

The Huawei Model: The Rise of China's Technology Giant. *By Yun Wen.* Champaign: University of Illinois Press, 2020. 256 pp. Maps, charts, notes, index. Cloth, \$110.00. ISBN: 978-0-252-04343-7.

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China's economic globalization in recent years has intrigued scholars from various fields including history, economics, and policy studies. One leading question is whether the path China pursued toward being a global economic power fundamentally differed from those of the Western capitalist countries. If it was different, how did this Chinese globalization and developmental path come to be? And who made it possible? Huawei, economist Yun Wen believes, is among the answers. In *The Huawei Model: The Rise of China's Technology Giant*, Wen examines the company's strategies in technology development and innovation in both domestic and global markets, as well as its ownership structure and labor management. The author also shows that the rapid development of new information and communication technology (ICT) and China's integration into global digital capitalism provide the larger context in which the Chinese technology giant emerged. A sweeping account of Huawei's history, this book not only broadens our understanding of the formation and expansion of China's multinational corporations but also offers new perspectives on the corporatization, globalization, and digitalization of the Chinese economy over the past four decades.

To explicate the "Huawei Model," Wen looks first into the company's domestic market exploration. Since the early 1980s, China's development strategy shifted from one dominated by the self-reliance principle to an outward-looking, market-oriented approach. Foreign corporations rushed into the newly opened ICT industries, seeking market share through exchanging technology. The result was another reliance: "structural dependence on imported technology and foreign capital," especially in the urban high-end markets (p. 52). To survive, Huawei's founder, Ren Zhengfei, adopted Mao's guerilla war strategy of "encircling cities from the country" and turned to rural and remote markets (p. 36). While Huawei gained a foothold in the neglected countryside, it also climbed the technological ladder through standard innovation and infrastructure buildup. With substantial support arriving now from the state, Huawei helped to establish China's indigenous telecommunications standards, including the 3 G TD-SCDMA and the 4 G TD-LTE, and eventually became a global leader in 5 G standards. National security is another reason that propelled the government to choose Huawei and

other domestic firms over foreign companies to build the country's networks and defend China's "network sovereignty," which helped Huawei control significant domestic market share in recent years (p. 50).

Global markets are also integral to Huawei's rise. In chapters 2 and 3, the author analyzes Huawei's "going-out" to the Global South and North, respectively. The two markets, with distinctive institutional frameworks, economic backgrounds, cultural legacies, and, most importantly, varying relations with the Chinese state, posed different challenges. As Wen notes, Huawei's initial expansion to the South was driven by the structural imbalance in China's domestic market, which turned increasingly competitive and even antagonistic to domestic firms in the mid-1990s. Ren Zhengfei remarked, "All of [our] fertile lands have been occupied by Western companies. Only in those remote, turbulent regions with adverse natural conditions where they entered at a slower pace and had less investment did we have a window of opportunity" (p. 69). Huawei was thus once again forced to explore the overlooked overseas markets. Their sales and engineering teams discovered opportunities in Kenya, Nigeria, Brazil, Venezuela, and many other African and Latin American countries. Wen shows that Huawei's remarkable success in those markets relied on competitively priced products as well as on state-backed financing and collaboration mechanisms, such as the Forum on China-Africa Cooperation (FOCAC) and the China-Africa Development Fund (CADF).

To enter the European markets, Huawei adapted its earlier strategy and began "circling core countries from peripheral ones" (p. 97). Serving as Vodafone's 3 G network equipment provider, Huawei gained market access to Spain, Greece, Romania, Iceland, and Hungary before acquiring contracts from tier-one operators in Germany and the United Kingdom. In the U.S. market, Huawei faced not only competition from mainstream companies but also state-imposed market and technological barriers. Those barriers were motivated by the mixed concern of national security and technology dominance. Starting in "the burgeoning field—the enterprise business, such as corporate routers, switches, internet access points, and corporate networks—as a beachhead into the US market," Huawei retreated to become a consumer device producer and even considered withdrawal (p. 103). The company's fate in the age of digital capitalism, as Wen points out, reflects the "intensifying geopolitical-economic struggle over the control of network infrastructure and information sovereignty" (p. 113).

Chapter 4 depicts the history of Huawei's technological development. Wen argues that Huawei's R&D strategies were characterized by two contradictory visions: techno-nationalism and techno-globalism.

On the one hand, Huawei's technological growth was rooted in the nation's self-reliant R&D system that viewed technology as "an intrinsically strategic power struggling for the relative position of the Chinese state in international relations" (p. 117). On the other hand, as a global company, Huawei was embedded in and benefited from "cooperative, transnationalized R&D networks along with its going-out process" (p. 115). Tensions and contradictions resulting from disparate state and corporate interests hampered Huawei's ascent to being a technology leader. The last chapter introduces Huawei's unusual ownership structure and management practices. The most salient institution was the "employee shareholding scheme" (ESS), which allowed for effective corporate control by Huawei's internal shareholders—mostly its own employees—instead of external investors. The author also discusses how Huawei as a Chinese corporation managed transnational labor. The key was a combination of socialist traditions and values and Western-style organizations. Wen claims that Ren Zhengfei employed "a business version of Mao style in cultivating corporate culture and ideology to ensure employees' compliance," which set the tone of Huawei's management style (p. 154).

In the concluding chapter, the author compares Huawei with two other prevailing company models in contemporary China: the "Foxconn Model"—a production system heavily dependent on foreign capital and low-end manufacturing; and the "BAT" (Baidu, Alibaba, and Tencent) model—a high-tech company model that had emulated the "Silicon Valley experience," mirrored "globalized digital capitalism," and pioneered China's recent digital innovation (p. 177). Wen suggests that the story of Huawei may point to a third model of Chinese development, one that combines socialist industrialization legacies and global economic networks and that has the potential to forge its own path. Inviting readers to rethink the past, present, and future of China's economic globalization through the prism of Huawei, this book makes an important contribution to the literature on the business, economic, and technology history of China and the world.

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