

Constructing large multinational corporations from China: East meets West at Huawei, 1987-2017

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Abstract:

The telecommunication enterprise Huawei, founded in 1987, is one of few multinational companies emerging from China to date. The development of the capabilities that allowed Huawei to become a formidable competitor on the global stage undoubtedly owes a great deal to importation of best practice routines from the West with the help of western consulting firms. But Huawei is also distinctly Chinese. In the West, a founder who relinquished all but a 1.4 percent of equity in the firm to give the remaining shares to employees would be an abnormality. Huawei's collective ownership arrangement (88,000 people own the other 98.6 percent of the shares) enabled management actions that are unthinkable in the West. The top 6,687 managers in 2007, for example, agreed to collectively resign from the company and to be selectively rehired to avoid falling under new labor law restrictions. We develop an account of how Western and Eastern history has shaped the leadership's decision making through multiple transmission mechanisms. Because the founder is an avid reader and student of history, major strategic decisions of Huawei have been deeply influenced by historical precedent. We argue that Huawei cannot be understood without coming to terms with the imprinting the firm has received both by the Chinese context and the founder's conviction that the firm needed to learn from historically accumulated Western knowledge.

Keywords: firm history, China, transfer of best practice routines, Western consulting firms, leadership frames

INTRODUCTION

Huawei is now China's most prominent multinational company. In 2016, Huawei achieved sales of USD 75.103 billion and operated in over 170 countries around the world, employing around 180,000 people. Over the past two decades, Huawei has spent at least 10% of sales on R&D expenditures. Huawei has 45% of all employees focused on technical work (Huawei, 2016b), giving the firm strong technological capabilities. Huawei has now even surpassed Ericsson and Nokia to become the largest telecommunication infrastructure equipment company in the world. It is number 83 on the Global Fortune 500 company list (Fortune, 2017).

Peter Williamson is one of the best-informed Western scholars on Chinese firms (Wan, Williamson, & Yin, 2015; Williamson, 2010). When asked to characterize strategy formulation at internationally prominent Chinese firms such as Huawei, Alibaba and Tencent, Williamson explains: “Leaders of private Chinese firms simply made it up as they went along” (Williamson, 2015). Unlike firms in the West, a blueprint that the first private companies in China could follow in the highly uncertain Chinese political and economic environment did not exist.

But how did the founder of Huawei and the team of executives who were at his side for the past 30 years “make it up?” In the absence of clear a blueprint for private companies, Ren had the freedom to combine management ideas and philosophies both from the East and West. The key argument we are developing in this article is that the leaders of Huawei drew on historical examples from western countries and China to construct their own management philosophy and organization design to compete with Western firms. Starting in year 9 of its existence, Huawei worked to import management ideas. First, in 1996, they recruited the help of 6 Renmin university professors, one of whom, Huang Weiwei, became the chief management scientist at Huawei in 2014 (Tian, De Cremer, & Wu, 2017). And they hired help from many Western management consulting firms, the most important of which was IBM. Ren had become very impressed with the turnaround that IBM achieved after almost going bankrupt in the early 1990s (for details on the turnaround see Gerstner, 2003). For this reason, Ren and members of his top team in 1997 visited IBM among other tech companies and over the next decade and a half he contracted with IBM to help it with many of its major initiatives to transform Huawei’s routines and practices. How important Ren believed the importation of historically accumulated best practices is demonstrated through these quotes.

“The process of borrowing and adapting ideas is a good thing. Western management philosophies and technology have proven successful—why would we resist them? Huawei should first apply more rigid methodology, adapt it, and then finally institutionalize it. This is a process we must go through” (Tian, De Cremer, & Wu, 2017, Kindle Locations 1992-1995).

“In this process, we don’t want any skeptical people or those who believe they are wiser than the IBM advisors. We must guarantee that there’s proper understanding and consensus, and there must be active involvement. We must eliminate those who think they are smarter than IBM and smarter than anyone else in the world.” (As quoted in Tian and Wu, 2015, p. 185).

Ren’s insistence on learning from Western best practices is not mere talk. Ren removed those executives who did not want to hire IBM. And he proverbially put his money where his mouth was. He hired IBM consultants at US \$680 per hour per person. When organizational members started complaining that Huawei paid IBM too much, Ren replied, “Don’t be foolish. You are paying US \$680 an hour, but you’re getting the knowledge they’ve developed over 30 years. If you ask for a discount, they’ll only hand over knowledge from the past three months. Which one is a better deal?” (Tian, De Cremer, & Wu, 2017, Kindle Locations 5656-5659). Between 1997 and 2012, Huawei spent at least US \$1.6 billion on its various initiatives (HR, product development, supply chain and financial management) to transfer the best practices of western

routines to Huawei (Tian, 2013). On an annual basis, this means that Huawei spent roughly 1% of its sales on these initiatives.¹

Scholars have previously documented the role US consulting firms played in transferring the multi-divisional corporate form (the M-form) in the 1960s and 1970s from the USA—where it was invented—to Europe (Kipping & Westerhuis, 2012; McKenna, 2012; McKenna, 2006). But the existing literature has never provided any estimate, as we are able to do in this study, on how much money firms have spent to acquire management knowledge from consulting firms. Nor have scholars previously shown the breadth of leading edge management knowledge a single firm obtained using a variety of different consulting firms.

Before we go into the details how historically accumulated knowledge was transferred and how Ren implanted the business history of Western firms within the Chinese context to focus the ever-growing number of employees on catching up with western firms, it is useful to give a brief sketch of the development of Huawei.

BRIEF HISTORICAL SKETCH OF THE DEVELOPMENT OF HUAWEI

Huawei was founded in 1987 by Ren Zhengfei in Shenzhen, where the Chinese government had set up the first special economic zone in May 1980 to experiment with private initiative and foreign investment in what was otherwise a centrally controlled and collectively owned economy. It is not a coincidence that the first special enterprise zone was set up right across the border from Hong Kong. Deng Xiaoping, the key political leader in China at the time,

¹ This percentage figure is lower than the one reported in Tian et al (2017) because we did our own calculation based on the 1.6 billion spending figure that was cited by the then-CFO in an interview with Tian in 2013. Across the years, this amounts to a little over 1 percent of sales annually.

became eager to reform the Chinese economy partly because he noticed how much better capitalist Hong Kong had developed than communist mainland China in the previous three decades (Vogel, 2013).

The rise of Huawei parallels in large the development of Shenzhen as a commercial hub in China. Shenzhen's population increased from around 300,000 inhabitants in 1980 to over 15 million today, making it the most densely populated city in China (Shenzhen Standard, 2014). Ren Zhengfei, who previously had worked as a civil engineer in the Chinese military corps of engineers, started Huawei just as the Chinese government started a strong push to upgrade the telecommunications infrastructure across the country. In 1978, China had only 2 million telephone subscribers and a total capacity of 4 million lines (Tian & Wu, 2015, p. xviii). In 2015, there were over 1.3 billion mobile phone users (Statista, 2016a). In one generation, having a telephone went from a luxury to what is perceived as a necessity of daily life. Visit any large Chinese city today and you will notice that all people have smartphones in their hands. To get the entire Chinese population connected with mobile phones, the investments that had to be made in telecommunications infrastructure were massive.

A key element of Huawei's history is that it faced fierce competition from the beginning both from domestic and international players. In light of how successful Huawei has become, it is easy to fall into the trap of thinking that Huawei's success was foreordained and that the rise to the top was easy and smooth. When Huawei entered the Chinese market in 1987 as a mere importer of telephone switches, the technologically sophisticated Western firms— Ericsson, Alcatel, Siemens, AT&T (later called Lucent Technologies), Northern Telecom (later called Nortel), Fujitsu and NEC from Japan—were all competing for orders in China (Tian & Wu, 2015, p. xxiv). What is more, in the mid-1980s there were many Chinese entrepreneurs and

managers of state-owned local companies who regarded the growth prospects of the telecommunications equipment market as attractive. According to Tian and Wu (2015, p. xxv), at least 400 firms entered the market in this period, creating strong competition also at the lower technological end of the market. Huawei differentiated itself from local competition by investing in new product development and later by importing western management know-how.

Huawei faced strong competition from the beginning, and competition in the industry continued to be fierce over the next 3 decades even though the global telecommunications equipment market increased from 119 billion US \$ in 1993 (U.S. International Trade Commission, 1998) to 354 billion US \$ in 2011 (Statista, 2016b). Especially when the internet bubble burst in 2001, many ICT firms struggled with overcapacities. Since then, many of the key players have merged because they could no longer compete successfully as standalone companies. Between 2006 and 2016, the telephone equipment businesses of Nokia, Siemens, Alcatel and Lucent have successively merged hoping to be better able to compete with Huawei and now operate under the Nokia name (Nokia, 2016). By 2013, Huawei became the largest telephone network equipment supplier in the world, and over the years moved from simply making equipment to offering turnkey solutions.

As Huawei overtook Western rivals, taking further market share away from these players became strategically unviable. Governments across the world would not have allowed Huawei to become a monopolist. This is one reason why Huawei sought further growth in related industries. In 2002, it started to make handsets and related consumer goods as a contract white goods manufacturer, and since 2009 Huawei has sold smartphones under its own brand using the market-leading Android OS (Gedda, 2009). The smartphone business has been Huawei's fastest growing segment since 2009, turning Huawei into the 2nd best-known Chinese consumer brand in

the Western countries behind Lenovo. In 2015, Huawei became the 3rd largest manufacturer of smartphones in the world after Samsung and Apple, shipping 76 million units and gaining 8.7% market share (IDC, 2016). Huawei also entered the enterprise ICT equipment sector, producing everything from corporate networks, storage and security systems, routers, IP telephony and video conferencing systems to cloud solutions and other ICT services (Huawei, 2016c). Here, Cisco is one of the main competitors (Reckoner, 2013). In terms of the relative size, telecommunication network equipment and services sales to operators (carriers) is still Huawei's largest segment, with 59 percent of sales, followed by consumer sales (largely smartphones) with 33 percent, and the enterprise sector accounting for 7 percent of sales (Huawei, 2016a).

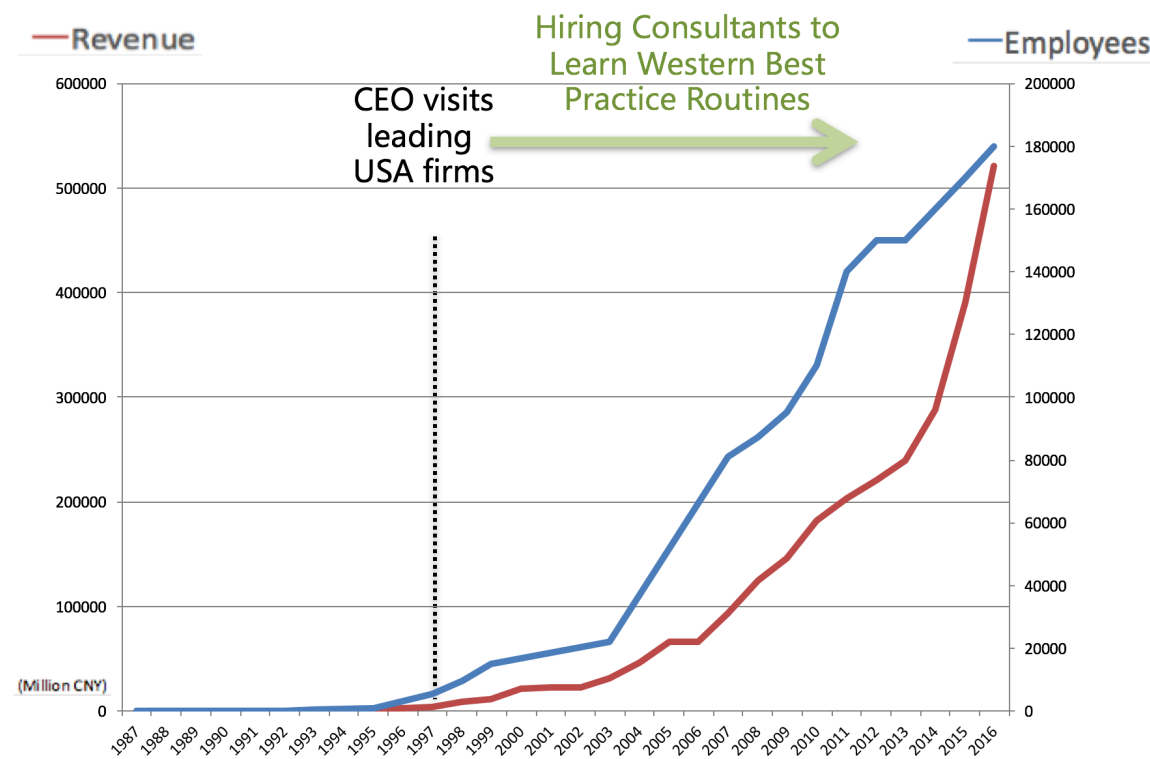


Figure 1: Sales and Employee Growth, 1987-2016

Huawei's remarkable growth history is visible in Figure 1, which tracks the number of employees and total sales over time, reaching 180,000 employees and sales of USD 75 billion. Although the growth of Huawei in the first 10 years since its foundation looks plain in Figure 1, which is due to the relatively small size of its revenue and workforce at that time, Huawei indeed grew rapidly by often doubling its size from one year to another in that period. These growth rates cannot simply be explained by pointing to favorable market conditions that would have allowed all competitors to grow. Many western competitors mentioned earlier declined over the past 15 years, and Huawei undoubtedly became stronger as an organization at the expense of its western competitors. Huawei experienced significant organizational problems as the firm grew from 50 employees in 1991 to 5,600 employees in 1997 precisely because this 100-fold increase in staff numbers undermined the shared culture and philosophy that the founding team may have had. Huawei overcame these problems and continued to grow and beat its many local competitors because it imported Western best practice routines, first in HR starting in 1998, then in starting 1999 in product development, which touched many functional areas of the firm, then supply chain management, organization design starting in 2003 and financial management in 2007.

DATA COLLECTION

We relied on a variety of different data sources to construct our account how of history shaped major strategic decisions at Huawei. First, two of us organized quarterly meetings at a Chinese university where former Huawei employees were asked to share their knowledge on various aspects of the development of Huawei's management practices (see Appendix A). To help us answer specific questions, for example how the project to transform product development processes came about and how it was managed, we also conducted oral histories with several

former Huawei employees, which are listed in Appendix B. We also analyzed 103 published speeches by or interviews with the founder and CEO of Huawei, Ren, composed in the period from 1997 to 2017. Highlighting the importance of history to Ren's cognitive frame, we found that that 49 out of 103 speeches/interviews made some reference to Chinese or Foreign History, with 30 speeches making references to foreign history and 30 making references to local history, and 11 making references both to foreign and Chinese history. When they were relevant for our arguments, we cite these speeches and interviews. Because of Huawei's prominence in the Chinese economy, several books have appeared that describe various aspects of the development of Huawei. The two books that we found most useful in Chinese are Wu (2016) and Zhang (2015). In English, the two most reliable books are ones written by Tian Tao with an academic from Renmin University of China, Wu Chunbu (Tian & Wu, 2015) and the later book that added an academic from Cambridge University, David De Cremer, to the author team (Tian, De Cremer, & Wu, 2017). Tian Tao also made available to us the 300,000-word transcript of the interviews he conducted with nine top-level managers of Huawei in 2013, which proved very valuable, for example, in helping to triangulate how much money Huawei spent on consultants over the years and filling out details on the integrated product development (IPD) transformation initiative.

MECHANISMS THROUGH WHICH HISTORY SHAPED HUAWEI'S DEVELOPMENT

Based on our three-year study of Huawei, we have developed an inductive model of the mechanism through which history shaped the development of Huawei. We argue that to understand why and how a Chinese startup can turn itself into a true multinational corporation (measured in terms how much sales occur outside the home country and of how many different

countries are served), we need to understand how foreign history and local history influences the leaders' cognitive frame, strategic decisions and key features of a firm's organizational design (routines, practices and culture.) Our paper is focusing on these three factors and not on the building up of firm capabilities and the product and market strategies of the firm, which comes later in the causal chain that explains a firm's growth in the global market.

The history of Huawei's reveals a variety of mechanisms through which previous historical experiences have shaped the firm's development (see Figure 2).

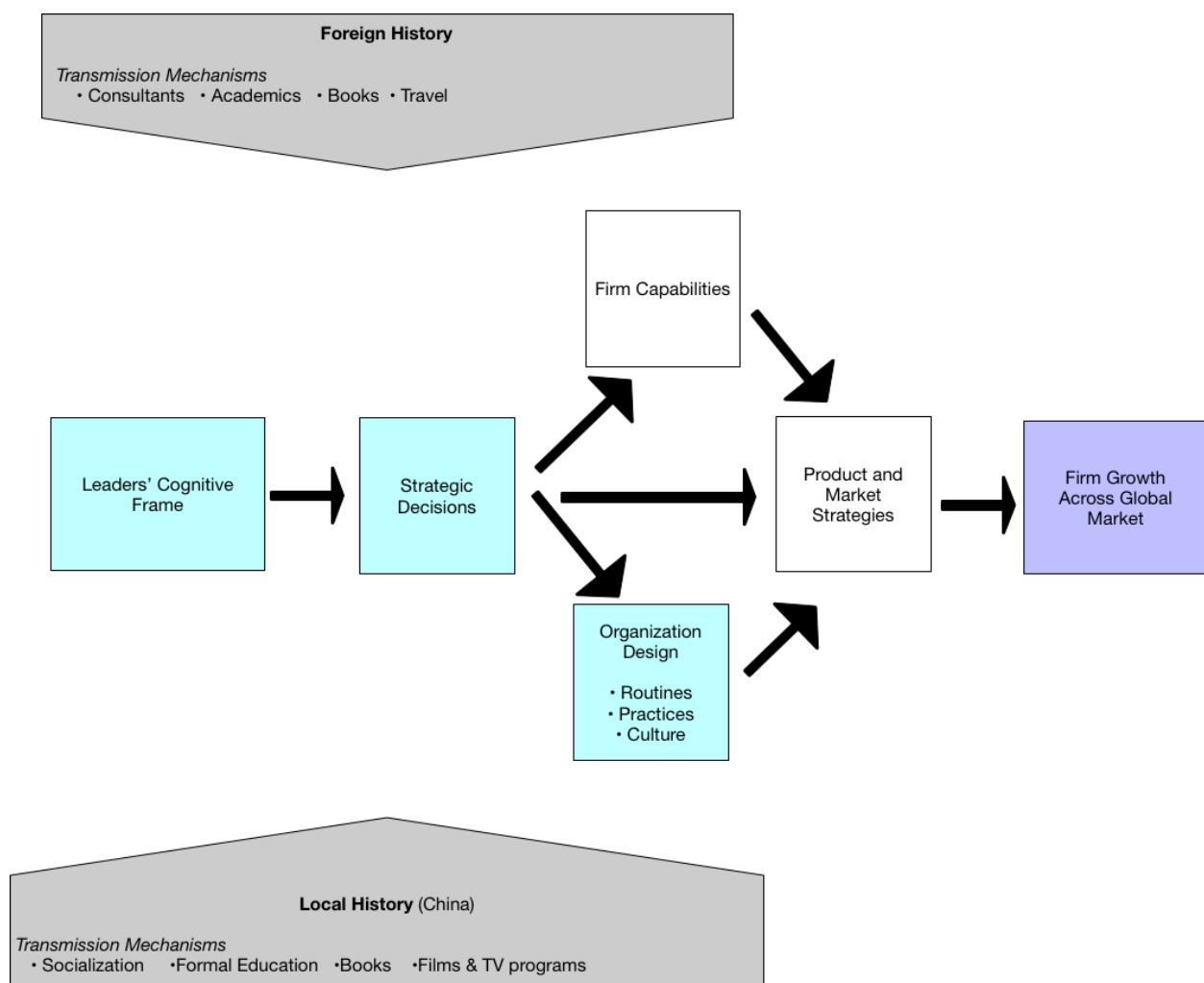


Figure 2: How Local and Foreign History Shapes Firm Development
(Focal factors of current paper are in color)

We will first describe four mechanisms—Consultants, Academics, Books, and Travel—through which foreign history shaped the development of Huawei and then four mechanisms—Socialization, Formal Education, Books, and Films and TV programs—through which local history shaped the development of Huawei. We give priority to the foreign history mechanisms because Huawei outperformed other local firms and became a successful multinational corporation by tapping the accumulated historical experience of western firms in a way that its Chinese rivals did not do.

Foreign History

1. Consultants

The key mechanism for transferring best practices accumulated by Western firm history were consultants. The major ones are listed in Table 1. Major western consulting firms set up offices in China by 1995 (Yang, 2016). Huawei stands out from other firms in China because in terms of the magnitude of consultants used to learn historically accumulated best practice routines. Huawei engaged consultants across all main functional aspects of the firms as is visible in Table 1, and spent US\$ 1.6 billion on projects to transform its operating routines (Tian, 2013). Because the previous literature on the role of consultants in the transfer of management knowledge has never provided an estimate on how much a single company spent on these efforts, we triangulated this number by estimating Huawei's spending on consultants. We used the \$680 per hour per consultant figure mentioned in the Ren quote above, together with the information provided in an interview with Arleta Chen that 100 IBM consultants worked at Huawei in 2002. Assuming they worked 40 hours per week for 48 weeks a year, their wage bill for 2002 would

have been \$130,560,000. Looking back, Guo Ping notes that on average 80 consultants worked at Huawei from 1999 to 2012 (Tian, 2013). Using the same numbers as before, this suggests a total bill of \$1,357,824,000 just for external consultants, which is in line with the \$1.6 billion estimate for the overall transformation spending by the CFO reported earlier.

Table 1. The history of Huawei's transformation and its consultants

Time	Transformation	Consultants/External experts
1996-1998	Huawei Basic Law	Six professors from Renmin University of China
1997 and 2005	Human Resources	Hay Group
1998-1999	Information Technology Strategy and Plan	IBM
1999-2003	Integrated Product Development	IBM
1999-2003	Integrated Supply Chain	IBM
1998-2007	Four Standardizations in Financial Management	KPMG
2003-2004	Organizational Structure Design	Mercer Group
2007-2014	Integrated Financial Services	IBM
2007-2015	Lead to Cash/Customer Relations Management	Accenture

The most important consulting firm for Huawei was IBM. IBM had 4 multi-year consulting engagements, the most significant one being the project to transfer best in class integrated product development (IPD) routines to Huawei, which was initiated in 1999 after IBM was engaged in 1998 to develop an Information Technology Strategy and Plan. The leadership of Huawei insisted the full system of routines practiced by IBM needed to be copied exactly. We will describe this episode in some detail later in the paper because the success of this transfer project convinced the organizational members the pain of adopting foreign management practices was yielding substantial gains. Key for the successful transfer of knowledge from consultants was first that consulting companies were carefully chosen to fit with the overall leadership culture of Huawei and that the founder and leader of Huawei, Ren, removed the resistance within Huawei to hiring consulting firms when the first major assignment was given to IBM. Unlike other typically short-term-oriented Chinese companies (Breznitz & Murphree,

2011), Ren had the patience to wait for the positive results of the consultant's engagement to come to fruition and after the initial success with the IPD project, Huawei then rolled out projects to improve all its other major business functions.

2. Academics

Huawei's rapid expansion led to organizational problems as the firm grew from 400 to 800 in 1995 and then to 5,600 in 1997. The old processes did not work at a larger scale as different managers within the sprawling firm adopted very different practices and Ren felt that he lost control over the company. For this reason, Ren wanted to codify the best aspects of Huawei's practices and enrich this with new ideas from the West on how to manage a large firm. Although many foreign consulting firms had already arrived in China in 1995, Ren felt that for this exercise he needed individuals who fully understood the Chinese roots of Huawei but also had an understanding and ability to research western management ideas. Ren then recruited six professors from Renmin University of China who had studied abroad as well as worked abroad for many years to undertake the task (Huang, 2002). The professors (Wu Chunbo, Sun Jianmin, Huang Weiwei, Peng Jianfeng, Bao Zheng, and Yang Du) were familiar with Western management ideas and they also had done extensive studies on how Japanese enterprises successfully internationalized. Ren is very explicit about this point:

“We hired professors from Renmin University because they understood western culture but because they were also quite clear about Chinese culture. They used western culture to upgrade Chinese culture, which was in sync with Huawei's way of thinking.” (As quoted in Yang 2016, Kindle Locations 1433-1439).

Ren met with the professors early in 1996 to tell them what he had in mind for creating a Huawei basic law. We will describe this episode in more detail later in the paper because it exemplifies

how Huawei married Western with Eastern ideas to beat out local rivals who only relied on homegrown management practices.

3. Foreign Books

Top managers at Huawei have learned about western history and ideas via books. The CEO is an avid reader of foreign historical works. For example, the book describing the rise and fall of nations (Rifkin & Howard, 1981) deeply influenced Ren's conviction that it is very difficult for any firm to be successful for very long and that the only way a firm has chance to survive at least for a couple of decades is to constantly change, to keep the organization slightly off balance so that it is able to absorb new developments. IBM consultants in 1997 gave Ren a book that in their view described key ideas underlying the integrated product development system of IBM, "Setting the PACE in Product Development" (McGrath, 1996). Ren bought 100 copies and distributed them across Huawei to implant key ideas (Tian, 2013). But it turned out that Huawei could not learn the system by just reading the book, and this was one reason why Ren decided to hire IBM consultants to help the transplantation of IBM's product development to Huawei.

4. Travel

Ren traveled extensively abroad to learn how Western companies were organized. After his tour in 1992, Ren concluded that Huawei needed to improve its management if it wanted to catch up with Western and Japanese rivals (Yang, 2016). Between 1993 and 1995, Ren took a team of Huawei managers to visit Alcatel, Siemens, Fujitsu, Matsushita, NEC, and Shanghai Bell (Yang, 2016). In 1997, Ren and this top team embarked on an extensive visit of the USA. Tian and Wu (2015, p. 53) report that when Ren and his leadership team visited top American firms including IBM, HP, and Bell Labs (Lucent), he realized how far Huawei was behind the best practices. Locking themselves up for three days in a hotel room in Silicon Valley ending on Christmas Eve,

they produced a 100-page document outlining the key learnings. One thing the Huawei delegation was particularly surprised by was the frequent rise and fall of companies in the US IT industry (Tian et al. 2017, Kindle Locations 1922-1923). Huawei's managers were particularly shocked by the dramatic rise and fall of the computer firm Wang laboratories (Tian and Wu, 2015, p. 54), which filed for bankruptcy in 1992 after being the 8th largest IT firms in 1978. In fact, one core element of Ren's cognitive frame evidenced in published speeches afterward is the conviction that the greatest challenge for any company is to keep changing to delay the common fate of firms that they will be replaced with new firms. See for example his speech "Huawei's Winter" (Ren, 2001). Conversations in 1997 with CEOs of leading of US tech firms solidified Ren's conviction that Huawei needed a radical transformation of its operating procedures to continue its growth and catch up in efficiency with global leaders.

Local (Chinese) History

1. Socialization

One of the key mechanism how history influences individuals' cognitive frame is by being surrounded by other people who pass on values, norms, stories, and ideas of the social context. In the case of the founders of Huawei, this was China. Ren developed a strong management philosophy that change needs to be constant but also incremental and not radical (Tian & Wu, 2015). This incrementalism is also visible at other leading entrepreneurial firms (Alibaba, Haier, Tencent) is reminiscent of Deng Xiaoping's often-invoked aphorism "that he groped for the stepping stones as he crossed the river" (Vogel, 2013, p. 2). He used this aphorism to articulate his incremental approach to transforming the centrally planned economy into one that extensively used market mechanisms to allocate resources. Any person living in China

during the 1980s and 1990s would likely have come across this idea of approaching major changes incrementally. Ren clearly took on this idea, and it forms a major part of his cognitive frame that influences decision making at Huawei about how to approach organizational change.

2. Formal Education

The formal education in any country has a strong influence on what students learn and do not learn. No one between 1949 and 1978 was taught in China how to manage private enterprise. The history of China here influenced what Ren and founders of Huawei brought to the table. Ren admits, “I am half-literate about technologies, corporate management, and financial affairs. I am trying to pick up and learn about these things along the way. So I must gather a number of people and let them play their own parts so that the company may move forward. Personally, I must remain modest, and depend on the collective power” (Tian & Wu, 2015, p. 114). Ren acknowledges here that he knew relatively little about what ideally a CEO of an IT company should know, and this led to a more collective leadership as evidenced by the rotating acting CEO system that Huawei implemented in 2011 after first creating a rotating COO position in 2004. He echoes the same point in a speech entitled the “River flows east” which is filled with historical analogies and highlights that his lack of training required him to rely heavily on other peoples’ knowledge (Ren, 2011a).

3. Local Books

The founder learned the ideas about courage, obedience, discipline, and mass mobilization from Mao and the Chinese Communist Party (CCP), which he joined in 1978 (Pullar-Strecker, 2013). Ren’s speeches (1998, 2011b, 2011c, 2014) also make clear that he learned a lot from the CCP, which is also acknowledged by Tian and Wu (2015, p. 139). In fact, Tian and Wu (2015, p. 62) report that “thirty years ago, [Ren] won the title of Model Learner of Chairman Mao’s Works,

and the writings have certainly inspired him ever since.” Tian and Wu (2015, p. 62) continue to note that, “Some critics are saying that Huawei’s management philosophy has clear Maoist features. This is true, but it is totally wrong that Ren Zhengfei is running the company with the thoughts of Mao Zedong.” We agree with this assessment. Ren has been influenced by many people. If anything, he is more influenced by Deng Xiaoping, who emphasized openness and reform in China. But he has been imitating Mao’s ideas about how to mobilize people and rally them behind an important goal. Evidence of Ren having learned from Mao is evident in his speech, “Why should we be self-critical?” (Ren, 2000).

4. Local historical films and TV shows

As a big believer that studying history is useful for corporate leaders, Ren also watches Chinese historical films and TV shows and then incorporates what he learns in his own thinking and his communications to staff. How much Ren has been influenced by historical films is evident in his speeches entitled “On participation in the Exhibition in Russia” (Ren, 1996), “Huawei university wants to be the cradle of generals” (Ren, 2006) and “Offence is the best defense” (Ren, 2013). In terms of the influence of historical TV shows on Ren’s thinking, Tian and WU (2015, p. 117) observe:

“[Ren] became fascinated by a series of historical lectures aired by Phoenix TV [A Chinese language Channel]: Bloody Dusk. Ren recommended these lectures to other members of senior management. The lesson he learned was that a leader must be flexible under changing circumstances; leaders must be able to take the offensive or hold back, insist on principles or accept failures as circumstances demand.”

Ren himself reveals in a public forum, published as “Dialogue with the 2012 Lab”² (Ren, 2012), that he had watched, for example, a historical TV series on the scholar Wang Guowei (1877-1927), who at the turn of the 20th century had forcefully articulated ideas concerning how to Westernize Chinese thought. Ren (2012) tells his audience that he believes that Wang’s ideas are still very applicable today.

THREE ILLUSTRATIVE EPISODES

We offer three episodes that collectively illustrate the inductive model (Figure 2) of how history influenced the leadership frames and strategic decisions at Huawei. We follow Argyres (1996) in presenting first the key facts about each episode and then offering interpretations of each episode.

Made in China: Collective Resignations at Huawei

This episode has two parts, the 1996 sales department shakeup and Huawei’s response to the new 2008 Chinese labor law. In January 1996, all leaders in the sales department were required to submit—in addition to an annual report on their personal performance and their plans for the next year—a letter of a resignation. Top management then evaluated the performance of all sales department leaders to determine whether they were a good fit for the requirements of their position, and accepted either the plan for the following year or the resignation of the individual (Tian & Wu, 2015). Through this process, more than 30 percent of the leaders in the sales department were let go. In the wake of this episode, Huawei began to systematically hire

² The 2012 lab is a new effort by Huawei to research fundamental new technologies. It involves 15,000 engineers and researchers, 20 percent outside China across a variety of laboratories that collectively are referred to as the 2012 lab. The head of the lab reports directly to the CEO.

and promote managers based on competence rather than seniority, and Huawei staff who did not perform well were demoted.

Starting in 2006, the Chinese government introduced plans for a comprehensive new labor law, giving greater protection to workers. The draft law received an unusually large number (190,000) of official comments (Gallagher *et al.*, 2014), indicating how significant this legislation was for the Chinese economy. The final wording of the new labor law included an important provision that dramatically strengthened the rights of employees who had worked in the same company for more than ten years or had signed two or more fixed-term contracts with the same company. This requirement of the new labor law clearly conflicted with the HR practices Huawei had developed to remove poor performance even if they had been with the company for over 10 years. To get around this problem, Huawei asked its top 6,687 high-ranking managers (representing 8.2 percent of a total workforce of 81,000) who had been employed by Huawei for over eight years to collectively resign from the company by the end of 2007 before the new labor law became effective on Jan. 1, 2008, thereby creating a break in their employment. The CEO was included in this. All 6,687 managers submitted their resignation letters, and the Huawei board accepted them. Huawei in 2008 evaluated all managers and, according to Tian and Wu (2015, p. 179) later signed new contracts with 6,581 of them. A total of 38 asked for retirement, 52 people sought employment elsewhere, and 16 others were deemed unqualified and were asked to leave the company.

Interpretation

We have never encountered in a Western company collective resignations of the kind that took place at Huawei. This raises the question of why this occurred at Huawei and not in a Western company. The idea of collective leadership and collective resignations is something that

Huawei leaders, especially someone like Ren, would have been socialized into. The Chinese Communist Party over the past couple of decades has developed routines for collective leadership transitions, which means a large group of leaders would take office together and step down together (Hu, 2014). Ren, as a member of the CCP since 1978 (Pullar-Strecker, 2013), would have learned this practice. But having the idea is clearly not sufficient for carrying this out. Why would managers of Huawei go along with the request from the CEO and engage in collective resignations?

The answer, in our view, lies in the collective ownership structure of Huawei, which is unusual for a multinational company. Ren, only holds 1.4 percent of equity in the firm and gave the remaining shares to other employees early in the history of Huawei. In 2016, for example, 88,000 Huawei employees (out of a total of 180,000 employees) own the other 98.6 percent of the shares (Huawei, 2017). In 2009, close to the time of the second collective resignations, 61,457 of 95,000 employees, or 65%, held shares in the company (Saarinen, 2010). These shareholders receive a large dividend payment in addition to any performance pay and bonus they may receive as part of being employees. Having developed into a strict meritocracy, employees with higher performance receive more shares. It is not a coincidence that in each of the two resignations, leaders of the company and not the lowest level employees were asked to resign. Our interpretation is that a high-level manager owns a larger fraction of the stock than the average employee shareholder, and they feel more like owners rather than employees. Therefore, they would be willing to engage in collective resignations as they were perceived to provide a big boost for the company to continue its rapid development. A larger, more successful firm would mean higher dividend payment for each individual, and hence any policy that is likely to boost growth would be welcome particularly by those with many shares. Furthermore,

if most of the managers go along with the plan, the peer pressure on the remaining ones would be high. Furthermore, the individuals who chose to retire in the 2007 collective resignations could maintain their shares and their dividend income for as long as they did not take up work for another company.

The motivations the top leadership of Huawei had with the collective resignation program for the sales department in 1996 were somewhat different from the ones at the end of 2007. Huawei's origins were not in manufacturing telecommunications equipment but in selling switches from Hong Kong in mainland China. It was an import and sales organization in the beginning. Hence the sales department in the early days was the most important function of Huawei. Ren determined that in order to grow and expand to the West, Huawei needed to professionalize and needed to be led by people who were all extremely dedicated to the firm. Furthermore, he wanted to establish more central control of the sales fiefdoms that had developed in the various regions of China. The forced collective resignations in 1995 in the sales department were seen by Ren and other top leaders as a way to enhance the performance culture of Huawei, which was subsequently rolled out to other parts of the firm. Different from the 1996 collective resignation of the sales department, the 2007 resignation wave was triggered by an external event, the upcoming labor law change, which would not have allowed Huawei to continue with all the elements of its performance culture for managers that the firm had developed since the first collective resignation in 1996. By making 6,687 managers with more than 8 years of service resign, Huawei could continue the practice of managing out low performers at least in the medium term. Although Chinese labor union officials investigated Huawei, the move was deemed legal and Huawei reaffirmed its comment to a performance culture where low performers are managed out, similar to General Electric's practice of

removing the bottom 10% of performers, which was in place at GE for decades until recently. It is important to note that Huawei's success with forcing collective resignations in 1996 made such a move more legitimate within the company in 2007. The company's own history has an impact on the cognitive frame of leaders and the decisions made in a later period.

East meets West: Creating a company constitution with the help of academics

Huawei began to formulate a “constitution” for the firm that would be binding for everyone in Huawei (Yang, 2016).³ This constitution is also often referred to the “basic law” or charter of Huawei (Huang, 2002). We alluded earlier to the 6 academics from Renmin University of China who were hired because they understood the Chinese context but also because of their experience in the West and knowledge of Western management knowledge. At the time, three of them were full professors—Peng Jianfeng, Bao Zheng and Huang Weiwei—and the other three were associate professors—Wu Chunbo, Yang Du and Sun Jianmin—(Huang, 2002).

The process of creating the “basic law” took two years from March 1996 to March 1998. The process unfolded this way. Initially, Ren spent three days with the academics to share his thoughts why Huawei needed to create a unifying document that would bring order to what he perceived to be a chaotic management situation at Huawei in large part prompted by the fast growth (see Figure 1) and the lack of strong management capability of many managers and unified vision and culture for the firm (Tian, De Cremer, & Wu, 2017). The idea was to envision a second founding of Huawei, now with the ambition to become a large and significant player in

³ In Chapter 6 his book *The Huawei Way*, Yang (2016) provides many details how Ren recruited the Renmin professors and how he interacted with them, and our account has benefited greatly from the details.

the global telecom industry (Yang, 2016). At the end of the three days, Ren and the six professors had a rough idea what the document should do on a high level:

“To get out of chaos, Huawei must clarify three issues: first, why has Huawei been successful? Second, what are the key factors that support Huawei's success? Three, what changes does Huawei need to make to achieve greater success?” As reported in an interview with one of the six academics, Wu Chunbo by World Business Report - 世界商业报道 (2006).

The professors prepared outlines with high-level ideas and Ren made comments on them. He also traveled to Beijing to meet with them in person again. Ren then encouraged the professors to do the writing at Huawei headquarters in Shenzhen to get a deeper exposure to the firm. The professors interviewed many employees, trying to crystallize what worked well in Huawei and what Huawei needed to do become a more sophisticated company. They combined answers from Ancient Chinese texts such as *The Art of War* (Tzu, 2012) and studied organization design western companies as IBM, HP and Intel (Yang, 2016). Over the two-year period, many drafts were created and the drafts were extensively discussed at Huawei across all levels of management.

The final version of the “Huawei’s Basic Laws” document runs over 9,000 words and is structured in terms of 103 articles (Huawei, 1998). Part I (Articles 1 through 20) sets out the vision of becoming a world-class equipment supplier, describes values for Huawei and it identifies some key intermediate goals, for example, to develop independent intellectual property. Throughout the articles that follow, the document not only sets out routines to be followed, but frequently aspirations for the various functions of Huawei are articulated and the rationale for them is also sketched.

Part II (Articles 21 to 25) sets forth basic operating principles. Article 25, for example, articulates that “customer satisfaction” should be the yardstick to value all work. Article 26 articulates a key resource allocation rule and differentiates Huawei from many other local firms in the telecommunication industry. It guarantees that at least 10% of sales is allocated to R&D. Huawei has implemented this rule consistently. In 2015, 14% of sales were allocated to R&D. Article 27 sets forth the organizational structure for R&D. Article 37 sets forth a clear rule that the company will not engage in unrelated diversification, a principle which the firm has followed since 1998.

Part III (Articles 39 to 54) articulates key features of the organization’s structure and it sets up aspirations for the level of competence to be achieved in the different functions of the firm. What comes out very strongly in these articles is the attempt to centralize control and not to allow individuals to run their own fiefdoms.

Part IV (Articles 55 to 73) articulates human resources aspirations policies. After announcing that development of superior human resources is key for the success of the firm, the articles in this section focus on how to create a fair and transparent human resources system. Article 72, for example, stipulates a job rotation policy for senior executives to give them broader experience.

Part V (Articles 74 to 99) sets forth principles for the management control system of the company. The key idea behind the rules is to strengthen the control of the center of the entire organization. The 25 articles touch on the areas where the firm needs to make real improvements and articulates principles that should be followed to make it happen. Article 78 sets the goal of engaging in total quality management and stipulates that the routines that Huawei will establish

for this purpose will comply with the ISO-9001 requirements. Article 79, among other things, sets a specific goal, namely that a product on average will run 2,000 days without fault.

Part VI (Articles 100 to 103) outlines that Huawei needs to balance using routines with introducing new routines. It also makes stipulations for who should succeed current managers, how they should be trained, and finally when and how the “basic law” is to be revised. Article 100 articulates the need to proceed incrementally with changes, emphasizing, “We must develop and inherit.” The final article (103) stipulates that the “basic law” is supposed to be revised every 10 years.

Interpretation

The rapid growth of Huawei in the early 1990s (see Figure 1) led to growing pains. When Huawei had only a few employees (in 1991, Huawei had 50), the founder could shape people’s behavior by direct interaction. By 1993, Huawei had 400 employees, by 1995, 800, and by 1997, 5,600 and in 1998, when the final version of the “Basic Law” appeared, Huawei had 9,500 employees. Ren was no longer able to monitor things himself and his sales managers and the far provinces of China were making up their own management principles. For this reason, Ren felt that there was chaos at Huawei. The entire point of the basic law was to gain control of the firm not through direct interaction but by collectively agreeing on values and organizational routines through which the firm was going to be managed in the future.

The entire orchestration of the Huawei basic law and Ren’s insistence that the drafts were going to be debated extensively and that firms would engage in “*criticism*” and “*self-criticism*” is reminiscent of the leadership of Mao. Here Ren took a chapter straight out of the playbook of Mao campaigns to unify the party members behind his plans (Dittmer, 1973). Tian and Wu (2015) explain: “In 1997, [...] Ren Zhengfei started to advocate self-criticism more often, and its

meetings of criticism and self-criticism, the so-called “democratic meetings” which had lasted 10 years, were institutionalized and extended to every level and part of the organization. This is a typical Communist Party of China practice for organizational development and has helped Huawei in developing its own managers and teams.

Every top- and middle-level manager was supposed to read and master the basic law so they would have a shared understanding of where Huawei wanted to go and what methods of getting there would be condoned and what methods would clearly be in violation of the basic law. It is useful to highlight the origin and the rationale for a few articles of the “Basic Law.” Huawei had left behind the other startups that focused on importing switches from Hong Kong by developing their own R&D. Ren and his team wanted to build on this success by getting everyone to agree and putting in the “Basic Law” that from now on Huawei would spend at least 10% of sales on R&D. Huawei has kept this rule over the past two decades. As mentioned before, the 25 articles in part Part V (Articles 74 to 99) identify the areas where the firm needs to make real improvements and articulates principles that should be followed to bring it about. One way to interpret this section is that it articulates a collective agreement for the various transformation initiatives that were started in 1999 including the IPD, Integrated Supply Chain and HR transformations.

Huawei’s “Basic Law” sees itself as a short- and medium-term articulation of organizational vision and key routines. The Huawei document is explicit that to achieve the vision of becoming a leading telecommunications company, Huawei needs to change its routines whenever this is deemed necessary. The significance of Huawei’s “Basic Law” lies not so much in the actual articles, as Ren acknowledges. It was a tool to unify the company and get everyone ready to accept significant changes to the organization going forward. The first radical departure

of the firm's existing routines was the IDP project, which we will detail as our final episode to illustrate our inductive model.

Learning from the West via Consultants: Transferring Integrated Product Development Practices from IBM to Huawei

As Huawei was growing rapidly and as it was developing its own original products instead of simply importing telephone switches from Hong Kong, Huawei experienced enormous fluctuations in market performance of new products. Because the company lacked rigorous procedures and controls, some products were well received by the market but others did not and were deemed a failure by Huawei's leadership. For this reason, the Huawei top leadership felt the urgent need to learn best practices in product development from Western firms to make product more robust, more efficient and faster. At the time Huawei had friendly relationships with Cisco and IBM consultants, who had Chinese speaking staff in China, were approaching Huawei (as they were doing with other Chinese firms in 1997). In 1998, IBM consulting landed its first engagement with Huawei to help it with an Information Technology Strategy and Plan and that got IBM the foot in the door to pitch a much more elaborated consulting engagement to restructure the product development routines of Huawei. Within Huawei there was an extensive debate about whether Huawei should copy Cisco's product development routines or IBM's. In the end, Ren insisted Cisco's routines were too flexible and were not sufficiently codified. He thought the more template-driven IBM system would be much more appropriate for the Chinese context (Tian, 2013).

The newly created routines coordinated much more extensively across functions and this led to resistance within the organization. But Huawei's leadership insisted employees had to copy exactly what the IBM consultants told them. To overcome resistance to the change, the CEO

repeatedly told employees that Huawei “cut its feet to fit in the shoes” (Yu, 2013) of the IBM templates.

The resistance to the proposed new routines was grounded in the fact that Huawei’s gradually grown routines would be broken by the new system. Before IPD, product development followed serial routines. Marketing and Sales sent requests for new products, R&D next would develop technological solutions that were handed to manufacturing and logistics would organize shipping to customers. Frequently the products did not work as promised because there was no back and forth between functions to ensure the technology worked well for customers. What is more, the same kinds of products were developed over and over again because different sales and marketing groups sent requests for similar products to R&D, which treated them as independent products. In 1997, there were over a thousand version numbers of often similar products (Liu, 2015). As result, product development costs increased dramatically and were out of line with international competitors. The new IPD routines required that cross-functional teams were formed to interact frequently during the product development phase and to prioritize what products were to be developed to avoid duplication. Marketing had misgivings about this change in routines because under the old routines when a product failed, marketing could simply blame R&D as marketing was not involved in the product design phase. In the new IPD system, marketing was deeply involved in the design stage and could no longer pass the blame to R&D. The breaking of old routines initially caused product development to be even slower, but before long the new more coordinated approach to product development increased efficiency significantly.

After recruiting IBM to help with the initiatives in 1999, Huawei spent the next 3 years gradually preparing a full rollout of IPD routine system across the company. In this four-year

period IBM had about 100 consultants continuously work at Huawei helping to transfer every detail of IBM's product development routines, providing detailed template for all aspects of the system. IBM, for example, even provided templates for how to run meetings of the cross-functional teams (Tian, 2013). The first integrated portfolio management team (IPMT) was established in 2003 and subsequently the new routines for product development were diffused in the company. While the IBM consultants finished working the IPD projects in the end of 2003, the project team in Huawei continued to refine and optimize the system of routines behind the integrated products development approach. 15 years after the start of the initiative, one of the measures to track improvement in product development still did not score at the target level set by the company, triggering another round of changes. With the implementation of the IPD project, the product development cycle and product failure rate declined (see Figure 3 and 4), whereas customer satisfaction continuously increased (Liu & Hu, 2015).

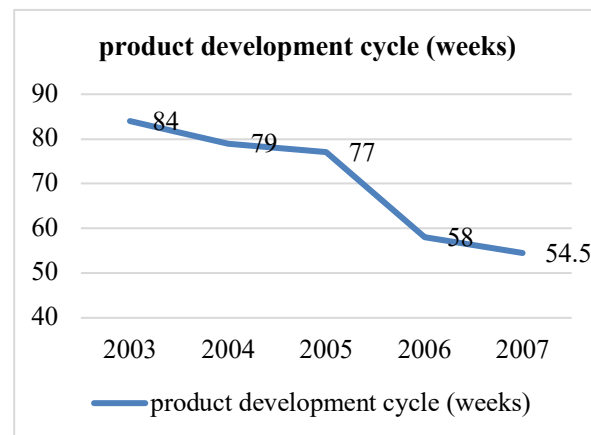


Fig. 3. The product development cycle of Huawei from 2003 to 2007 (Ouyang, 2015 presentation)

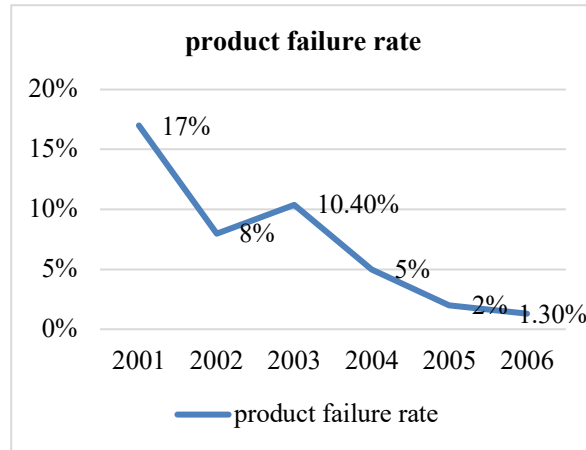


Fig. 4. The product failure rate of Huawei from 2001 to 2006 (Liu & Hu, 2015)

Interpretations

As we showed in Table 1, Huawei engaged many different consulting firms after 1997. The most important major project is the IPD because it involved so many different functions of organization and it was the first time that Huawei replaced its own organically grown routines by importing an entire system of routines that had been developed in Western company, here IBM. While IBM was involved for four years to transfer the IPD routines, Huawei spent another 10 years optimizing the system, consistent with the philosophy and practices advocated by the total quality management movement in the USA in the 1990s (Winter, 1994).

The IPD initiative ushered in a large cultural change and gave Huawei the confidence to carry out the subsequent major transformation. If the initiative had been a failure, it is doubtful that Huawei would have continued hiring western consultants as it did. It is also highly doubtful that if the initiative had failed Huawei would have continued on its quest to constantly transform itself, and continue to grow and take market share away from Western firms all of the world.

In the case of the IPD initiative, the CEO insisted that Huawei employees copy exactly the routine templates that IBM consultant provided to Huawei. Unlike the copy exact strategy of

Intel where the firm insisted that a 2nd factory making a particular generation of chips copy exactly the design of the first factory (Winter, 2010), IBM consultants made a few changes to the IPD templates copied from IBM's practices to accommodate the context of Huawei in China. But the CEO insisted the only the IBM consultants were allowed to make changes to the system and not the Huawei employees. This way he wanted to make sure that first the entire system was transferred and given a chance to succeed.

The IPD transformation not only allowed Huawei to become much better and efficient in product development, the importation of the Western routines also gave it credibility with potential Western customers. The IPD system became a strong piece of evidence that convinced Huawei's clients and future partners that Huawei now possessed a set of advanced management methods that would ensure its product and service quality. One of its first Western customers, British Telecom, agreed to source equipment from Huawei after Huawei presented the IPD system to the British Telecom experts who visited the company in 2002. The success of the IPD is visible in terms of Huawei's growth. During the period of IPD implementation (1999-2014), Huawei's sales grew from 1 billion USD to more than 40 billion USD. And the number of employees increased more than tenfold from 15,000 in 1999 to 160,000 in 2014.

DISCUSSION & OPPORTUNITIES FOR FUTURE RESEARCH

Between 1949 and 1978, China ran a centralized communist economy that did not allow private enterprise. All major industries were run on the Russian model with large state-owned enterprises (Naughton, 2007) guided by five-year plans for the entire economy. When the economy in the 1980s was gradually liberalized, entrepreneurs started new private enterprises, particularly in special enterprise zones like Shenzhen, where Huawei was founded in 1987. As a few of these firms grew rapidly, the founders could no longer run the ventures without

administrative hierarchies and routines, but they had no examples of private companies in China they could imitate or hire experienced Chinese staff from. Hence, they had to make it up, as we mentioned in the beginning of the article. But the example of Huawei clearly shows the founder and his key managers did not make it up completely on their own. They heavily imported historically accumulated knowledge of Western best practices, which they obtained primarily through western consulting firms and Chinese academics who had Western knowledge. And they married this knowledge with Chinese ideas on how to mass mobilize people toward a collective good.

Simply hiring consultants and academics is not a guarantee that the organization will successfully implement best practice routines. Huawei was successful in using consultants and academics to important knowledge because the CEO of Huawei was deeply involved in selecting the consultants and academics. Especially with the first major transformation project (the IPD), there was significant internal opposition to hiring IBM consultants to teach Huawei best practice product development routines. And the opposition did not only come from the lower ranks whose work processes would change dramatically because of the program. The director of Management Engineering Department at the time, Hu Hongwei, who oversaw the IT system and management transformation projects of Huawei, was against hiring IBM. The CEO then moved him into the production department and made Guo Ping⁴, who had joined the firm in 1988, the director of the Department (Tian, 2013). It is very clear that without Ren's strong push and his insistence that Huawei learn western best practice routines the IBM consultant would have not been successful. Future research could look systematically into effective governance structures for hiring and managing consulting firms during their engagement within the firm, going beyond

⁴ Guo Ping today is one of the rotating acting CEOs.

what we do in this paper, namely showing the importance of the CEO's commitment and deep involvement in the process.

Scholars have previously elaborated the key role of consultants in globalizing managerial knowledge (Engwall, Kipping, & Üsdiken, 2016). There have been also been case studies of how individual firms hired consultants to help them adopt the M-form, for example the Kipping and Westerhuis (2012) comparative research on two Dutch banks ABN and AMRO in the late 1960s and early 1970s. Kipping and Westerhuis (2012) reported that while ABN only engaged Arthur Little for a short period from 1972 to Jan 1974, AMRO engaged McKinsey for the next two decades. This means that Huawei's long-term engagement of consultants is not unique.

But the existing literature has never provided any estimate how much money firms have spent to acquire management knowledge from consulting firms as we have been able to do in this study, nor has it shown the breadth of cutting-edge management to a single firm. We were able to report that between 1997 and 2012, Huawei spent at least \$1.6 billion US on transformation projects and consulting firms, which amounts to 1% of sales every year that helped them with this. One of the contributions of our paper is to provide a yardstick that future studies can use to determine to what extent the Huawei spending on transformation projects and consultants is not just special in regard to China but also by global standards. At this moment, such an assessment is simply not possible because the literature presently does not provide figures for other firms.

It is worthwhile to note that in our initial interviews with former Huawei executives, they advanced the idea that Huawei had a dedicated budget for corporate transformations. If such a dedicated budget existed, then a budgeting routine needed to exist that automatically allocated a certain amount of money for change projects. While R&D budget routines exist in virtually all technology companies—Huawei is no exception—no academic or business person we spoke to

had ever encountered an institutionalized change budget. As our research progressed, it became clear that such a budgeting routine did not exist at Huawei. However, as is evident from the interview that Tian conducted with top managers of Huawei and the IBM leaders of the IPD project (Tian, 2013), upon discussion with IBM consultants, Ren decided around 1998 that Huawei needs to spend up to 3% of sales on transformation projects. If Ren and his team identified the areas in which Huawei had gap with the best practice in the world, and decided to start a new multi-year transformation project to learn from the best practice, they would then review proposals from consulting companies concerning how many consultants were required before they made up their mind whether they wanted to spend the money. Once they had, they instructed the finance department to pay for it. Because the top management team decided to have transformation projects that ran for at least 18 years starting in 1998 and Ren emphasized repeatedly in his speeches that Huawei constantly needs to change, members of the organization would talk as if there actually was a routine allocating that budget. If you will, the transformation budget was institutionalized at the level of cognition but not at the level of an organizational routine.

Our study of Huawei is special at least in two other ways. While more recent research has reported that US accounting and IT consulting firms have in recent decades sold their knowledge all over the world (Kipping & Wright, 2012), we are not aware that anyone has documented for a single company the breadth of the different kinds of knowledge Huawei acquired via a series of consulting firms, going far beyond that transfer the routines related on the M-form described in earlier research (Kipping & Westerhuis, 2012). Second, the template of the M-Form was transferred to Europe in the 1960s and 1970s decades after it was created in the US (McKenna,

2012). In the case of Huawei, as the quote by Ren in the introduction to this paper makes clear, Huawei acquired best-practice routines that were often only a few years rather than decades old.

We opened up the black box of history, by examining how Huawei managed to become a large multinational company by combining historically accumulated best practices from Western countries with historically grown ideas from China to make strategic decisions about how to change the design of the organization to create routines, practices, and a culture that would allow the firm to compete with strong international firms. We identified four mechanisms—Consultants, Academics, Books, and Travel—through which foreign history shaped the development of Huawei and four mechanisms—Socialization, Formal Education, Books, and Films and TV programs—through which local history shaped the development of Huawei. The next step in this research stream would be to examine in more detail why some leaders are more open to historical information and others are not. Perhaps Ren’s lack of training in management and business made him more open to learning from historical sources. While we acknowledge that earlier episodes influencing later episodes (for example the first collective resignation influencing the 2nd one and the first major transformation making it easier to convince the organization of the need for later ones), we shed little systemic light on how earlier episodes in the history of the company influenced the subsequent history. If other papers in this special issue also do not do it, this would clearly be another important avenue for future research.

APPENDIX A: INVITED PRESENTATIONS BY FORMER HUAWEI EMPLOYEES AND TAO TIAN

Note: Two of the authors organized quarterly meetings at a leading Chinese university. We have removed their university name during the review process.

Winter 2014

TIAN, Tao. 2014. *Modes and Choices: Huawei's Global Expansion Strategy*. Presentation at the 2014 Huawei Winter Forum.

FAN, Frank. 2014. Regional Strategy of Huawei Globalisation Development: The case of Latin-America. Presentation at the 2014 Huawei Winter Forum.

HU, Saixiong. 2014. The Analysis of Huawei's Culture and Value System. Presentation at the 2014 Huawei Winter Forum.

WANG, Ling. 2014. The Cultivation of Generals: Introduction to Huawei's Manager Management System. Presentation at the 2014 Huawei Winter Forum.

LIU, Hongge. 2014. The IPD of Huawei: Paths and Lessons. Presentation at the 2014 Huawei Winter Forum.

YU, Donghai. 2014. From ISC to GSC: The Construction and Development of Huawei's Supply Chain. Presentation at the 2014 Huawei Winter Forum.

Spring 2015

TIAN, Tao. 2015. The Methodology of Transformation: Principles and Practices of Huawei's Transformation. Presentation at the 2015 Huawei Spring Forum.

FAN, Frank., SUN, Yelin. 2015. Customer-Centric Transformation. Presentation at the 2015 Huawei Spring Forum.

OUYANG, Jianhong. 2015. The Transformation of Huawei R&D and Product Line. Presentation at the 2015 Huawei Spring Forum.

GUO, Shizhan. 2015. Huawei Legal Affairs Department: Strategic Positioning, Value and Organizational Systems. Presentation at the 2015 Huawei Spring Forum.

Summer 2015

HU, Yanping. 2015. How does Huawei Improve Organisation Performance? A Perspective of Management System Improvement. Presentation at the 2015 Huawei Summer Forum.

YU, Donghai. 2015. To Implement Management System, To Improve Organisational Efficiency. Presentation at the 2015 Huawei Summer Forum.

PENG, Zhijun. 2015. The Construction of High Performance Teams: A Perspective from Finance. Presentation at the 2015 Huawei Summer Forum.

HU, Saixiong. 2015. Manager Management and High Performance Teams. Presentation at the 2015 Huawei Summer Forum.

CHEN, Zhimin. 2015. High Performance Team Construction: Talent Team Construction. Presentation at the 2015 Huawei Summer Forum.

Autumn 2015

TIAN, Tao. 2015. Huawei: Implications of History. Presentation at the 2015 Huawei Autumn Forum.

CHEN, Zhimin. 2015. Huawei's Practices on Manager Management. Presentation at the 2015 Huawei Autumn Forum.

LI, Jun. 2015. Overseas Manager Management Presentation at the 2015 Huawei Autumn Forum

XU, Wenli. 2015. Manager Management of Huawei Marketing System. Presentation at the 2015 Huawei Autumn Forum.

ZHANG, Huixi. 2015. The Transition of R&D Talents Management. Presentation at the 2015 Huawei Autumn Forum.

Winter 2015

TIAN, Tao. 2015. Concept Innovation and Organizational Innovation of Huawei. Presentation at the 2015 Huawei Winter Forum.

SUN, Yelin. 2015. The Development of Innovation Capabilities: Based on Huawei's Practices. Presentation at the 2015 Huawei Winter Forum.

SONG, Haibing. 2015. Company Transformation and Organizational Innovation. Presentation at the 2015 Huawei Winter Forum.

WANG, Wenjia. 2015. Customer Needs Management and Open Innovation. Presentation at the 2015 Huawei Winter Forum.

Spring 2016

TIAN, Tao. 2016. Customer Needs Management of Huawei. Presentation at the 2016 Huawei Spring Forum.

FAN, Frank. 2016. How to Recognize and Transform Customers' need? Presentation at the 2016 Huawei Spring Forum.

ZHU, Xiaojiang. 2016. Using Process and IT to Support Effective Customer Relationship Management. Presentation at the 2016 Huawei Spring Forum.

CAO, Feilong. 2015. Road of Product Development: How to Transform Needs to Competitive Products. Presentation at the 2016 Huawei Spring Forum.

WANG, Zhangang. 2016. The Value Realisation of Demands Management: From Product Positioning to Implementation. Presentation at the 2016 Huawei Spring Forum.

Winter 2016

TIAN, Tao. 2016. Cooperation and Sharing: An Institutional experimental investigation on a Chinese firm. Presentation at the 2016 Huawei Winter Forum.

YAO, Weimin. 2016. Chinese Firms Going Abroad and Globalization: The Challenges and Solutions. Presentation at the 2016 Huawei Winter Forum.

CHEN, Zhimin. 2016. Leadership Cultivation in Chinese Firms: Under the Context of Internalization. Presentation at the 2016 Huawei Winter Forum.

Spring 2017

TIAN, Tao. 2017. The Principle of Rise and Fall: An Organizational Formula. Presentation at the 2017 Huawei Spring Forum.

WANG, Xingyuan. 2017. The Self Correction Capability of Huawei: Implications from the Telekom Malaysia Affair. Presentation at the 2017 Huawei Spring Forum.

ZHANG, Hui. 2017. Huawei's Brand Strategy and Practices. Presentation at the 2017 Huawei Spring Forum.

Summer 2017

TIAN, Tao. 2017. The Leadership of Huawei. Presentation at the 2017 Huawei Summer Forum.

GE, Caifeng. 2017. The Leadership of Huawei's Managers. Presentation at the 2017 Huawei Summer Forum.

CHEN, Zhimin. 2017. From Personal Leadership to Organizational Leadership. Presentation at the 2017 Huawei Summer Forum.

APPENDIX B: ORAL HISTORIES WITH FORMER HUAWEI EMPLOYEES

Interviewee	Position with Huawei	Dates of Interview	Locations of Interviews
SUN Yelin	Former senior VP of Huawei	2015.08.11 2015.12.03 2016.05.06	Shenzhen Shenzhen By telephone
GUO Shizhan	Former director of Huawei Global Legal Department	2015.08.10 2015.12.03	Shenzhen Shenzhen
FAN Frank	Former VP of Huawei Overseas Regional Market	2016.04.11 2016.07.05	By telephone By telephone
LI Yigai	Former manager of Huawei IPD transformation project	2015.08.10 2015.12.04 2016.05.06 2016.07.06	Shenzhen Shenzhen By telephone By telephone
LOU Peng	Senior Vice President of Huawei	2015.12.04	Hong Kong
TANG Jiyue	Former personnel director of Huawei Wireless Products Department	2016.05.10 2016.10.10	By telephone By telephone
LIU Hongge	Former manager of Huawei IPD transformation project	2015.08.10	Shenzhen
PENG Zhijun	Former VP of Huawei Financial Management Department	2016.04.26 2016.07.18 2016.10.11	By telephone By telephone By telephone
YU Donghai	Former director of operation support of Huawei Supply Chain Management Department	2016.04.26 2016.07.05	By Telephone By Telephone
SONG Haibing	Former director of personnel of Huawei Financial Management Department	2016.10.12	By Telephone
Hu Yanping	Former senior VP of Huawei	2016.11.08	By telephone

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