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PRACTITIONER'S PERSPECTIVE

Disruptive innovation in the financial sector

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Abstract Disruptive innovations have been happening in the field of finance as a consequence of a magical combination of technology and financial engineering. The Indian financial sector too has seen disruptive innovation not just in payment systems but also in the segments of deposits, credit and insurance. This article discusses the key drivers behind this disruptive innovation in Indian financial sector including internet penetration, usage of smartphones, improved online presence and policy initiatives. Further, the article elaborates the disruptive innovation that is presently caused by FinTech companies in accelerating the pace of change and reshaping the financial services industry radically.

Keywords: Disruptive innovation · FinTech · Indian Finance · Technologies · Demonetisation

1 Introduction

When we look at disruptive innovation today, we can't but acknowledge the big elephant in the room – demonetisation in which 86% of the currency was delegalised overnight [1] in what is arguably one of the most cash-intensive economies in the world.

While the objectives, costs and benefits of demonetisation are a subject matter of contentious debate, what is not contentious is that this has possibly been the most disruptive policy innovations in India since the 1991 reforms.

We owe to the celebrated economist Joseph Schumpeter who gave us the phrase – creative destruction [2], which he called – a process or mutation that revolutionises the economic structure from within – destroying the old one and creating a new one.

The smartphone, for example, is a creative destruction because it killed the market not just for regular cell phones, but also for PDAs, point and shoot cameras, wrist watches, calculators, voice recorders, planners and even music systems.

Demonetisation is in that sense creative destruction too, but it is a unique type of creative destruction because what it aims to destroy is itself a destructive creation. So, demonetisation is a creative destruction of a destructive creation.

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2 FinTech revolution

The world of finance has witnessed rapid disruptive innovation over the last decade as a consequence of a magical combination of technology and financial engineering. Tasks once handled by paper money and bulky computers are now being accomplished entirely on digital interfaces.

Even as late as 2008, one of the problems was the duration taken to clear outstation cheques. Now, a generation of millennials is growing up without knowing what a cheque is. Large number of young enthusiastic entrepreneurs are taking aim at the heart of financial sector and are revolutionising how financial transactions are carried out. Borrowing money through peer-to-peer lending club, transferring money through independent payment systems rather than through a bank and investing based on online customised advice tailored to individual needs are all made possible by start-ups [3]. Fighting cybercrime with help of financial services company that checks customer identities based on biometrics, behavioural profiling, push notifications and analytics across all channels – from mobile phones to physical branches - is a great illustration of the emergence of FinTechs [4].

One could get into a taxi, go to the destination and walk away – the billing is automatically taken care of. One could go into a restaurant, wave the phone and touch the thumb for biometrics and walk away. This is how fintech is revolutionising financial services.

FinTechs will change financial sector in many ways. They will cut costs and improve the quality of financial services, unburdened by legacy IT systems, large branch networks and traditional regulation. These companies would explore new ways of assessing risk through social media review and usage of logistic firms. For instance, motor insurance risk gets assessed not just by how much one drives and but also by how one drives. They will be able to diversify risk without the burden of geography.

3 Disruptive innovation beyond finance

Disruptive innovation extends beyond Fintech. Think about the concept of microfinance which was in existence for a long time but took centre stage in 2006 when Dr. Muhammad Yunus, founder of Grameen Bank, received the Noble Prize [5]. The world took notice of this amazing experiment of lending in small amounts to closely-linked communities.

Similarly, self-help groups in India, which are closely linked small communities based on mutual guarantee, are taking advantage of the community norm that default is a social taboo.

Another example is carbon credit, which in simple terms is a tradable certificate that permits a right to emit one ton of carbon-dioxide or other greenhouse gas of this equivalence. The concept was created as part of Kyoto Protocol to discourage countries/companies that emit carbon-dioxide, and that they should pay to countries/companies that don’t emit such toxic gases by using clean technology.

4 Disruptive innovation

So what exactly is disruptive innovation? [6] The Harvard Business School's Clayton Christensen calls it "wild and unexpected changes that radically restructure markets typically by harnessing new technologies."

Examples of disruptive innovation include mobile phone which has nearly killed fixed line phones; digital photography which sent sales of camera film plummet and made Kodak change its business model; online retailing which is bruising traditional retailing; online ticket booking which has made travel agents reinvent their business models and MOOCS, which are a paradigm shift in the business model of higher education.

But disruptive innovation is not necessarily new technologies. It can as well be using of an existing technology with a new business model. For instance, Netflix is moving away from sending DVDs to streaming content online on demand.

Disruptive innovations usually find their first customers at the bottom of the market. They move up the value chain as successive refinements improve them to the point that they start to steal customers. They may end up reshaping entire industry as in the following cases:

- Craigslist has transformed classified ads
- Skype has changed long distance calls
- iTunes has changed record stores
- Uber has changed the business model of taxis. [7]

In future, driverless cars, 3D printing, shipping via drones and Internet of Things are expected to have huge impact.

5 Are all innovations disruptive?

Not all innovations are disruptive even if they are revolutionary. The first automobiles in the late 19^{th} century were not a disruptive innovation because those automobiles remained expensive luxury items that did not disrupt the market for the horse drawn carriages. It was the low-priced Ford Model which came 30 years later, that was a disruptive innovation because it was cheap, mass produced and changed the rules of the transportation market.

Similarly, the first mainframe computers which used to occupy acres of space were not a disruptive innovation. It was the introduction of the personal computer that disrupted the market.

The Indian financial sector is witnessing disruptive innovation not just in payment systems but in the segments of deposits, credit, and insurance. The key drivers behind this disruptive innovation include: [8]

Internet penetration: The National Optic Fibre Initiative under Digital India will link every village with a broadband connection. As the fastest growing internet economy in the world, India is slated to add 300 million internet users by 2020.

Usage of smartphones: India currently ranks #2 in the world with over 1 billion mobile subscriptions. Of this, approximately 240 million consumers use smartphones and this base is projected to increase to over 520 million by 2020.

Improved O2O (Online to Offline) presence: Online shopping, bill payment and mobile recharge are the foremost reasons for using a digital mode of payment. Sensing these opportunities, merger of e-commerce and e-wallet firms is adding synergy.

Policy incentives: The Unified Payment Interface (UPI) which introduced a virtual payment address, Payment and Small Finance Banks, Aadhaar based Jan Dhan Yojana accounts, Tax rebates for digitisation, and Start-up India initiative are some of the recent important policy initiatives.

6 Conclusion

FinTechs, Payment Banks and Small Finance Banks will challenge the business model of banks and can potentially take away some of the lucrative segments of the banking business by offering tailor-made products and better service.

So, Indian banks have to find strategies to face competition from the new entities. Banks may need to collaborate, build alliances with some of them and even consider taking over a few activities. Ceding the last mile to them is also an option, but what is not an option is not changing their attitude and not becoming more responsive.

The regulators are caught between two competing objectives of letting a *laissez-faire* regime run by encouraging innovation and regulating in the interest of financial stability and consumer protection. Managing the right balance is the challenge for regulators.

Regulation of financial sector is different from regulating other sectors because the financial sector is interconnected. If it doesn’t self-correct in good time, risk builds up, and it’s difficult to know where the implosion will occur. It has to be recognized that a collection of healthy financial institutions does not make a healthy financial system.

The most important thing for regulators is to inspire trust that they will do the right thing. They must ensure that what is regulated is prudently regulated and what is left unregulated is because of a conscious decision.

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