When a nation (such as China) pushes for a digital currency, what are the main considerations it should have to ensure that it becomes a success? (i.e. what are the necessary antecedents should the nation have in place before rolling out such an initiative?)

E-Money is hard to create and implement. The considerations for a nation to push for a digital currency or e-money are as follows: Dealing with a network infrastructure between users and vendors, low seigniorage of the e-money, security & risk management

Using the case of China and the digital renminbi, China must ensure that the infrastructure between users of the digital renminbi and the vendors accepting it is in place. Given that it is legal tender, China should have no issues with getting vendors on board as it would simply be akin to accepting cash payments. Thus, the issue would be to provide users an incentive to use the digital renminbi, especially given how the Chinese population may have already been using Alipay and WeChat pay, along side cash and other traditional forms of payments for their daily activities. For users to be incentivised to adopt digital renminbi, China has already been releasing the e-money as a form of “red packets” to the public into their e-wallets connected to state-owned banks to initialise the pick-up rate of the digital currency. In order to further boost this pick-up rate, China has to work with its state-owned banks to ensure that the costs of holding digital renminbi is close to zero, especially since users and consumers are usually the ones who are more price sensitive. After attracting users, China must work on compatibility with the vendors. Assuming the new digital renminbi would require a new type of digital device or updates to current applications on mobile phones to be transferred person-to-person and consumer-to-business, then China has to ensure that this process is facilitated be it by providing the machinery required for free or to massively push for the necessary updates and upgrades to current applications. This way, the network for paying with and receiving digital renminbi would be ready for its roll out.

The next important factor would be managing the security and risks involved with dealing with digital currency. As the issuer, the Chinese government would have to supervise these factors closely to ensure user confidence. A slight potential of a security breach would push people away from the digital renminbi as people would naturally be afraid to lose their money. Firstly, the devices connected to the digital renminbi would have to be encrypted and secure, meaning it is both tamper and malfunction-proof. This ensures the integrity of the digital renminbi’s value and reduces the risks of fraud or theft. This would mean that they would have to engage several different partners (with thorough background checks for all staff involved) to create the devices or applications, ensuring that no one party has complete autonomy over the operations. Devices would likely have to be registered too. The Chinese government would also have to invest heavily on ensuring that the devices and applications are tamper-resistant and hack-proof to give both vendors and users a peace of mind when using the digital currency. In addition, on the users’ end, there has to be some form of effective and efficient authorization so that only the right person would have access to his/her own money. This would include some form of ID, password, two or even three factor authentication as well as some form of biometrics to fulfil the 3 prongs of authentication: what you have, what you are and what you know.

Lastly, money has to have low seigniorage – this should not be an issue as the way of holding the digital renminbi on e-wallets should not pose too much costs on the users. One factor the Chinese government might have to be aware of would be to not ‘lock’ users in as this would add to the holding costs of the currency. In addition, given the plans to use existing platforms like Alipay and WeChat pay, the holding costs and flexibility of holding digital renminbi would be low (assuming that the government works out a partnership to ensure secure holding of the currency on both platforms).

How will the e‐yuan roll‐out impact e‐payment providers such as Alipay and WeChat pay? How should such companies react to the competition?

In introducing the digital renminbi and providing e-wallets on state-owned banks, it is evident that the digital renminbi is meant to rival current e-payment providers such as Alipay and WeChat pay in an attempt to reduce the duo’s market share as well as control the two payment firms who might have too much influence over users.

Since the digital renminbi is legal tender and backed by the Chinese Communist Party itself, it can be seen as replacement to the paper cash existing in the system, and this would mean a large proportion of the Chinese public would be using it when it rolls out, provided the government has properly ensured the necessary conditions for it to be a success. The digital renminbi might even have an edge over the current e-wallet systems provided by Alipay and WeChat – it enables p2p transfers offline. This might mean that more users would hop onto digital renminbi and its corresponding e-wallets.

Moreover, on the vendor side of things, it is expected that it would be free for merchants and retailers to accept digital renminbi (legal tender) as compared to some form of costs that the vendors have to bear when charged a fee by Alipay and WeChat pay. Given this, the vendors would prefer to use the digital renminbi since it provides cost-savings and larger profit margins, especially so when more users are using the digital legal tender.

In addition, the Chinese government even has plans to use Alipay and WeChat pay for the initial distribution of the digital renminbi, which in my opinion simply boosts the digital currency’s user rates even more since the initial stages of rolling out a new e-currency is the hardest. This also means that users would easily be able to compare between digital renminbi and Alipay/WeChat pay.

Thus, in order for Alipay or WeChat pay to resist the migration over to digital renminbi, they would have to dole out certain measures to retain their users and further expand their usership.

Firstly, to retain and attract price sensitive users, the payments firm may have to fork out money as a form of customer acquisition. This means paying for customers to use their platforms in the form of discounts, promotions, or freebies. This would help in retaining and attracting more users.

Next, the two companies would also have to retain and attract more vendors. They can do so by having deals with the merchants, such as free installation of receipt devices or not charge them fees for a certain period of time.

Another field the two companies can react and fight the digital currency would be the network and infrastructure itself. By investing and improving their current platforms, be it improving the security or the convenience in usage, Alipay and WeChat may be able to keep their users by virtue of being the better e-payments platform. They would also increase their perceived value by offering users free analytics of their spending and consumption patterns to give their platforms an edge over the digital renminbi.