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## The Innovation Industry in China

### Introduction: the Era of Innovation

It was Monday morning, August 1st, when Liu Shufen opened her MacBook pro bought by her employer, Uber, the largest car pooling company in western world. She just found out that every file in her laptop was erased by the company pre-installed software “Global protect” for “protection of business secret” reasons, the screen showed her. (Xie Mengyao) That was the Monday after Uber’s Chinese subsidiary, Uber China, was acquired by its Chinese competitor, Didi, another victory story about a Chinese local startup rising up against the “invasion” of an international giant. This is not the first such story. The last ten years have witnessed the boom of the Chinese internet industry, from local giants like the BAT (Baidu, Alibaba and Tencent) and unicorns like Didi and Xiaomi, to hundreds of new startups every season. Gathering the most talented salesmen, engineers, designers and managers together, the internet industry is viewed as the most innovative industry nowadays in China. Like premier Li Keqiang said, this is the era of “mass entrepreneurship and innovation” (“da zhong chuang ye, wan zhong chuang xin”).

### The Evolution: From Copy and Paste to Copy and Innovate

Among all these internet companies, when it comes to the most innovative software, people always talk about WeChat. Like many other Chinese companies, at first it was criticised as a copy of Kik, an Korean instant message software. Actually, Wechat’s mother company, Tencent, has had a reputation for copying other softwares for a long time. Before the invention of the smart phone, at the beginning of the era of the PC, Tencent launched a desktop instant messenger named OICQ in 1999 (Wikipedia), which

was literally the copy of a western software ICQ(I seek you). But after that, it evolved.

While the first version was indeed just a simply copy, the second was tailored for Chinese user habits, as have been all the later versions. In 2000 Tencent changed OICQ's name to QQ for legal reasons (Wikipedia). Tony Ma, the CEO of Tencent, may not have even realised that later this name would be familiar to a whole decade of Chinese people. At that time while ICQ was simply for sending messages, QQ evolved to gain functions like QQ show (the first virtual personal image in China) and QQ zone (one of the largest Chinese blogs at that time). For the first time the Chinese people realised that the Internet contains so much space and interesting things. Then people learned how to QQ each other.

The methodology of “evolving” was adapted by QQ's successor, WeChat, in the era of mobile communication. On the 13th of March, 2011, the year after the iPhone entered the Chinese mainland market, Allen Zhang, the leader of a small team for new products in Tencent, posted a status: “the first version has applied for the app store shelf yesterday night.” (Tai Kong Xiao Hai) That was the birth of WeChat. At that time it was criticised because its similar appearance and function as Kik. However, again, in the second version a new function named “have a shake” was introduced. When you shake your smart phone, WeChat connects you to another person who is shaking his or her phone at the same time. None of these instant messengers had the same function at that time. While shaking took full advantage of the nature of the smart phone (you cannot shake your desktop to find a new friend.), Allen's “insight into Chinese people's loneliness” (He Caitou) brought huge success to WeChat. After that, Allen was viewed as the godfather of the internet industry in China like Steve Jobs in the U.S. Nowadays, people use WeChat to order taxis, buy movie tickets, book hotels and pay their bills. These services are all based on WeChat pay, an online payment system launched in 2014, which later became another huge success mainly because of its supplement for the insufficient infrastructure of the Chinese

credit card system. After that, Apple, Samsung and Facebook launched their own online payment systems.

Tencent is not the only company that is good at evolving. Companies like Didi, Baidu and Xiaomi all started as imitator, but later evolved to become innovator. As Benjamin Joffe from Forbes pointed out, these companies inherited Chinese companies' "fast-following" tradition and started their own wave (Joffe)

However, a sustainable development of a company takes more than that, and that is what the once largest local smart phone producer Xiaomi is facing now.

#### After Copy and Innovate: What's Next?

When Xiaomi's CEO Lei Jun criticised speculators on his social media: "When the wind comes, running toward it, even a pig can take off" he may not have realised that his own company is now suspected as the flying one. After three years' rapid growth beginning in 2011, it was surpassed by its domestic competitor, Huawei, in 2015. The reason for Xiaomi's rapid growth was methodologically the same as Tencent: fast prototyping and quick tailoring to the Chinese customer . But the reason that Xiaomi's growth slowed down was different.

At first, Xiaomi's smart phone was popular for its powerful hardware and user-friendly operating system. Each time Xiaomi launched a new product, it would boast about how fast and smooth the cell phone was. However, nearly every key component of Xiaomi's smart phone was produced by other companies. Among these components, CPU, the heart of a smart phone, was produced by Qualcomm, a U.S. telecommunication company. When Qualcomm decided not to support Xiaomi's product, Mi 3, in 2013, Xiaomi was no longer the "performance monster" that it had boasted of. This revealed the underlying problems with Xiaomi's rapid growth: the lack of technology accumulation. Actually the major patents in the field of telecommunications are held by Qualcomm. For

this patent reason, Xiaomi cannot sell one single smart phone in the States to this day (Zhang Zhiwei).

Woetzel et al. from McKinsey distinguished two different kinds of innovation in his report (Woetzel et al.). He suggested that Chinese companies excel at customer-focused innovation, which was exactly how Tencent evolved, while still not mature enough for research- and development-driven innovation, which requires technological accumulation. It is ironic that Tencent, the most profitable technology company in China, was not identified as a technology-driven company. When it comes to Xiaomi's dilemma, it should be pointed out that while Xiaomi is relying on Qualcomm's processor, its competitors, Apple, Samsung, and Huawei all have their own processors. While Xiaomi cannot sell its cell phone in the U.S. for patent reason, Huawei is selling its products worldwide (Zhang Zhiwei).

Xiaomi is not the only one that lacks the technological accumulation. In fact, this is a common problem faced by many Chinese Internet companies. All they can do is to dig their deepest potential of developing customer-focused innovation, thus being criticised as innovation for the sake of innovation. But when it comes to R&D based innovation, or "the true innovation" described by Joffe, what they can do is quite limited.

However, in his article, Joffe still mentioned a "true innovative" company, DJI, the world's largest consumer drone company. As he described, DJI should be "the first of this new wave of true innovation."

#### The Future: Research and Development Based Innovation

Few people can imagine that DJI, today the world's leading consumer drone company, started from an "C" grade. This was the score that Wang Tao's graduation project, a helicopter control system, received. Now he has turned this "C" project to a \$10 billion business (Popper) with 10 years accumulation of research and development, taking up more than 70% of the market. DJI is not the only one who is focusing on R&D. Huawei,

which surpassed Xiaomi in the Chinese smart phone market in 2015, also has a good reputation for its technological gene.

What's more, the year 2016 has seen the rise of many AI (Artificial Intelligence) startups in China like DeepGlint, YITU and Oculus, all based on solid technology. As Goldman Sachs pointed out in its report, AI, as the “epex technology” of the information era, is opening a \$9 billion market(2020) in China and more than \$300 billion(2025) market in the U.S. (Terry et al.) China has made major moves as the number research articles about “deep learning” has already surpassed the U.S. in 2014. The new era of innovation is coming, and the nimble players are already in move.

### Summary

Time is passing, companies are evolving, talents are devoted, generation after generation is rising, history is being made, but the core of innovation remains the same: to do something that nobody has ever done before that makes the world a better place. Tencent's QQ and WeChat has done that with customer focused innovation. Xiaomi is also a fairly innovative company although it has not done well yet in research and development based innovation. DJI and Huawei, for now and in a foreseeable future, are leading technological innovation in their own field. AI startups are booming in this year and will continue to boom in a foreseeable future. But innovation itself is unforeseeable to some degree, it requires solid knowledge, critical thinking, strong action and a bit of rule breaking. Who knows the next one will be?

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