



# Neo-techno nationalism: The case of China's handset industry



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## ABSTRACT

China has made significant progress in the telecommunications market, particularly in the handset industry. In this study, we focus on the interaction between the government and the industry to trace industry performance and growth, and investigate the factors contributing to the rapid industry growth by drawing on the actor-network theory (ANT). The findings from the ANT interpretation suggest that China's mobile manufacturing industry has been driven by the rise of neo-techno nationalism. China's overall strategy can be characterized in terms of neo-techno nationalism, in which technological development that supports national economic and security interests is pursued by leveraging the opportunities presented through globalization to gain national advantages. The promise of and limitations to applying the ANT to reach a deeper understanding of the telecom strategy of China are discussed.

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## 1. Introduction

During the past few decades, economic growth in China has far surpassed those in other countries. There were many driving forces behind such economic growth, including China's information and communications technology (ICT) industry. The Chinese government views ICT as a cutting-edge industry for the country's transition from a manufacturing to a knowledge-based economy. China's ICT industry has maintained a high growth rate and is beginning to enlarge its share in the international market. These advances in the Chinese ICT industry have increasingly attracted the interest of many scholars.

An ICT sub-industry that has experienced remarkable progress in China is handset manufacturing. During the past three decades, the industry grew rapidly and increased its share in the global mobile phone market. Chinese smartphone makers have been rapidly expanding their market share, not only in China but throughout the world (Shim & Shin, 2015).

Chinese handset makers have become highly competitive companies, providing consumers around the world with a variety of low-priced smartphones. Manufacturers such as Lenovo and Xiaomi are quickly gaining market share not only in China but also overseas (Wu, Dou, & Wang, 2013) and are competing directly with global smartphone brands. The arrival of Chinese smartphone makers threatens the market shares of giants such as Samsung and Apple. Indeed, the rapid growth of

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the smartphone industry in China has changed the structure of both the local and international mobile phone industries (Shim & Shin, 2015).

With such remarkable advances comes a series of questions. What brought about these significant changes in China's handset manufacturing industry? How has it grown rapidly in the past few decades? There are many, complex factors of the industry's success, including advanced technology, policy, culture, and market factors. This study aims to investigate the performance of China's handset manufacturing industry by using the lens of the actor-network theory (ANT) and, specifically, the sociology of the translation concept. It attempts to answer the following research questions.

RQ1: What factors contribute to the rapid growth of China's handset manufacturing industry? How has China become more powerful than other countries through the translation process?

RQ2: What are the differences among Chinese domestic mobile phone manufacturers, including state-owned enterprises (SOEs), first-generation (1G) handset makers, and second-generation (2G) handset makers? How have the 2G handset makers successfully translated in China's smartphone market?

RQ3: To what extent does neo-techno nationalism shape national high-tech policies? Is China successfully transforming its state-led economy into an innovation-driven one?

The answers to these questions would highlight the role of techno-nationalism in the Chinese approach to this emerging industry. Although the desire to promote indigenous technology is not a new phenomenon in China, techno-nationalism has only recently enhanced in the face of mobile innovation in the name of neo-techno nationalism (Han, 2009). China's telecom strategy is deeply rooted in the techno-nationalism that has, in recent years, been characterizing the country's technology policies and standards strategy (Xiaobo, Wei, & Yueqi, 2013). The case of the country's handset industry provides new insights into the characteristics of Chinese techno-nationalism, in particular the manners in which this nationalism is intermingled with techno-globalism. With respect to Latour's (1987) ANT, this study utilizes the actor-network-based view to analyze the formation and diffusion of the technical innovation that has resulted in the current state of China's handset industry.

The rest of this paper is organized as follows. Section 2 reviews the previous studies that consider the ANT and describes the present study's research methods and questions. Section 3 provides a historical background on China's handset industry. Section 4 analyzes the development of the handset industry from an ANT perspective. Sections 5 and 6 discuss the implications for the future of the mobile industry and for academic theory, respectively. Section 7 concludes the paper with neo-techno-nationalism and its future.

## 2. Theoretical framework

We utilize the ANT to examine how technical and human actors interact to create success stories in the Chinese handset manufacturing industry, and to understand how focal actors construct their goals and mobilize other actors.

### 2.1. Actor-network perspective

Originally created by Callon (1986) and Latour (1987), the ANT attempts to understand the processes of technological innovation and scientific knowledge creation. The ANT aims to explore how networks are built or assembled and maintained to achieve a specific goal. Therefore, the ANT does not attempt to explain why a network exists. Instead, the theory focuses more on how networks are formed and how they fall apart (Latour, 1987). Translation is a crucial process for the ANT (Callon, 1986). The translation of an actor or actors into a network is achieved through four stages of translation: problematization, interessement, enrollment, and mobilization. Problematization is the first stage of translation, wherein a focal actor defines and identifies the interests of other actors that are consistent with its own interests and establishes itself as the obligatory passage point (OPP) (Callon, 1986). Interessement is a process through which a focal actor convinces other actors to agree to and accept the definition of the focal actor (Callon, 1986). Enrollment is the stage in which other actors accept the interests defined by the focal actor. Mobilization is the final stage of translation, which maintains the network by persuading other actors that their interests are the same as that of the focal actor.

Recently, several studies applied the ANT to the telecommunications field. Lee and Oh (2006) examined the formation of alliances among mobile carriers, banks, and other related parties, and the effect of technology on competition and collaboration among them in Korea's mobile banking sector. Shim and Shin (2015) used the ANT to investigate the process of setting Chinese mobile standards in the international context. Shin (2010) used the ANT to explain the evolution and stabilization of fourth-generation (4G) technology in next-generation network environments in Korea.

### 2.2. Three perspectives of China's technology policies

In explaining why states choose specific policies, scholars have emphasized variables at different levels of analysis, which can be summarized into three domains: individual, state, and international system. Some explain structural change in the international system, whereas others place greater emphasis on state-level or domestic concerns. Numerous policy studies

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