
Editorial

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1 Asian automotive industries and markets: trade liberalisation and fragmented productive integration

In the first issue (Heim, 2017), we saw that the uneven developments of Asian automotive industries and markets, coupled with a late regionalisation, are critical issues for the actors of the industry. While Asia is by far the most important market for cars and auto parts, it is also the most challenging one. There are several sub-regions with extremely diverse socioeconomic and productive environments and also diverse industrial policies and infrastructures. Above all, this special issue presents a very distinct regional productive integration in Asia, compared with the American and European ones, somewhat similar to previous researches (Jetin and Mikic, 2016). The trade liberalisation (the increase of free trade agreements for instance) that has been engaged since the 2000s fosters a slow convergence of the markets (with the reduction of tariff barriers) and fragmented productive networks (with enduring non-tariff barriers). Three uncertainties – the contrasted national and sub-regional market structures, the roles of emerging countries and firms, and the varying degree of protectionism – imply a slower integration than one might expect in Asia, where there are high expectations of fast market growth.

The observation, description and analysis of these uncertainties and the innovation strategies followed by some car and part makers are at the core of this second issue:

- Will in the future an Asian-wide production network emerge?
- If it is the case, what might be its characteristics?
- Do the Asian automotive industries follow a similar trajectory than the EU one?

- Might one observe a further sub-regional specialisation or on the contrary, the development of more comprehensive national markets and industries?
- Will China and Japan be the winners of the current regionalisation process?
- How do the car and part makers deal with this current trend of trade liberalisation?
- Are some emerging indigenous firms able to compete with traditional firms?
- If so, do they follow previous productive models, or do they design new product architectures and organisational policies?
- Are emerging players condemned to follow similar development strategies?
- How some traditional tier-one suppliers deal with product innovations that incorporate new knowledge?
- How will Japanese carmakers reorganise their production bases in ASEAN following trade liberalisation?

This special issue covers all those topics, adopting several methodologies – trade patterns analysis, prospective studies, comparative case studies of innovation strategies and historical comparison of regional integration – with the aim to provide the reader with a more accurate knowledge about the recent trends in Asian automotive industries.

2 The contributions of this special issue

The first part of this second issue (the three first papers) is mostly dedicated to the analysis of trade patterns and production networks in Asia, while the second part offers comparative studies of innovation trajectories of car and part makers.

In his paper, ‘Production networks of the Asian automobile industry: regional or global?’, Jetin offers a very detailed and synthetic analysis of the evolution of the Asian automotive trade patterns over the period 2001–2016. The analysis, based on the trade flows of vehicles and auto parts in Asia (distance and sub-regional trade configuration), raises one important question: Does the rapid expansion of the Chinese market trigger a broader regionalisation of the Asian production network? The author argues that, indeed, regional integration has grown. But more important, he shows that the two core countries in that process are China and Japan and concludes that the regional integration is relatively fragmented. It also raises important future research questions. First, how does this integration impact the supplier networks in China? Is there a considerable upgrading of local part makers, or most of the suppliers are foreign-owned ones? Second, in the case of Japan, where production volumes did not grow substantially over the covered period, does it mean that Japanese carmakers built up specific product policies in order to diversify their supply bases in Asia? Finally, even if it is out of the scope of this paper, the examination of both the political context and negotiations of the several policies to endeavour free trade and the Japanese and Chinese trade and industrial policies to reinforce their positions in Asia, is a relevant topic to better understand the changing geography of the Asian production network highlighted in this paper.

The second contribution, ‘Examining the realignment strategies of automobile production bases in Southeast Asia: the case of Japanese automakers’, is closely related

to the first paper, with a specific focus on the ASEAN sub-region. Shioji attempts to compare several scenarios of Japanese carmakers' productive reconfigurations in the region, following the introduction of the ASEAN economic community. There are two relevant questions raised in this paper. First, how will the Japanese carmakers react to the possible increase of imports of Korean cars? Second, following specific path dependent trajectories, which countries will reinforce their positions as producers and which ones will lose their competitive edges? Shioji's main conclusions are that Japanese carmakers should preferably assign specific car models to specific countries (a specialisation of production with higher potential to export those cars in the region) and that the core countries such as Thailand, Indonesia and Malaysia will improve their productive-bases, while the followers such as Cambodia, Laos, Myanmar and Vietnam, will be badly affected by this productive reorganisation. Besides these conclusions, this paper also offers an original methodological contribution to our understanding of regional integration processes. Putting the emphasis on and crossing three core parameters – the current market structure, the production volumes and the product policies of the carmakers – this paper also gives some strong evidence of the interrelationships between the product policies, productive organisations and the markets in order to understand firms' strategies. Low labour costs alone cannot explain the restructuring of the automobile industries. This aspect deserves future researches including also employment relationships and regimes of production (Lüthje et al., 2013).

The third paper from Bungsche, 'Regional economic integration and the automobile industry: automobile policies, division of labour, production network formation and market development in the EU and ASEAN', is a historical and comprehensive comparative study of the regional integration of the automobile industries in the European Union and ASEAN countries. The analysis lies in the discussion of production, labour, trade patterns and industrial policies back to the 1950s in these two regions. Bungsche argues that, compared to Europe, ASEAN countries as late comers present more diverse and uneven economic growth, which explains why, even if a productive integration is under way, it is slower than one might expect. According to his enquiries, the two main remaining challenges are, first, the labour shortage of skilled workers in the core countries (Thailand, Indonesia and Malaysia) and second, the variety of production bases in these countries. Along with the high socioeconomic inequalities and low motorisation rates in that region, those are barriers to a more harmonious convergence of the industries and markets. This observation is somewhat in line with Shioji and Jetin's ones, but the conclusions regarding a too specialised spatial distribution of production, as a barrier to further convergence, deserves to be assessed in the future. Furthermore, research agenda on the spatial reorganisations of the supply chains and the development of skills would provide a more factual and detailed picture of the challenges faced by each country (Kobayashi and Jin, 2015; Kobayashi et al., 2015).

The two following contributions are based on comparative case studies of Asian firm's innovation trajectories. Lee's paper, 'Growth strategy from the suppliers' viewpoint: a case study of Denso and Hitachi Automotive Systems', proposes a prototypical comparison of two Japanese mega suppliers' innovation paths in the field of automatic braking system. Its focal point is the growth strategies of these mega-suppliers and the reason why Hitachi Automotive Systems (HAMS), being an independent supplier, has a competitive advantage over Denso, which is part of the Toyota Group. This is explained by HAMS's more flexible and adaptive capabilities, which enabled that

firm to develop more quickly this complex automotive component. The main discussion lies in the conclusion that Japanese independent suppliers have greater adaptive and flexible organisational capabilities than the group-dependent ones, which was assumed to be one of the classical Japanese competitive advantages (Nishiguchi, 1994). This conclusion contradicts the idea that Japanese suppliers find several external resources in the so-called '*keiretsu*'. In Lee's view, these business groups, on the opposite, enforce strong bureaucratic rules and too strict division of tasks, which in turn slower the rhythm of innovation. The analytical framework designed by the author and its discussion about the classic typology of Japanese suppliers, constitute a tool for future researches on this critical issue. The remaining questions are whether Japanese independent suppliers such as HAMS will in the future reframe Japanese supply chain management tools on the one hand, and become key players in shaping the Asian supply networks on the other hand. In order to tackle these two issues, future research might also put the emphasis on the interrelations between product architectures, organisational capabilities and external environment such as technology, market or institutions.

This is the specific approach adopted by Wang et al. in their paper, 'Product innovation in emerging economies: product architecture and organisational capabilities in Geely and Tata'. The main research objectives are, first, to propose a new analytical framework to analyse the divergence of innovation trajectories of indigenous firms in emerging countries and second, to explain the opposite innovative trajectories followed by Geely and Tata in China and India. Based on in-depth empirical research on both firms since the mid-2000s, the authors conclude that while Geely evolved from a closed integral product architecture to a quasi-open one, Tata followed the opposite path. The originality of this observation is to be found in the tentative elaboration of a new theoretical framework, starting from the mirroring hypothesis and the product architecture, but including also so-called external factors (institutions, industry, market and technology) to explain to co-evolution of product architectures and organisational capabilities. This study is crucial in understanding how local emerging firms catch-up with foreign rivals and might also reshape the rules of competition in emerging markets such as India and China where both low-cost products and medium-range ones become more and more important in firms' product portfolios. While in India, the market is still less developed and very price sensitive, the Chinese one shows considerable evolutions, with Chinese independent brands accounting nowadays for more than 40% of the overall market. In the future, a research could be launched in order to further develop the theoretical framework on external environment and its impact on firms' trajectories, but also to investigate how those firms' product architectures and organisational capabilities participate in the shaping of the environment (Fligstein, 2001).

3 Lessons and future research agenda

The two issues dedicated to the regionalisation of the Asian automotive industries and markets indicate several common trends.

First, most of the contributions converge towards the conclusion that, while the productive integration is under way in Asia, its development path is still slow. The several liberal policies launched since the 2000s in Asia have fostered trade, however non-tariff barriers, uneven economic and market development, national protectionist policies, specific firm strategies are hindrances to a faster and more harmonious

integration. In this perspective, Korea is the typical illustration. The Korean Government, car and part makers decided to adopt an export-led strategy with few FDIs in the region. It signed several free-trade agreements, with China (Schott et al., 2015) and South-Eastern Asian countries for instance, but is still lagging behind its Japanese rivals in most of these emerging markets. This is due to the willingness of some emerging countries to host local factories, rather than to import cars from Korea. One can raise the hypothesis that, in the future, the growing economic integration, especially in ASEAN, might worsen the competitive edge gained by the Japanese firms and exports from Korea might soar. This is the reason why the Japanese Automobile Manufacturers Association (JAMA) has been lobbying for more than one decade for new conformity assessments rules among ASEAN countries, which as a consequence would facilitate trade flows of Japanese cars manufactured in ASEAN between those countries.

Second, regarding the characteristics of this integration process, one can conclude that there is on the one hand industrial upgrading trend in some emerging economies, namely China, Malaysia, Thailand, Indonesia and somewhat India and on the other hand, countries that still lag behind due to several structural constraints. China is without any doubt the most successful country among the former category (Li et al., 2016). The policies launched in order to drain foreign investments shaped an industry that is about to catch-up with the American, European, Japanese and Korean ones. Interestingly enough, the indigenous brands reach nowadays 40% of market share, but most of them are private firms with no foreign partner (Smitka, 2016). These emerging carmakers acquired organisational capabilities that enable them to compete on upstream car segments. India also gave birth to new players who benefited from a specific institutional environment and gained knowledge in the entry segment. However, in most Southeast Asian countries, very few local players could emerge, both car and part makers. In those countries, the part makers have still lower capabilities than their Japanese counterparts, which explain why it is difficult for them to diversify their products and markets. Successful carmakers such as Proton in Malaysia and Kuozui in Taiwan harmoniously grew thanks to the support of their Japanese joint-venture partners.

Among the less integrated countries, one can quote most of the South Asian countries (Afghanistan, Bangladesh, Bhutan, Nepal, the Maldives, Pakistan and Sri Lanka). They not only have the strongest protectionist policies, but they also show very slow economic and market growth. Compared to the economic inequalities in Central and Eastern European Countries, inequalities between these countries and some Southeast Asian countries are greater. Moreover, in that sub-region there are not only little intra-sub-regional trade flows, such as between Pakistan and India for instance (Nag, 2017), but also low levels of trade with farer Asian countries. In Southeast Asia, Cambodia, Laos, Myanmar and Vietnam (CLMV countries), while having a stronger wage competitive advantage compared to other ASEAN countries, lack the basic industrial infrastructures, skills and market potential to further attract FDIs. It might even be possible that trade liberalisation policies have side-effects on these countries, such as Vietnam, with Japanese firms taking decisions to close their plants and relocate production in other ASEAN countries.

The third lesson from these two special issues is that Asian firms will lead the competition in this region. Though China and somewhat India attracted Western firms (GM and Volkswagen have the highest market shares among foreign brands in China), in other countries the leading firms (car and part makers) are Asian ones. The catching-up

strategies adopted in several emerging countries showed so far their limits. In the component and part industries, at the tier-1 level and even tiers-2 and 3, Japanese firms still have stronger organisational capabilities. They designed and monitored the development of most of the emerging industries, defining specific transaction rules, work processes and standards. This is to say that whether new players will emerge in the automotive industry is greatly related to the legal, technical and market environments that exist in each country and sub-region. Thailand for instance has acquired strong capabilities in the production of 1-ton pick-up trucks and neglected the SUV segment, while India developed skills in low cost segments. The economic liberalisation might even strengthen this productive specialisation in this region, rather than giving birth to more comprehensive and harmonious industries in each country or sub-region.

A fourth and last point to be highlighted is that, while in Europe or North America, trade liberalisation policies badly impacted most of the mature and emerging industries, Asia shows a more balanced development. Indeed, the two mature industries, Japan and Korea, were still able to keep relatively stable domestic markets, strong production bases and high export levels. These two countries that followed somewhat similar productive trajectories, being less bounded to collective decision-making processes such as in EU, have greater flexibility to adapt specific development schemes. In Asia, most of the global players still adopt centralised governances in the fields of R&D, production, supply and distribution management. However, some plants acquired a relatively high degree of autonomy such as Kuozui's ones and indigenous emerging firms such as Tata and Geely could develop in a very competitive environment thanks to reverse engineering and the acquisition of foreign carmakers. With new market and product innovations and regulations to be enforced in the coming decades (both for low-entry segments and upstream segments), the question of the changing patterns of competition is still an open one.

Overall, Asian automotive industries and markets, which are nowadays seen as the most profitable ones, have clearly evolved towards greater regional integration. There are still barriers to further integration, barriers due to the specific path of economic integration followed in Asia. This trajectory fosters a more fragmented regionalisation than in Europe or North America. The challenges are how these several fragments will be structured and combined to each other in the future and whether emerging players will be able to compete with Japanese and Korean makers and define new productive policies, profit strategies or organisations. This question is especially relevant when considering the development of alternative powertrains and mobility systems. Such question deserves to be inquired in detail to better grasp the future role of Asian players in the reshaping of the worldwide automotive industry.

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