

A Comparative Study of Digital Financial Inclusion in India and China: Challenges and Opportunities for FinTech & UFA by 2020

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Abstract: Financial inclusion is a much debated and discussed topic both for inclusive growth and sustainable growth. Both India and China are coming out with various financial reforms and policies to have a sustainable society. In the context of the Indian Financial Inclusion Advisory Committee (FIAC) which is tasked with the preparation of the National Strategy for Financial Inclusion (NSFI) deliberated extensively on its formulation upon international best practices on digital financial inclusion there is a need to explore the opportunities and challenges of using FinTech in India. This paper analytically compares and explores the status quo operandi of India and China on various Financial Inclusion Indicators published by World Bank through the Findex reports. The paper explores the opportunities and Challenges of FinTech in India especially in the context of Digital Financial Inclusion. The findings include that innovative financial service involving use of mobile phones is still in the novice stage in India, there is still a long way to go to remove the gender gap, usage of technology and there is significant variance exists between India and China in the digital financial inclusion indicators. The paper concludes that though there is drastic increase in percentages of most of the indicators of financial inclusion in India from 2014 to 2017, there is still a long way to go to reach the level of China for India. The paper suggests some measures and recommendations for the policy

holders to move towards digital financial inclusive society as well as to achieve Universal Financial Access (UFA) by 2020.

Keywords: FinTech, Digital Financial Inclusion, UFA 2020

1. Introduction

According to RBI reports, “Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players” (Mundra, 2016). This paper analyzes the Global Findex database which is an in-depth data on how individuals save, borrow, make payments and manage risks. It is the world’s most comprehensive database on financial inclusion that consistently measures people’s use of financial services across countries and over time. The 2017 Global findex consist of over 100 indicators separated by gender, education, income and age published by World Bank. This paper takes the findex data of 2017, 2014 and 2011 and compares India and China on some of the indicators of digital financial inclusion.

1.1 Objectives

- To compare and contrast India and China on the World Bank statistics especially on the financial inclusion indices introduced in 2017.
- To explore the opportunities and challenges of FinTech in India.
- To compare the digital financial inclusion status of men and women in India.
- To know the status of India on financial inclusion and FinTech especially in the context of moving towards achieving the goal of Universal Financial Access (UFA) by 2020.
- To suggest and recommend the policy makers on various parameters related to best practices of financial inclusion.

2. Methodology

For this research, data has been collected from academic and non-academic studies and publications between 2000 to 2020, which are related to digital financial inclusion. Using Global Findex database, survey of World Bank analysis is done to compare the indices

related to digital financial inclusion of China and India Microsoft Excel is used to prepare the Charts and tables. Tools like averages and percentages are used to compare.

3. Review of Literature

According to CRISIL inclusive Index India's inclusion improved significantly as the inclusix score stood at 58.0 in fiscal 2016 compared with 50.1 in fiscal 2013 (Crisil, 2018). Rene Schuurman, the Global Product Manager of Citi Treasury and Trade Solutions opined that the Financial services is undergoing the type of disruption that we've seen across industries like hospitality, but banks are not equally successful in navigating this disruption.

According to Yes Bank Reports, the Indian Fintech market is poised to touch USD 2.4 billion by the end of 2020. Favorable demographics, increasing mobile phone and internet penetration, an active startup ecosystem puts India on the cusp of Fintech revolution, akin to where Fintech hubs like London, Singapore and New York were a couple of years earlier. Supported by facilitating ecosystems of future skilled talent, growth of capital, sustained demand and enabling policies, India can emerge as global Fintech Hub (YesBank, 2018).

On one side, Faster payment Schemes in China and India and elsewhere in Asia are proving that QR codes used as an overlay to facilitate payments can add value when approached with a mobile-first mindset. In China market leaders Alipay and WeChat both use QR code vouchers to add loyalty elements to their mobile wallet offering and have integrated instant payment mechanisms into their fabric. The other emerging use cases around the world include Delivery Drivers, Airline Traveler and Grocery Shoppers (FisGlobal, 2018).

On the other hand, according to FinTech Trends Report 2017 of PWC, Expected Return on Investment on Fintech is 29 % which is the highest in the World (PWC, 2017). According to Fintech report published by Capgemini, Alipay launched its online enquiry system to enable online servicing of the customers it also introduced a voice-controlled payment system for mobile users of China. It also tapped the offline market with the novel idea of "Payment with Barcode" and it is the first company to implement fingerprint verification which brought mobile payments into the biometric recognition era (Mary-Ellen-Harn, 2018). Further, according to NASSCOM, the Indian FinTech market is expected to grow at a CAGR of 22 percent for the next five years. Another KPMG report states that the

transaction value for the Indian FinTech sector was estimated to be approximately \$33 billion in 2016 and is expected to reach \$73 billion by 2020 (Nasscom, 2018).

4. Need for the Study

India is in the era of banking reforms and moving towards cash less society. There is a need for a study in the context that achieving Universal Financial Access by 2020 is the main objective of the World Bank Governor Jim Yong Kim. Around 2 billion people do not use formal financial services and more than 50% of adults in the poorest households are unbanked. Financial inclusion is a key enabler to reduce poverty and boosting prosperity.

The Indian FinTech industry grew 282 % between 2013 and 2014 and reached USD 450 million in 2015. In 2017, 400 FinTech companies are operating in India and their investments are expected to grow by 170% by the end of 2020. The Indian FinTech software market is forecasted to touch USD 2.4 billion by 2020 from a current USD 1.2 billion as per NASSCOM. The transaction value for the Indian FinTech sector is estimated to be approximately USD 33 billion in 2016 and is forecasted to reach USD 73 billion in 2020 and growing at a five-year CAGR of 22 percent (Uniindia, 2019).

As per a research report by McKinsey Global Institute, widespread adoption and use of digital finance could increase the GDP of all emerging economies by 6 percent, or a total of \$3.7 trillion, by 2025. This is the equivalent of adding to the world an economy of the size of Germany, or one that's larger than all the economies of Africa. This additional GDP could create up to 95 million new jobs across all sectors of the economy (McKinsey, 2016).

Furthermore, both China and India together have 32 % of unbanked population in the World. In the above context, there is a need for a study which compares India and China on various indicators of financial inclusion. The study can help us take some steps towards achieving UFA by 2020 and to explore the challenges and opportunities for FinTech in India.

5. Analysis

The following paragraphs confer the analysis of the FinTech Companies and financial inclusion indices related to India and China.

Table 1: Top 20 Fintech companies in India

Sl.NO	Name of the FinTech	Country	Amount
1	Paytm	India	US\$2.4B
2	Policybazaar	India	US\$277M
3	Pine Labs	India	US\$207M
4	PhonePe	India	US\$184.1M
5	LendingKart Technologies	India	US\$128.7M
6	Free Charge	India	US\$80.6M
7	Capital Float	India	US\$78.8M
8	Aye Finance	India	US\$67.5M
9	NeoGrowth Credit	India	US\$47M
10	OfBusiness	India	US\$43.8M
11	Acko General Insurance	India	US\$42M
12	Mswipe	India	US\$41M
13	Balance Hero	India	US\$38M
14	Mobikwik	India	US\$35.4M
15	Walnut	India	US\$30M
16	BankBazaar	India	US\$30M
17	Paisabazaar	India	US\$30M
18	PaySence	India	US\$23.3M
19	FINE PayTech	India	US\$23.1M
20	EarlySalary	India	US\$20.5M

Source: Own Computation data from (Techinasia, 2018)

From the above table, it can be observed that in the Payments and Remittances of Fintech top 20 companies, Paytm is standing first with 2.4 Billion US Dollars' worth of transactions.

Table 2: Fintech companies in Asia are located in China

Sl.NO	Name of the FinTech	Country	Amount
1	Ant Financial	China	US\$14B
2	JD Financial	China	US\$4B
3	Paytm	India	US\$2.4B
4	Duxiaoman Financial	China	US\$1.9B
5	Qudian	China	US\$900M
6	Sunning Finance	China	US\$814M
7	Caogen Touzi	China	US\$373.5M
8	Dianrong.com	China	US\$335.9M
9	Wecash	China	US\$301M
10	Mashang Finance	China	US\$293M
11	Policybazaar	India	US\$277M
12	Linklogis	China	US\$250M
13	Hyperchain Technologies	China	US\$234M
14	WeLab	Hongkong	US\$220M
15	Pine Labs	India	US\$207M
16	Vcredit	China	US\$202M
17	JBH.com	China	US\$200M
18	Feidee	China	US\$200M
19	51Zhaoyou	China	US\$199.8M
20	Black Fish	China	US\$195M

Source: Own Computation data from (Techinasia, 2018)

It can be observed from the above table that, the top twenty fintech Companies in Asia are located in China. India's Paytm is in third position. Majority belongs to China and only one belongs to Hong Kong.

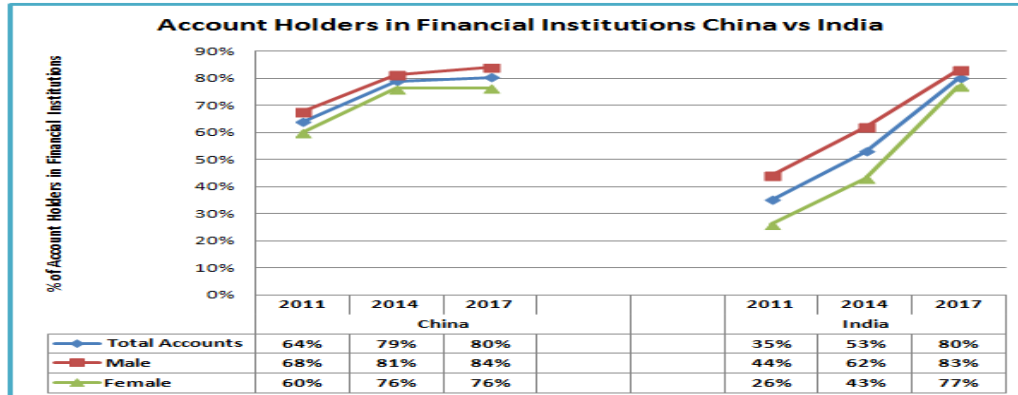


Figure 1: Account holders in China

Source: Own Computation data from Findex-2017 published by World Bank

From the above figure, it can be observed that India has reached the level of account holders in China in the year 2017. The total account holders' percentages in both the countries are the same now. But the male and female percentage is only one percent less compared to China. The significant change is that India has jumped from 53% to 80% and there is 50% increase in the number of account holders in financial institutions. This is a welcome move, and this was possible because of two reasons first because of JanDhan Yojana and demonetization effect.

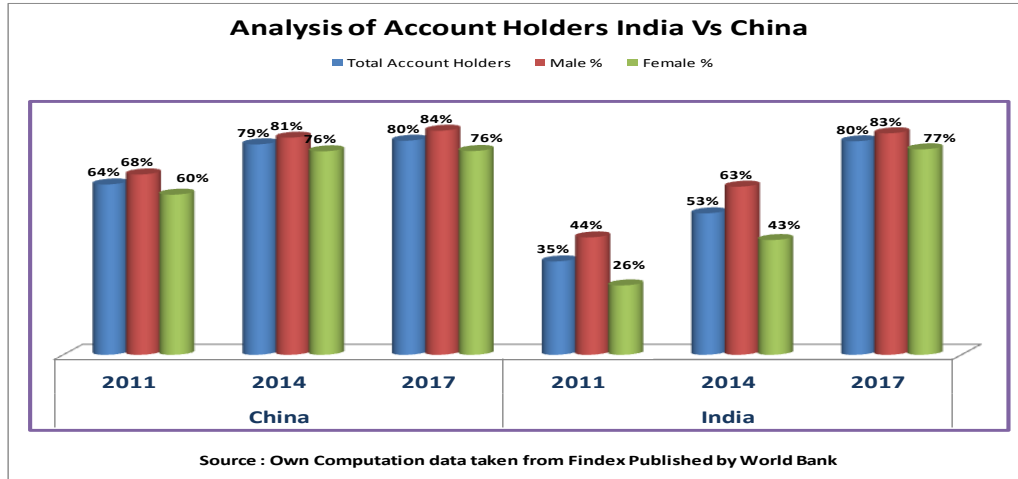


Figure 2: Account holders in India and China

From the above figure, it can be observed that what China achieved in 2011, India was able to achieve it in 2014. But in 2017 India is almost all equal to China.

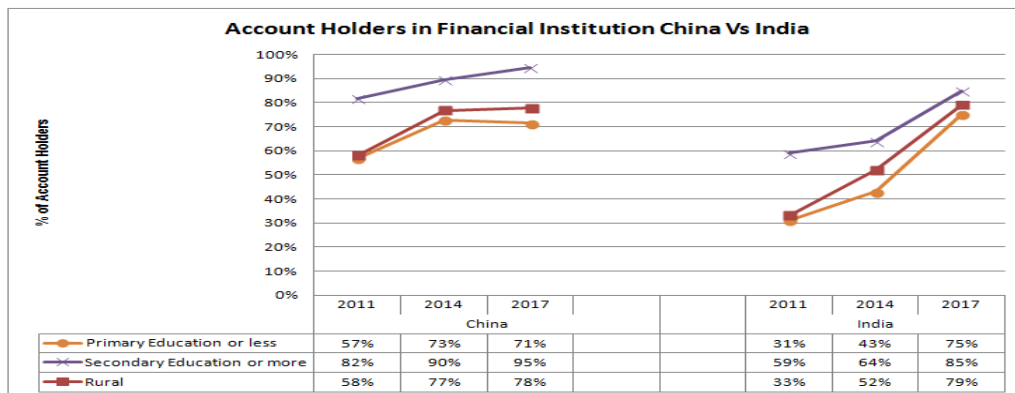


Figure 3: Account holders in financial institution in China and India

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, it can be observed that, in India the account holders with primary education or less are more than China. But secondary education or more are 10% less than

China in India. India is better than China in rural population holding accounts in financial Institutions.

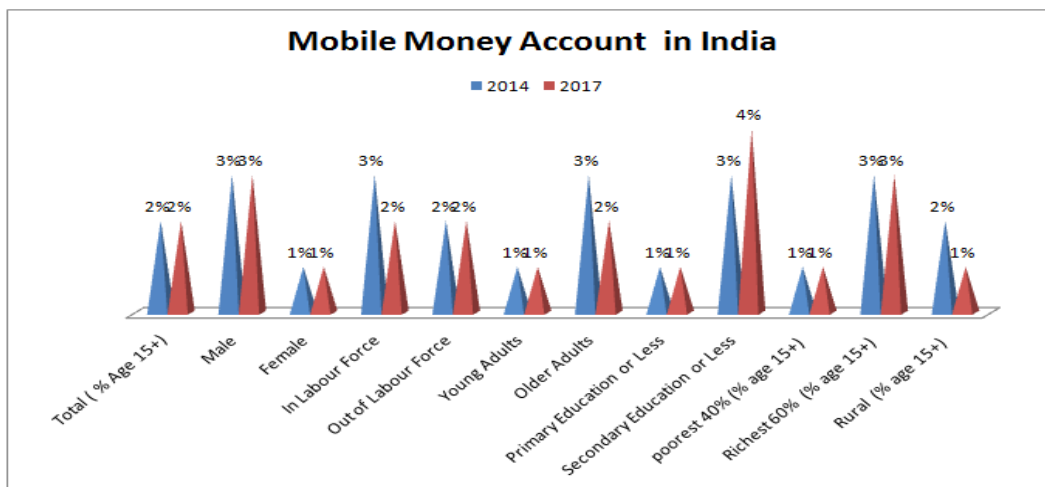


Figure 4: Mobile money account in India

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, it can be observed that mobile money account in India has not increased at all from 2014 to 2017. In many parameters it is the same. Only in the secondary education holder it has increased 1%. In rural users and in Labour Force it has decreased 50%. This need to be explored and researched more. The point of discussion is when the number of account holders have increased 50%, then why not mobile money usage increased. Again, this is one area where plethora of opportunities exists for the FinTech industry.

From the above figure, it can also be observed that mobile money account in India is only 1% to 4%. This is the area of opportunity to the FinTech Industry, especially the FinTech companies who are working on the Mobile Payment Technologies. Here also it can be observed that gender variations exists. Only 1 % of female use mobile money and 2% of men are using mobile money. Also, older adults are using more than young adults.

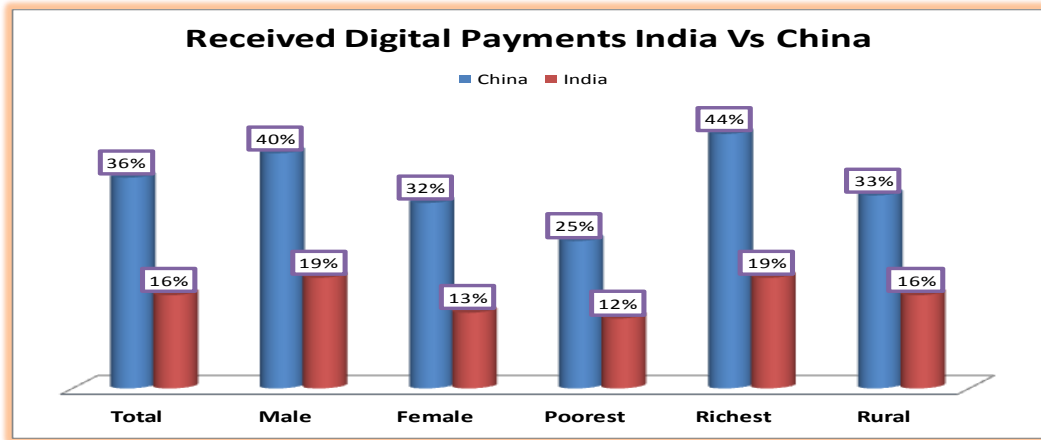


Figure 5: Received digital payments in India and China

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, it can be observed that, there is significant variance in the percentage (%) of account holders who have received digital payments between China and India. India is almost halfway through to China. This is again an opportunity to FinTech Companies in India especially digital payments companies.

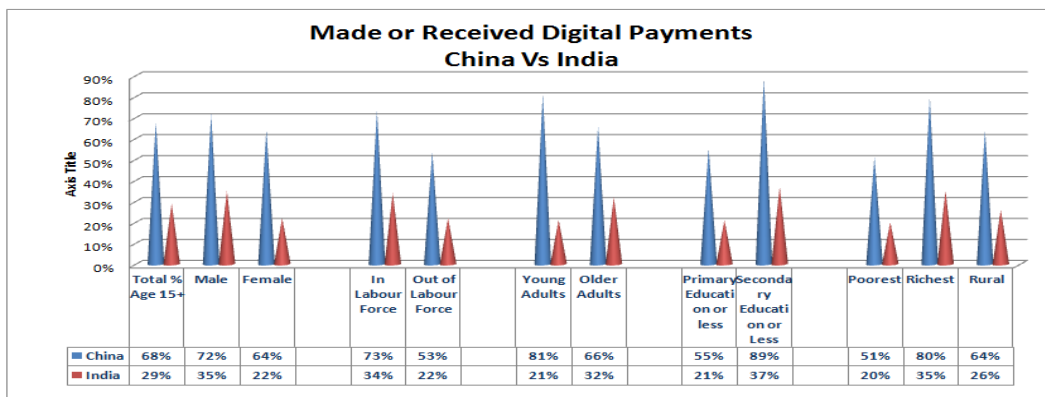


Figure 6: Made or received digital payments in China and India

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, it can be observed that, India is far behind China in making digital payments. India has started in the number of account holders, but the new entrants are yet to adopt the digital payment, they are still using the traditional methods, which is again an opportunity to the Fintech companies.

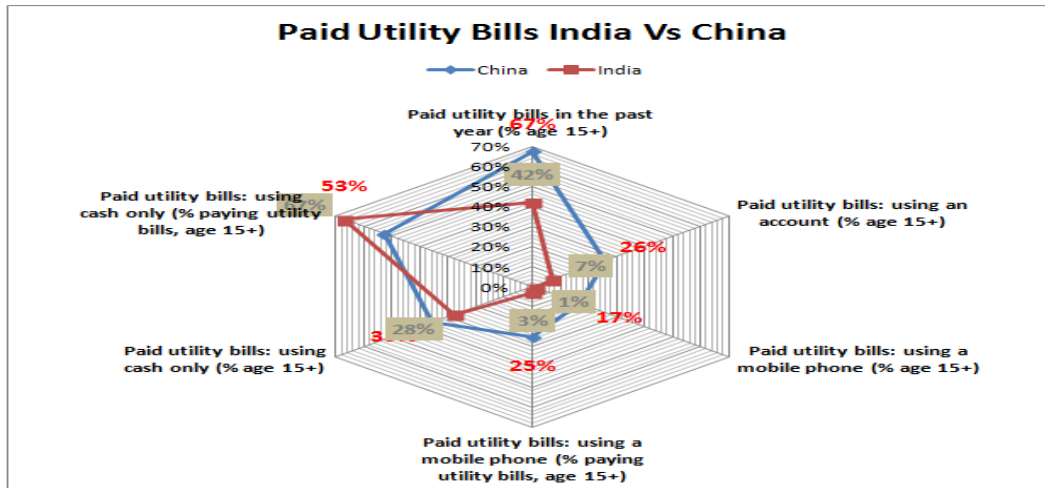


Figure 7: Paid utility bills in India and China

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, it can be observed that, India is little behind China in making digital payments especially utility bills. India has started in the number of account holders, but the new entrants are yet to adopt the digital payment, they are still using the traditional methods, which is again an opportunity to the Fintech companies.

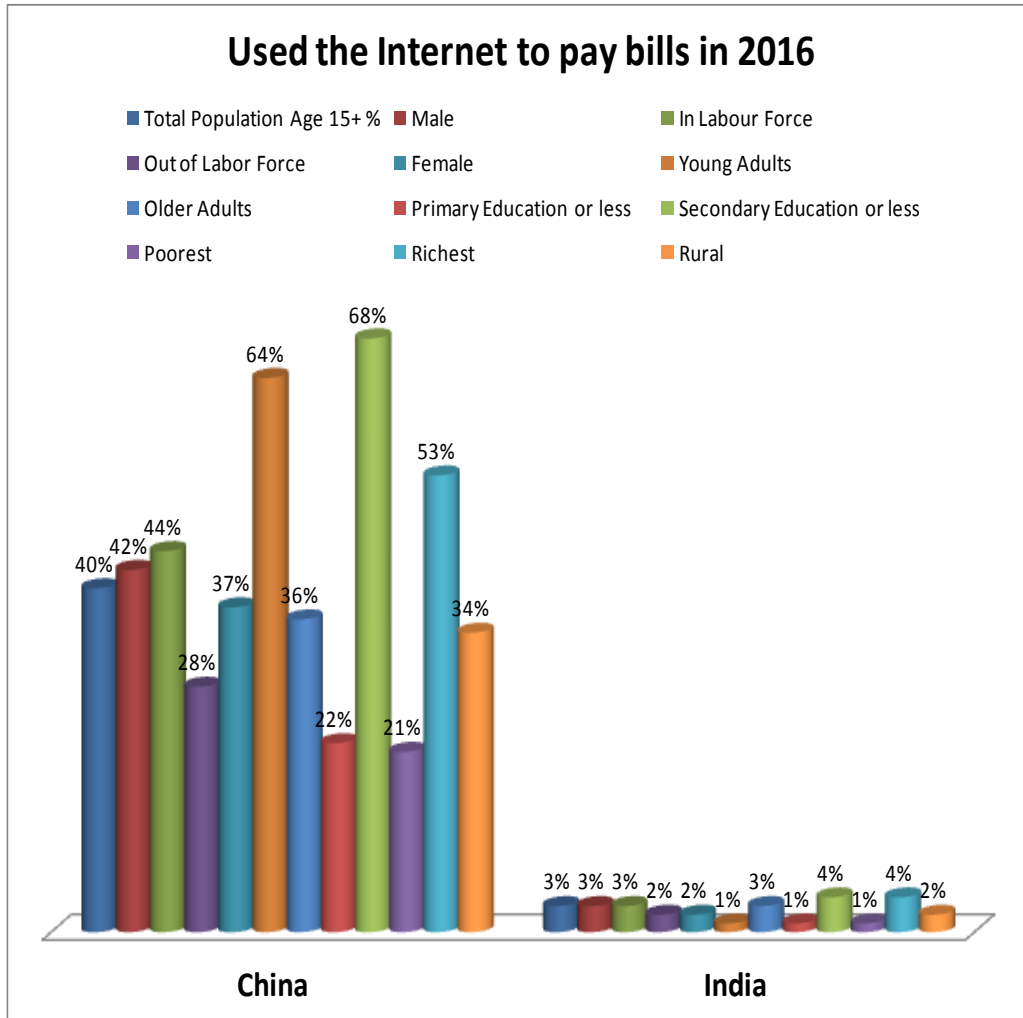


Figure 8: Internet bills in India and China

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, the variance of using the Internet to pay bills in 2017 by China and India is observed. This is again an opportunity to the FinTech companies.

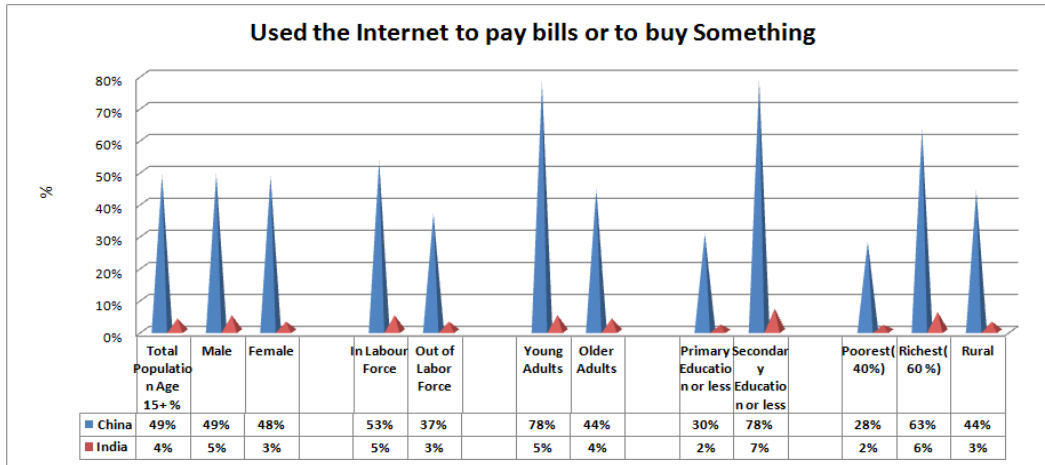


Figure 9: Internet bills in China and India

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, the variance of using the Internet to pay bills or to buy something in China and India is observed. This is again an opportunity to the FinTech Companies. The percentage of India in this category is little more than the previous category, where 4% of the total account holders buy something using Internet whereas 49 % in China.

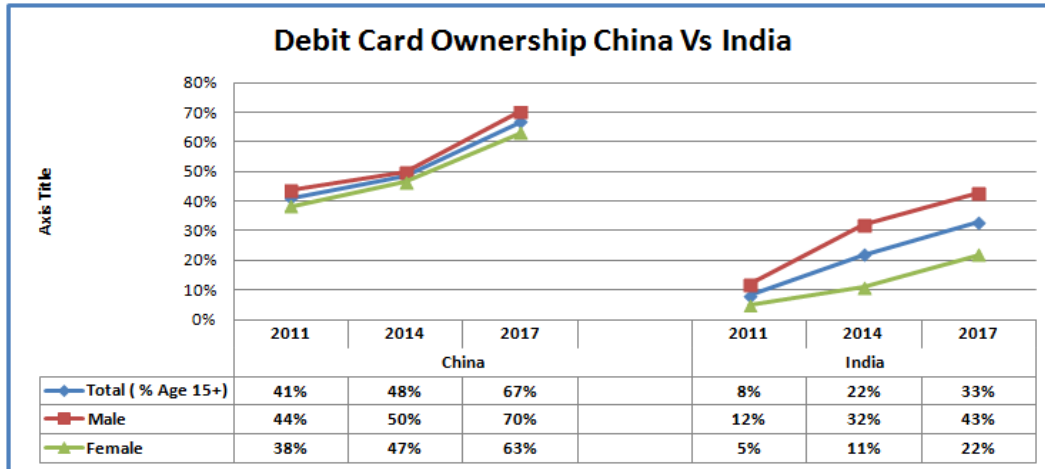


Figure 10: Debit Card ownership in China and India

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, it can be observed that the numbers of Debit Card holders in India are less than in China. India has exactly half number compared to China. Significant variance exists between men and women also. Only 22% of women in India have Debit Cards, whereas it is 63% in China. Though 80% of the population has an account in a Financial Institution, the number of Debit card holders is less than half. This is one area for FinTech firms to concentrate. Also, digital financial Inclusion can be labeled as low in India.

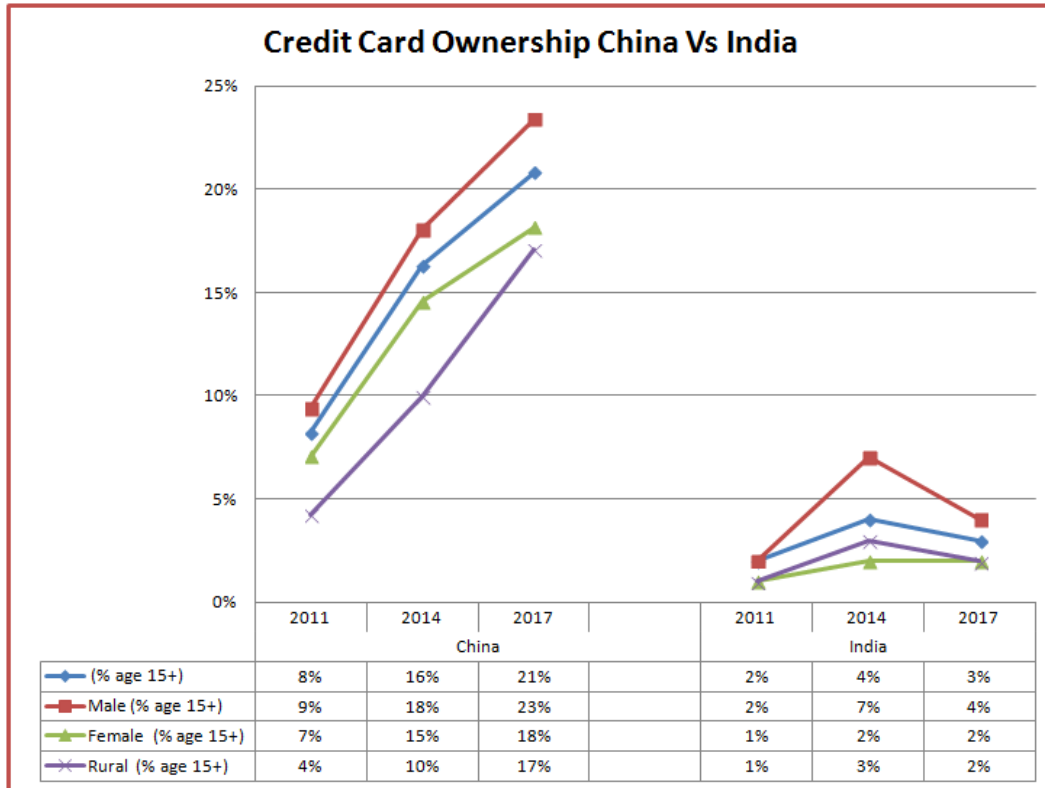


Figure 11: Credit Card ownership in India and China

Source: Own Computation data from Findex-2017 (World_Bank, 2017)

From the above figure, it can be observed that Credit Card Ownership in India is in single digit. Only 2% of women have credit cards whereas 4 % of men have. This can also be inferred that Indians are saving more than Chinese and they do not want to own a credit card.

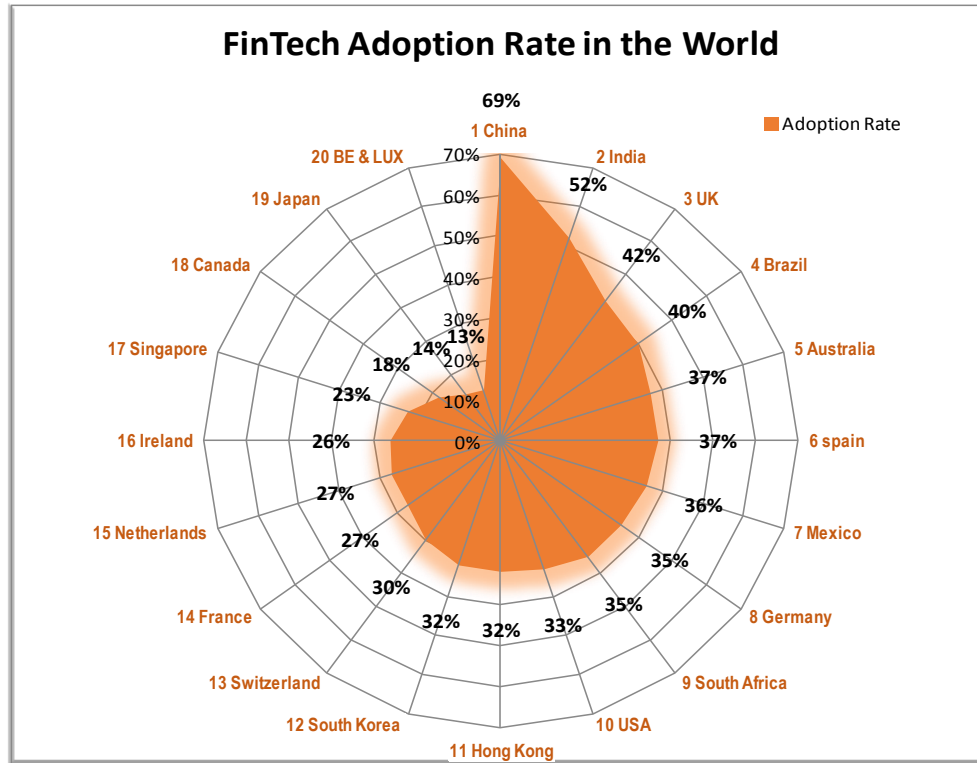


Figure 12: FinTech Adaptation in the world

Source: Adopted from EY Adoption Index 2017.

From the above figure, it can be observed that FinTech adoption rate in India is next to China with 52%. Even countries like Singapore which stand in the top five in the Global Technological Readiness Index are ranked 17th in the FinTech Adoption rate. India is only next to China, leaving UK and Brazil behind. Since adoption rate is high in India, this is an opportunity for the Indian Fintech companies.

6. Impact of FinTech on Financial Inclusion

The RBI report states that the government of India and the Reserve Bank are actively promoting financial inclusion with schemes like Jan Dhan Yojana, Aadhaar enrolment and licensing of payment banks, small finance banks, to name just a few. The fintech companies

across the nation are taking the advantage of these initiatives for expanding financial inclusion in the following areas by leveraging technology (RBI, 2017).

Table 3: Use of FinTech for financial inclusion

Use of FinTech for Financial Inclusion		
S. No.	Area of Financial Inclusion	Use of FinTech
1	Augment the government social cash transfer in order to increase the personal disposable income of the poor. It would put the economy on a medium-term sustainable inclusion path.	Easy cash transfer App
2	Banks should make special efforts to step up account opening for females belonging to lower income group under this scheme for social cash transfer as a welfare measure (Sukanya Shiksha Scheme).	Modification to existing Bank FinTech App.
3	Aadhaar should be linked to each individual credit account as a unique biometric identifier which can be shared with Credit information bureau to enhance the stability of the credit system and improve access.	Integration of Aadhaar Infrastructure
4	Bank's traditional business model should be changed with greater reliance on mobile technology to improve 'last mile' service delivery.	Enhanced Mobile Banking
5	Increase the formal credit supply to all agrarian segments through Aadhaar-linked mechanism for Credit Eligibility Certificates (CEC).	Digitization of land records
6	Corporates should be encouraged to nurture Self Help Groups (SHGs) as part of Corporate Social Responsibility (CSR) initiative.	Loan / Payment App.
7	Replacement of Government's current agricultural input subsidies on fertilizers, irrigation and power by a direct income transfer scheme as a part of second generation reforms.	Direct Account Transfer App with the help of Aadhaar Infrastructure
8	Introducing universal crop insurance scheme by Government covering all crops starting with small and marginal farmers with monetary ceiling of Rs. 2 lakhs.	Crop Insurance App
9	To provide credit guarantees in niche areas for micro and small enterprises (MSEs). It would also explore possibilities for counter guarantee and re-insurance.	Multiple Guarantee App for agencies
10	Introduction of UID for all MSME borrowers and information from it should be shared with credit bureaus.	UID for MSME App.

Source: RBI Reports (RBI, 2017)

7. Opportunities

According to India Fintech opportunity review published by Yes Bank, the following are the major opportunities for the FinTech Companies in India.

1. Fintech in India is still young.
2. India has the second highest global FinTech adoption rate with collaboration
3. Lending is a massive opportunity
4. Proof of concept and early stage funding is still limited
5. Managing burn rate is emerging as a key issue for Indian FinTech
6. Accelerators and incubators might actually be supporting in commercialization

8. Challenges

1. The talent pool is not ready for the future; India has to work on it.
2. Understanding of regulatory requirements is not complete, India need to work on the regulatory requirements for Block Chain Technology and other innovations.
3. Security concern for the online payment is still an inborn thought for most of the older age population.
4. Though 80% of the population has account in a Financial Institutions, only 4% of them use the Fintech applications.
5. Electricity availability is still low in many of the villages in India. According to the International Energy Agency, nearly 240 million Indians lacked access to electricity in 2017. One out of every five people around the world without access to power lives in India.

9. Findings

1. India jumped from 53% Account holders in Financial Institutions to 80% account holders in 2017. The next survey is in 2020.
2. Jan Dhan Yojana and other reforms brought by RBI made significant impact on FinTech, financial inclusion and UFA 2020.
3. Gender disparity exists in the financial access also in India.
4. In the population with secondary education or more, there are 10% less account holders compared to China with 95% and 85% in India.
5. Mobile money is used by only 1% of the population in India.

6. The mobile money usage in rural India decreased from 2% to 1%.
7. India is halfway through to China in digital transactions.
8. For paying utility bills online or through mobile money India is behind china whereas through cash India is ahead of China.
9. There is significant variance between China and India in using Internet.
10. India has 4% of population buying something from Internet whereas it is 49% in China.
11. Only 33% of account holders own a Debit Card in India, whereas it is 65% in China.
12. Only 3 % of account holders have Credit Cards in India.
13. Most of the top 20 FinTech Companies of Asia, exists in China.
14. PayTM is top Fintech Company in India and third in Asia.
15. Fintech is promoting Digital Financial Inclusion.

10. Conclusion

The comparison of Digital Financial Inclusion indices of India and China reveals that though India is able to reach China in number of account holders in financial institutions, in the digital financial inclusion parameters like making online payments, receiving online payments, using credit cards, debit cards and mobile money, India has to go a long way to reach the level of China. But since the adoption rate is high, India's expedition towards UFA 2020 can be reached by the end of 2020. It is concluded that significant variance exists between men and women in using the FinTech. It is also being concluded based on the digital financial inclusion parameters comparison that, there is plethora of opportunities to the FinTech Companies in India. Wherever there is a challenge of financial inclusion it is an opportunity to the FinTech.

11. Suggestions

It is suggested to provide access to low cost mobile phones in rural areas and providing POS terminals in large number. Banks and other financial institutions should promote digital financial inclusion through a greater number of awareness programs. Youth of India should come forward to help the older age population to adopt the technology. More digitalization is suggested to utilize the true power of Fintech. It is suggested to promote financial literacy in schools, colleges and universities.

12. Recommendations

Gender disparity still exists in adoption of FinTech in India, where India need to work upon with some policy reforms to minimize it. Fintech is still in the novice stage in India, it is recommended that the regulatory environment should promote it by making the online payments free or low charges rather than charging it based on the amount of transaction, as the high rate of charge is leading to avoidance of online payment or promotion of Cash transaction.

Though Jan Dhan Yojana brought drastic increase in the number of account holders in the financial institutions, there should be some policy change to promote the 100 % financial access by 2020, as there are still 20% of the country's population which is deprived to have an account in a financial institution. Also, it is strongly recommended to build the required digital platforms to promote digital financial inclusion in India by establishing the required Infrastructure like electricity supply, not only connections, in the Indian villages.

13. Future Research

The FinTech adoption rate is high in India, but the number of users for digital financial inclusion indices is very low, this need to be further investigated and explored in the future research.

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