

Dialogue, Debate, and Discussion

Dynamic and Ordinary Capabilities in Industry Transformation: The Case of the Electric Vehicle Industry

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In 2018, in the Dialogue, Debate, and Discussion section of MOR 14.3, an interesting series of articles was published in the ‘Forum on Tesla and the Global Automotive Industry’, where researchers discussed the future dynamics of the global automotive sector. In their work, Perkins and Murmann (2018) contended that, based on Tesla’s success, a well-funded company could develop a new electric vehicle (EV) from scratch and move it into production within three to five years if it would invest one to two billion USD in design, development, and manufacturing. Expressing a contrasting view, MacDuffie (2018) questioned this possibility, arguing that EV product architecture is unlikely to become substantially more modular and any new entrant would therefore have to develop the ordinary capabilities that current automotive original equipment manufacturers possess, and there is no guarantee that a firm can develop such capabilities. Teece (2018) joined the debate by proposing a capability-based framework within which to analyze four paradigm shifts that have marked progress in the global automotive industry: EVs, autonomous vehicles, connected cars, and personal mobility services. He argues that these paradigm shifts have created opportunities for new entrants while posing challenges to incumbent firms. To navigate through the uncertainty associated with these paradigm shifts, incumbent firms need to enhance and refine their dynamic capabilities and leverage their integration skills. Jiang and Lu (2018) based their contribution to this debate on the development of the Chinese EV market. In MOR 15.1, published in 2019, Teece (2019) further elaborated his framework to facilitate analysis of the prospects for Chinese firms seeking a stronger foothold in the global automobile market. All these articles

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have been well received by MOR readers and were ranked among the top 20 articles in full-text view times between June 2021 and June 2022.

The Chinese EV market, which has ranked as the world's largest since 2015, has changed considerably since the abovementioned articles were published in 2018 and 2019. Bloomberg once predicted that internal combustion engine (ICE) cars would continue to account for at least half of the market through 2040, which would allow a decade or more for automobile makers to adapt to the paradigm shifts (BloombergNEF, 2017). The explosive growth of EV sales in the Chinese market in the last several years has, however, indicated that this transformation is taking place at a much faster pace, at least in China. According to the International Energy Agency (2022), the share of EV sales in total car sales in China was merely 1% in 2016 but had increased to 16% by 2021. The International Data Corporation predicted that the share would further increase to 50% by 2026 (IDC, 2022). In total, 3.5 million EVs were sold in China in 2021, accounting for more than half of total global sales (China Association of Automobile Manufacturers, 2022).

In the rapidly growing Chinese EV market, domestic incumbents such as Shanghai Auto and Geely, foreign incumbents such as Volkswagen and BMW, large information and communications technologies (ICT) companies such as Huawei, Baidu, and Xiaomi, and new ventures such as NIO, Li Auto, and XPeng have competed fiercely with each other. As a market leader, BYD Auto announced on April 3, 2022 that it would cease producing ICE cars and devote itself fully to producing new energy vehicles, including EVs. Therefore, China represents an excellent case for studying the dynamic capabilities–ordinary capabilities framework and assessing the strategies and performance of incumbents and startups against the backdrop of automobile industry transformation. Focusing on these issues, the articles in this section include Murmann and Vogt's analysis of the importance of ordinary capabilities to startups seeking to lead the transformation and Jiang and Lu's renewed assessment of the dynamic capabilities of EV startups and incumbents in the Chinese market. Their studies are followed by Blair and Teece's comment, which compares the transformation to EVs in the automobile industry and the transformation to smart phones in the mobile phone industry; they emphasize the role that competence with software will play in the transformation.

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