

**GLOBAL VALUE CHAINS AND THE
INNOVATION OF THE CHINESE
MOBILE PHONE INDUSTRY**

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Executive Summary

1. The global value chain (GVC) strategy, which is key to the success of the Chinese mobile phone industry, provides an effective channel for the industry to innovate and catch-up with foreign competitors.
2. Chinese firms initially assembled hand phones for global vendors in the GVCs. The inter-firm linkages between Chinese firms and upstream foreign buyers give Chinese firms access to information about technology and consumer demand, facilitating their innovation activities and upgrading progress along value chains.
3. The innovation activities prevented Chinese firms from falling into the low value-added trap. They have captured more and more value added from both home-grown and foreign brand mobile phones.
4. The teardown data of iPhone X shows that Chinese firms performed relatively sophisticated tasks beyond simply assembly, contributing about 25% value added of the phone, much higher than the 3.6% of value added from iPhone 3G, the first generation of the iPhone.
5. The GVC strategy requires the specialisation in tasks rather than in products. By sourcing core technology from foreign companies, Chinese mobile phone makers have concentrated on incremental rather than drastic innovations and on introducing differentiated products.
6. The strategy has successfully nurtured a few home-grown brands, namely, Huawei, OPPO and Xiaomi. In Q1 2019, Chinese brands captured 90% of the domestic market and 44% of the global smart phone shipments.
7. Despite impressive success in both domestic and international markets, Chinese brand mobile phones remain heavily dependent on foreign technologies. The teardown data of Xiaomi MIX 2 and OPPO show that foreign companies supplied

all core components of the phones, which account for 83.3% and 84.6% of their total manufacturing costs respectively.

8. Based on the retail prices of these phones, the domestic value added of OPPO R11s and Xiaomi MIX2 rises to 40.3% and 41.7% respectively, indicating an increase in Chinese domestic value added.
9. Huawei Pro30 uses the Kirin processor of HiSilicon, a subsidiary of Huawei, suggesting that Huawei has the technological capacity to produce a chipset which can substitute for Qualcomm's chipsets commonly adopted by Chinese mobile phone makers. The mark of GVC strategy in the Huawei phone is also significant as foreign value added consists of 61.9% of Huawei Pro30 production cost.
10. The efficiency and effectiveness of the GVC strategy depends on the assumption that Chinese firms could purchase necessary technologies via fair market transactions. If unexpected shocks lead to the disruption of the supply chain as in the case of the US blacklist of Huawei, the operation of the Chinese firms would suffer.