

XIAOMI CHALLENGES GLOBAL SMARTPHONE LEADERS

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In December 2014, surprised newspaper readers around the world learned that the most valuable start-up company was a Chinese company that most had never heard of: smartphone maker *Xiaomi* (valued at \$45 billion) overtook the worldwide operating taxi-booking company *Uber* (valued at \$40 billion). Within only four years, *Xiaomi* became number one in China by units sold, ahead of *Samsung*, *Apple* and *Lenovo*. In the second quarter of 2014, *Xiaomi* had overtaken *Samsung* to become volume market leader with a 14 per cent market share. Worldwide, *Xiaomi* rose to sixth place in 2014, behind *Samsung*, *Apple*, *Lenovo*, *LG* and *Huawei* (Table 1). What explains the phenomenal success of *Xiaomi*?

The Chinese smartphone market has grown to become the largest in the world, overtaking the USA in 2012, with 31.8 million units sold. The industry was driven by rapid evolution of smartphone technologies and the availability of Wi-Fi, cheap components, specialized contract manufacturers and a vast domestic market of budget-conscious consumers. Local Chinese companies compete head-on against *Apple*, *Samsung* and other major global brands, who still sold about 20 per cent of their global sales in China. Six of the top eight vendors are Chinese firms that compete intensely among themselves: computer maker *Lenovo*, telecom equipment giants *Huawei* and *ZTE*, consumer electronics firms *TCL* and *Coolpad* and start-up *Xiaomi*. *Samsung* and *Apple* target the high-end market with handsets for about €500, while domestic competitors target lower market segments with selling prices set between €100 and €150.

Only a few years ago, the hottest brand in town was *HTC*. Once a manufacturer of phones for Western brands, *HTC* started its own branded smartphone in 2007, and became the top Android-based smartphone in the USA in 2010. Driven by a fast innovation culture, *HTC* aimed to launch a new version every month. Yet with an undifferentiated product and a mid-price positioning, *HTC* soon found itself squeezed

Table 1 Estimated world smartphone market share (units sold)

	2013	2014	2014
Samsung	16.8%	32.5%	28.0%
Apple	10.2%	16.6%	16.4%
Lenovo	n/a	4.9%	7.9%
LG	n/a	4.3%	6.0%
Huawei	9.5%	4.4%	5.9%
Xiaomi	nil	2.2%	5.2%
Coolpad	n/a	3.6%	4.2%
ZTE	6.9%	3.2%	3.1%
Sony	n/a	4.1%	3.9%
Nokia	30.1%	3.0%	n/a
Other	26.6%	21.2%	19.4%

Sources: Technavio, Gartner, authors' estimates.

between *Apple* and *Samsung* at the high end and Chinese players such as *Huawei* and *ZTE* at the low end. *HTC*'s global market share slipped to 2.2 per cent in the third quarter of 2012. In the next two years, *HTC* launched new high-end phones, but despite awards and rave reviews, sales remained modest.

ENTREPRENEURSHIP: CHINESE STYLE

One entrepreneur who observed and learned from *HTC* was Lei Jun. A graduate from Wuhan University, he spent his early years as a software engineer, later a CEO, at *Kingsoft*, a software company competing with *Microsoft* in China. His first major success as an entrepreneur was *zhuyou.com*, an online book retailer, he sold to *Amazon* in 2004, earning him €10 million. After *Kingsoft* was listed on the *Hong Kong Stock Exchange* in 2007, Lei resigned as CEO and started a new career as a venture capitalist, investing in online commerce and social media businesses.

In 2011, Lei Jun founded *Xiaomi*. At this time, the smartphone industry was rapidly maturing, with specialist providers at different stages of the value chain. Upstream were hardware manufacturers (like *Qualcomm* for chips) and software providers, for operating systems (such as Android) and software applications (like WeChat and Weibo). In the mid-stream, companies like *Foxconn* integrated the hardware and software to manufacturers of the physical products, smartphones. Further downstream, brand owners like *Nokia*, *Apple*, *Samsung*, *HTC*, *Huawei* and *Lenovo* marketed the products, and also led product innovation. Smartphones were usually sold via distributors, including telecom operators *China Mobile*, *China Telecom* and *China Unicom*, and retail stores like *Gome*, *Suning*, *ID.com* or *Taobao*.

With a good dozen established smartphone brands, how could *Xiaomi* differentiate itself? First, *Xiaomi* only used the suppliers for *Apple* and *Samsung* to establish a reputation as a top-tier brand. For example, *Xiaomi*'s chip suppliers were *Nvidia* and *Qualcomm*, and its manufacturers were *Foxconn* and *Inventec*. Second, *Xiaomi* developed its own operating system, MIUI, based on Google's Android system, yet using creative designs to make it more user-friendly for Chinese consumers.

Third, Lei Jun developed an innovative business model to reach consumers while reducing costs. *Xiaomi* spent next to nothing on advertising, but sold its phones exclusively through the internet. In this way, it not only saved the margin the retailer would earn, but dramatically reduced the need to keep inventories. Building on his experiences in e-commerce and social media from his earlier entrepreneurial ventures, Lei Jun designed innovative online marketing and distribution channels. Initially, *Xiaomi* targeted technology-savvy IT engineers and college students via an online *Xiaomi* forum. Thus *Xiaomi*'s official website is its main sales channel, complemented by online malls, such as *Taobao*. Lei Jun moreover developed a pre-selling model to reduce expenses for inventory. *Xiaomi*'s cell phones were usually offered with limited supply, and customers had to register online before being able to bid online for a *Xiaomi* smartphone. As a result, 150 000 units were often sold online within minutes. A *Financial Times* correspondent observed:

offering sleek, high-spec kit at low prices, *Xiaomi* has overtaken more venerable rivals to become the country's most popular smartphone brand. Its models sell for hundreds of dollars less than the latest *Apple* or *Samsung* phones, yet on the streets of Beijing or Shanghai they have become objects of lust.

However, the true source of *Xiaomi*'s success may not be the product, but the community of fans that *Xiaomi* has built. Before launching its products, *Xiaomi* already recruited tech enthusiasts to help testing its MIUI operating system. *Xiaomi* engages directly with its fans both online, for example, through social media communications and early bird offers, and offline, by inviting them to product launches or parties in nightclubs across China. With intensive online communication, *Xiaomi* developed a fashionable image beyond online geeks. As CEIBS professor Jane Wang observed (source 15):

Everyone around us has the iPhone6 and iPhone6 plus. But *Xiaomi* stands out as something different. What does this say about its users? It says: I'm experimental, I'm willing to give new ideas a try and I'm really leading the trend.

As the brand matured, it also became popular as a gift young people gave to the grandparents: good value for money, and easy to use. This market however was less emphasized by *Xiaomi*, as it adds less to its aspired brand image.

Xiaomi's innovation strategy focuses on fast prototyping with very short 'launch-test-improve' cycles, a strategy found in many Chinese technology start-ups. Thus products are launched in quick succession, customer feedback is collected via online forums, and engineers quickly incorporate new ideas in the next product ideas, especially in software. While every change is small, cumulatively this process generates quite substantive innovations in the operating software, MIUI, and the apps that come with the *Xiaomi* phone.

This business model enables *Xiaomi* to offer innovative products while undercutting rivals with rock-bottom prices; many *Xiaomi* models are available online for prices around €100, whereas *Samsung*'s Galaxy smartphones retail for €500 and more. Thus in 2014, *Xiaomi* sold 61.1 million smartphones (a 227 per cent increase over 2013) and earned sales revenue of almost €10 billion (135 per cent increase). However, some observers expected *Xiaomi* to drive smartphones to commoditization – a process of competition by which differentiated products that command high prices and high margins lose their comparative advantage. *Xiaomi* focused on building volume and market share, and expected profits to come later once market leadership had been consolidated, thus following a strategy common in boom years in Silicon Valley. However, with thin margins, the business model was also sensitive to disruptions, as *Xiaomi* had little financial buffer to absorb unexpected shocks.

As *Xiaomi* became the most popular Android-based smartphone brand, it was recognized as the most 'threatening' competitor for *Samsung* in China. In the third quarter of 2014, *Samsung*'s market share in China fell to 24.4 per cent, down from 32.1 per cent a year before, and for five consecutive quarters

Samsung reported falling earnings, because it was squeezed by *Apple*'s iPhone6 and Chinese local rivals like *Xiaomi*.

Moreover, *Xiaomi* also ate market share of local players like *Huawei* and *ZTE*. In response, *Huawei* and *ZTE* launched mobile phones with similar configurations at competitive prices. Thus *Xiaomi* launched Redmi Note at the price of €110, which was in direct competition with *Huawei*'s Honor 3X, priced at €130. The intense competition between Chinese brands raises the question whether or not *Xiaomi* has sustainable competitive advantages. Some commentators suggest that the loyal fan base and the associated online platforms are rare and hard to imitate resources. However, CEIBS Strategy professor Sam Park has his doubts (source 15):

There is nothing that warrants any type of sustained advantage for *Xiaomi* even in the local market...

Given the lack of unique competences, *Xiaomi* is, and will continue to be, easily challenged by other local companies. Most of these, including *Lenovo* and *Huawei*, already launched a similar business model in part of their operations. For local companies, once competition heats up, and the margins become thin, it becomes difficult to survive.

Moreover, the lack of patents has become *Xiaomi*'s Achilles heel. *Huawei* has built a portfolio of 22 169 patents, one of the largest number, not just in China, but worldwide. Likewise, *Lenovo* has accumulated 14 493 patents, including 2300 patents acquired with the takeover of *Motorola Mobility*. In contrast, *Xiaomi* had only seven patents, quite literally a technology dwarf among the giants of the telecom industry.

This lack of patents came to haunt *Xiaomi* as it challenged the leaders. In November 2014, lawyers for *Huawei* and *ZTE* sent letters to *Xiaomi* about the latter's patent infringements. Yet neither *Huawei* nor *ZTE* actually sued *Xiaomi* in court. The reason was twofold. *Xiaomi*'s hardware supplier *Qualcomm* owned 80 per cent of the patents for CDMA communications. *Qualcomm* also signed reverse patent authorization whenever it worked for a different mobile phone vendor, which meant that *Qualcomm* was able to integrate all kinds of patents on one smartphone chip. As a result, the *Xiaomi* chip provided by *Qualcomm* was safe. On the other hand, due to the IP protection environment in China, even if *Huawei* or *ZTE* won the lawsuit, the reimbursement fee for each patent was only €10 000, which would hardly dent *Xiaomi*.

INTERNATIONAL AMBITIONS

Focused on the vast and fast-growing Chinese market, *Xiaomi* sold only 3 per cent of its smartphones outside of China, compared to *Lenovo*'s 16 per cent and *Huawei*'s 41 per cent. Following the example of its Chinese peers, *Xiaomi* decided to first focus on other emerging economies, starting in India and then Brazil and Russia.

Xiaomi's first major international venture was in India, where its €90-a-piece smartphones undercut key competitors including global players *Samsung* and *Apple*, as well as local start-ups *Micromax*, *Karbonn* and *Spice*. However, *Xiaomi* found India more difficult to penetrate than China. While both are emerging economies, the Chinese experience was only of limited use in India. In particular, the online sales channels were – so far – less effective: first, *Xiaomi* does not enjoy the same attention in online tech circles and hence did not gather the same extent of buzz. In part, this was because many Chinese like *Xiaomi* because it represents the Chinese entrepreneurial spirit, an appreciation that is difficult to replicate abroad. Second, online retailing was still in its infancy in India, mainly because the physical infrastructure to bring online ordered products to consumers is not in place. Thus *Xiaomi* adapted its business models by collaborating with phone operator *Bharti Airtel* and electronics retailer *MobileStore* to develop more traditional distribution channels – but this increases its costs.

A different challenge of internationalization is the possibility of global competitors claiming intellectual property rights (IPR) infringement. IPR disputes are common among smartphone giants; *Apple* and *Samsung* have been fighting court battles in several countries for years. While the nature of IPR is often disputed, claims of IP infringement have become an effective, if costly, weapon of competition. In China, many

INTEGRATIVE CASE 2

ROLLS ROYCE: FROM INSOLVENCY TO WORLD LEADERSHIP

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DISCUSSION QUESTIONS

From an institution-based view:

- 1 How has *Xiaomi* been able to leverage the institutional environment in China to challenge global players such as *Samsung* and *Apple*?
- 2 What obstacles would it have to overcome to similarly succeed in India or Brazil?

From a resource-based view:

- 3 What resources has *Xiaomi* been able to create to enable its growth in China? Do you believe it has a sustainable advantage in China?
- 4 What obstacles to transferring resources to India and Brazil is *Xiaomi* likely to experience, and how to you suggest overcoming them?

IPR that are not specifically registered in China cannot be enforced. Yet once companies operate outside of China, and become big enough to be able to pay large fees, they become the targets of IPR lawyers. Thus *Xiaomi*, and other Chinese smartphone makers have armed themselves with *Google* executives and Silicon Valley lawyers seasoned at navigating the perilous waters between war and peace in IPR.

Xiaomi experienced its first foreign IPR conflict in India. In December 2014, *Ericsson* sued *Xiaomi* in an Indian court for IPR infringement, and the Delhi High Court ordered *Xiaomi* to suspend its sales in India. A few days later, the ban was reduced to a specific product with a specific chip made by *MediaTek* of Taiwan. Yet the ban was reintroduced a few months later when that particular phone was found to still be on sale in India through an online retailer that *Xiaomi* claimed was not an authorized retailer. While sorting out this specific legal battle, *Xiaomi* had to prepare itself for bigger battles to be expected when it entered other markets around the world.

Sources: (1) BBC News, 2014, China's *Xiaomi* becomes most valuable tech start-up, December 30; (2) CCID Consulting, 2012, Strategic Analysis on Chinese Smartphone Industry; (3) *South China Morning Post*, 2014, Chinese companies drive commoditisation of smartphone market, August 18; (4) *Wall Street Journal*, 2014, HTC One (M8), March 25; (5) C. Clover, 2015, Sell-made in China, a smartphone billionaire, *Financial Times*, January 8; (6) *Xiaomi's* microblog, 2013, www.weibo.com, November 28, accessed March 2015; (7) E. Dou, 2015, Five things *Xiaomi* does to cultivate fans, *Wall Street Journal*, April 6; (8) C. Clarke, 2015, Rebel, geek, or both? *CEIBS Link* (Alumni Magazine), no 1, p. 38-44; (9) T. Hout & D. Michael, 2014, A Chinese approach to management, *HBR*, September, 103-107; (10) T. Bradshaw, 2015, *Xiaomi* MI Note, *Financial Times*, February 27; (11) *South China Morning Post*, 2014, Chinese companies drive commoditisation of smartphone market, August 18; (12) K. Benner, 2015, *Xiaomi's* passage to India, *Bloomberg view* (blog), April 1; (13) S. Mundy & S. Jung-A, 2015, Profits blow sands *Samsung* back down to earth, *Financial Times*, January 9; (14) *Sohu*, 2014, The price war between *Xiaomi* and *Huawei*, oil.sohu.com/20140322/1637023827.shtml, accessed March 2015; (15) J. Coughlin, 2015, Mobile Battlefield, *CEIBS Link* (Alumni Magazine), no 1, p. 28-31; (16) S. Yu, 2014, Why *Huawei* and ZTE cannot sue *Xiaomi* for patent infringement? tech.sina.com.cn/2014-11-26/1664-invoasrfs/; (17) *Bloomberg Businessweek*, 2014, *Samsung's* China problems come to India, October 27, 44-45; (18) *The Economist*, 2014, Smartening up their act, October 25; (19) J. Crabtree & C. Glover, 2014, India ban threatens *Xiaomi's* overseas expansion, *Financial Times*, December 11; (20) J. Crabtree, 2015, Indian court to investigate *Xiaomi* in *Ericsson* case, *Financial Times*, February 5.

Rolls-Royce Plc (RR) sticks out from the crowd: it is a rare case of a large British company leading in a high-technology manufacturing industry: aircraft engines. Although Britain has been the cradle of the industrial revolution, it has more than other European countries shifted in the latter part of the 20th century to a service-driven economy. The share of manufacturing in British GDP fell to little more than 11 per cent in 2009, making RR look like the leftover of a bygone era. In fact, RR effectively went bankrupt in 1971, and was taken over by the government. Yet since privatization in 1997, it has gone from strength to strength, rising to second place behind *General Electric* (GE) in the market for civil aircraft engines.

How did RR achieve its leadership position under such adverse conditions? This case traces the history of the company (see Table 1) in search of the roots of its long-term success (Table 1). Before we start, we need one clarification: in the 21st century, RR does not make cars – the famous *Rolls-Royce* motorcar brand is now owned by *BMW* of Germany.

ENTREPRENEURIAL ORIGINS

Rolls-Royce was founded in 1904 by two entrepreneurs, Henry Royce, a perfectionist engineer, and Charles Rolls, a persuasive salesman. From the outset, the company integrated Royce's perfectionist approach and his attention to detail with Rolls' ability to relate customers' wishes, and engineering feasibility shaped the credo of the company. Soon the media called their cars 'the best cars in the world'.

World War I changed the priorities for RR. It started constructing aero engines, initially under a licence from *Renault*, but soon based on Royce's own engine designs. RR drew on its extensive experience of building engines for motorcars, but needed major innovations, because it takes far more energy to keep an aircraft in the air than it does to keep a car rolling along a road. This success helped both the firm and the nation: RR built the engines for half of all WWI aeroplanes of the Allies.