सीएबी कॉलिंग
CAB Calling

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मुख्य संपादक की कलम से

From the Desk of Editor-in-Chief

प्रिय पाठकों,

जैसा कि आप जानते ही हैं, भारतीय अर्थव्यवस्था के विकास में कृषि और संबद्ध क्षेत्र की भूमिका महत्वपूर्ण होती है। यह क्षेत्र समावेशी विकास के दृष्टिकोण से भी महत्वपूर्ण है क्योंकि यह भारत की लगभग आधी आबादी को आजीविका के स्रोत प्रदान करता है। किन्तु, इस क्षेत्र को जीडीपी में इसके योगदान में अस्थिरता, भूमि विखंडन, क्षेत्रीय असंतुलन और काश्तकार किसानों से संबंधित समस्याओं जैसी विभिन्न चुनौतियां का सामना भी करना पड़ता है। दूसरी ओर, कुछ खंडों में ऐसी क्षमता है जिसका संभवतः पूरी तरह से दोहन नहीं किया गया है, जैसे कि बागवानी और सूक्ष्म खेती जैसे तरीकों का उपयोग जो उत्पादकता बढ़ा सकते हैं।

उपरोक्त पृष्ठभूमि में, सीएबी कॉलिंग के वर्तमान अंक में कृषि और संबद्ध क्षेत्र पर चार लेख शामिल हैं। कृषि–वित्तपोषण पर पहला लेख श्री एच आर दवे, उप प्रबंध निदेशक, नाबार्ड द्वारा प्राथमिकता प्राप्त क्षेत्र को ऋण प्रवाह पर पुणे के सीएबी में 18 जून 2018 को आयोजित 14 वें सम्मेलन में दिए गए उद्घाटन भाषण की प्रतिलिपि है। श्री दवे ने अपने संबोधन में कृषि और संबद्ध क्षेत्र के विभिन्न मुद्दों को सामने लाया है अर्थात, जीडीपी में इसके योगदान में अस्थिरता, किसानों की आय की प्रवृत्ति और कृषि में संरचनागत बदलाव। उन्होंने इस क्षेत्र के लिए ऋण के प्रवाह के विभिन्न पहलुओं के साथ ही भूमि के सिकुड़ते आकार और क्षेत्रीय असंतुलन के कारण आने वाली चुनौतियों की भी चर्चा की है। उन्होंने जेएलजी, एफपीओ, हरित नीति, एसएचजी को डिजिटल बनाने और ऋण परिचलनों में ग्राम पंचायतों की भूमिका के बारे में भी बताया। दूसरा लेख काश्तकार किसानों पर है जिसमें भारत में काश्तकारी की प्रवृत्ति, काश्तकारी की कानूनी स्थिति और काश्तकार किसानों की ओर

Dear Readers,

As you are aware, agriculture and allied sector is important for the growth of Indian Economy. The sector is also important from the inclusive growth perspective as it provides sources of livelihood for almost half of the Indian population. However, the sector faces various challenges such as volatility in its contribution to GDP, land fragmentation, regional imbalances, and problems pertaining to tenant farmers. On the other hand there is potential in certain segments, which is perhaps not fully exploited, such as horticulture and use of methods such as precision farming which can increase productivity.

In the above backdrop, the present issue of CAB, Calling includes four articles on agriculture and allied sector. The first article on agri-financing is a transcript of inaugural address delivered by Shri H. R. Dave, Deputy Managing Director, NABARD at the 14th Conference on Credit Flow to Priority Sector held at CAB, Pune on June 11, 2018. Shri Dave in his address brought out various issues faced by agriculture and allied sector, *viz.* volatility in its contribution to GDP, trends in farmer's income and compositional shift in agriculture and discussed various aspects of flow of credit to the sector and challenges faced due to shrinking landholding size and regional imbalances. He also spoke about JLGs, FPOs, green policy, digitizing SHGs and role of village panchayats in credit operations. The second article is on tenant farmers which discusses trends in tenancy in India, legal status of tenancy and credit flow to tenant

ऋण प्रवाह पर चर्चा की गई है। तीसरा लेख बागवानी पर है जो भारत में बागवानी और उभरते कृषि–वित्त वितरण मॉडल के बारे में चर्चा करता है। सूक्ष्म कृषि पर चौथा लेख सूक्ष्म कृषि के सिद्धांतों, उपयोग में लाई जा रही विभिन्न तकनीकों और उस क्षेत्र में वित्तपोषण के अवसरों के बारे में चर्चा करता है।

समावेशी विकास के संदर्भ में सहकारी बैंक महत्वपूर्ण भूमिका निभाते हैं। शहरी सहकारी बैंक शहरी और अर्ध–शहरी क्षेत्रों में वित्तीय सेवाएं प्रदान करते हैं और ग्रामीण सहकारी समितियां गांवों और छोटे शहरों के लोगों को सेवा प्रदान करती हैं। हाल के वर्षों के दौरान मोबाइल और इंटरनेट प्रौद्योगिकी के विस्तार से वित्तीय समावेशन पर भी सकारात्मक प्रभाव पड़ा है। डिजिटल वित्तीय समावेशन की पहल ने वित्तीय सेवाओं तक पहुंच बढ़ाने में मदद की है। बैंकिंग में सहकारिता का लाभ लेने पर पांचवां लेख सहकारी आंदोलन की उत्पत्ति, दुनिया भर में इसके उद्भव और सहकारी संरचना और भारत में सहकारी बैंकिंग के विकास पर चर्चा करता है। यह वित्तीय समावेशन के लक्ष्यों को प्राप्त करने और सहभागी आर्थिक विकास को बढ़ावा देने में सहकारी बैंकिंग की भूमिका के बारे में भी चर्चा करता है। डिजिटल बैंकिंग और वित्तीय समावेशन पर हिंदी में छठा लेख डिजिटल बैंकिंग में हाल के घटनाक्रम की जानकारी देता है, जिन्होंने वित्तीय समावेशन को बढ़ाया है। साथ ही, यह वित्तीय समावेश पहल में प्रौद्योगिकी सक्षम नवोन्मेष की भूमिका के बारे में भी चर्चा करता है।

इन लेखों के अलावा, इस अंक में तीन पुस्तक समीक्षाएं और इस महाविद्यालय द्वारा आयोजित प्रशिक्षण कार्यक्रमों से संबंधित आरबीआई द्वारा जारी किए गए महत्वपूर्ण परिपत्रों का सारांश और 'कैंपस कैप्सूल' जैसी अन्य नियमित मदें भी शामिल हैं।

– मधुमिता सरकार देब

farmers. The third article on horticulture discusses about horticulture in India and emerging agri-finance delivery models. The fourth article on precision farming discusses about principles of precision farming, various technologies being used and the financing opportunities in the area.

The co-operative banks play an important role in the context of inclusive growth. The urban co-operative banks provide financial services in urban and semi-urban areas and rural co-operatives serve the population in villages and small towns. Financial inclusion has also been positively influenced by expansion of mobile and internet technology during recent years. The digital financial inclusion initiatives have helped in increasing access to financial services. The fifth article on leveraging cooperative advantage in banking discusses the genesis of cooperative movement, its emergence across the globe and evolution of cooperative structure and cooperative banking in India. It also discusses about the role of cooperative banking in achieving the goals of financial inclusion and promoting participative economic development. The sixth article in Hindi on digital banking and financial inclusion traces the path of recent developments in digital banking that have enabled greater financial inclusion and discusses about the role of technology enabled innovations in financial inclusion initiatives.

In addition to these articles, the issue contains three book reviews and other regular items such as gist of important circulars issued by RBI related to training programmes conducted by the College and the 'campus capsule'.

- Madhumita Sarkar Deb

Feature Articles

Agrifinancing in India – Gaps and Overlaps[1]

Shri H.R Dave,
Deputy Managing Director, NABARD

1. Good afternoon to all. CAB conducts the Annual Conference on Priority Sector, which is very important, as many points that get crystalized here may find some place in the policies of RBI. I had the privilege to be here in 2015 and this is the second occasion, I am addressing the participants of this important Conference. I am given to understand that there are only four delegates who are attending the conference the second time thereby reflecting the rotation that we have in our own institutions in terms of how long we continue to nurture this portfolio.

2. Within the priority sector, today's theme is primarily to discuss agriculture and since you all are at a senior position, I thought I will not get into the smaller details but would focus on some of the macro-economic aspects of agriculture because changes in the macro-economic aspects in agriculture enable us to re-design our portfolio, re-position our portfolio and to some extent re-price our portfolio. Largely, I have divided this address in two parts. As we go along, I shall certainly like to hear from you on aspects that require a change and the challenges that the sector faces. To start with, let me set the context by discussing some overall trends in agriculture.

Part 1 - Agrifinancing in India: Some Issues

Trends in Overall GDP and Agriculture Growth

3. Looking at the trends in overall GDP and the agricultural growth (Fig 1), we find that as far as agriculture is concerned there exists huge volatility in its contribution to GDP growth (now GVA). When we lend to this sector, therefore, we must keep this in mind that there is going to be uncertainty involved. These are natural and nature induced volatility, there are political and policy-induced volatility also and if we superimpose all of these we have a better understanding of the functioning of the sector. But this is the segment on which 50 per cent of India's population depends, directly or indirectly and from this perspective it is important to know what happens 'in' and 'to' agriculture.

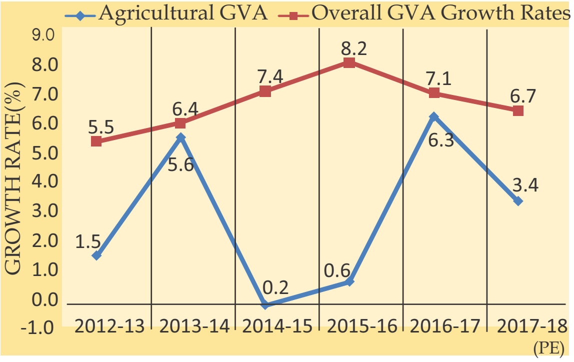


Fig 1: Trends in overall GDP and the agricultural growth

[1] Address delivered at the 14th Conference on Credit Flow to Priority Sector: Policy and Implementation, CAB, Pune, June 11, 2018

Trends in income of farmers

4. Let's reflect on what is happening to farmers' income as it's the net income which the farmer uses for servicing the debt. Among the various sources of farmer's net income change is primarily eminent in the animal husbandry segment (Fig 2). The income which a farmer earns from animal husbandry is growing and there is substantial increase in the income from animal husbandry as compared to cultivation. If we analyse the growth story of different States of India, agriculture has sustainably grown at over 10 per cent, not core agriculture but in terms of diversified agriculture, viz., horticulture, dairy, poultry, and fishery. When we design, and strategize our intervention, should we not look at some of the sub segments especially the ones which are growing at a faster rate?

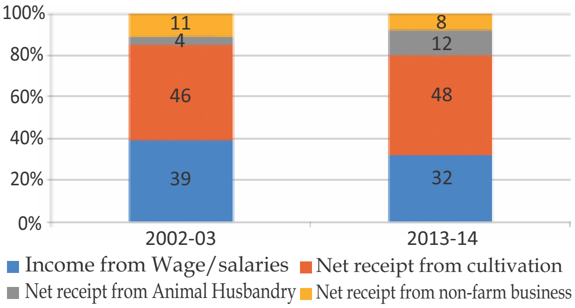


Fig 2: Sources of Farmers' Income - Shares

Compositional Shift in Agriculture

5. Between food grains and horticulture, till 2012-13, the food grain growth was higher than horticulture (Fig 3).

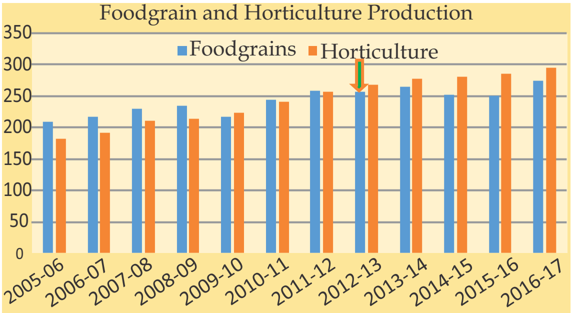


Fig 3: Compositional Shift in Agriculture

Post 2012-13, horticulture has taken over the growth rate of food grains, in terms of quantity of production. This indicates that horticulture sector is growing at a fast pace and because it is capital intensive sector, banks need to prioritize it adequately for term loans disbursements for this segment.

Sub-sectoral Growth Rates

6. Sub-sectoral growth rates during 2007-08 and 2016-17 for agriculture and allied and horticulture provide insights on what sub-segments to look for while financing in terms of growth (Fig 4). Crops like rice, wheat, coarse cereals, and to some extent fruits are not the ones which exhibit high growth rates, but it is floriculture that has experienced tremendous growth. Plantation crops, spices, horticulture are also the sub-segments which have grown faster than the coarse cereals. These growth rates need to be interpreted to prioritise portfolio by banks and have important lessons.

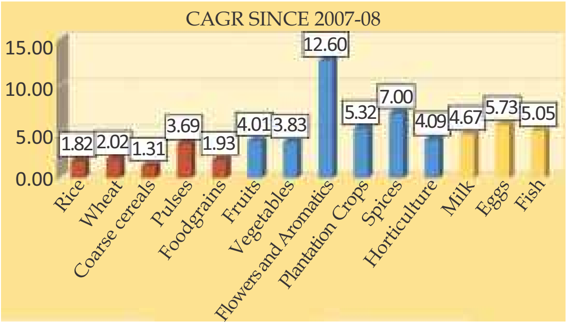


Fig 4: Sub-Sectoral and Crop wise Growth rates

Allied Agriculture Sector: Current Trends

7. It would be worthwhile to analyse the growth in the allied sector (Fig 5). While milk and poultry have grown substantially in the last few years, wool has not grown and in fact growth was negative. Fisheries with Government focus on blue revolution has seen especially inland fishery is generating a lot of surplus as opposed to marine sub-segment. So, within the fisheries sector, it is the inland segment that may offer bright business potential.

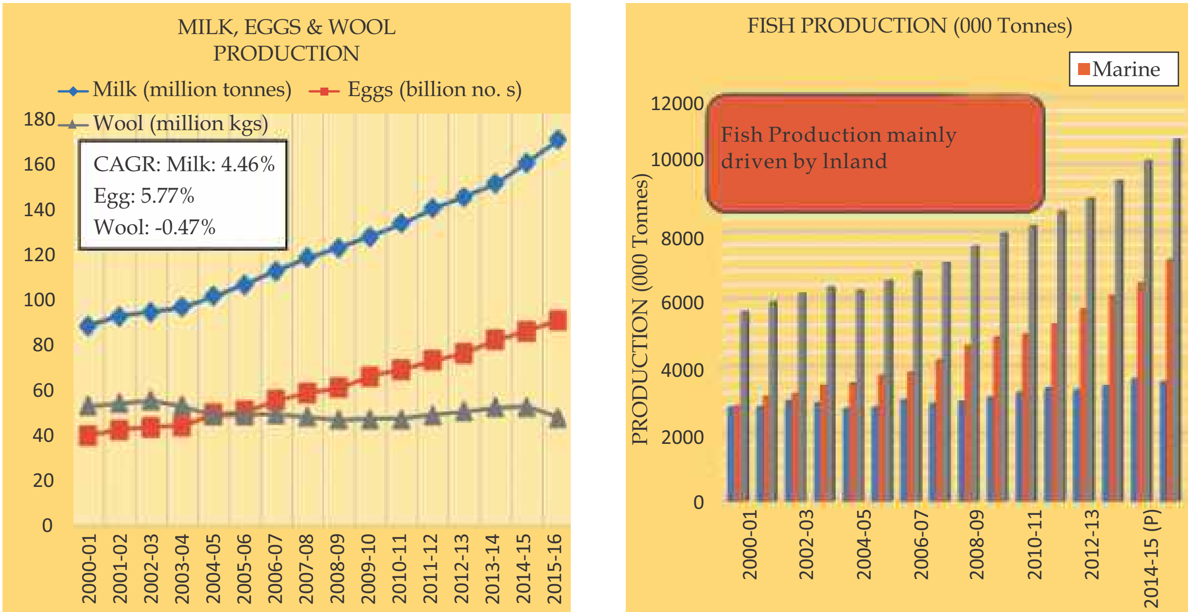


Fig 5: Allied Agriculture Sector: Current Trends

Credit Flow to Agriculture and Allied Sector

8. Let me move my discussion to agricultural credit. The ratio of agriculture credit to Gross Value Added (GVA) in agriculture is increasing steadily over the years (Fig. 6), thereby indicating that Indian banks have stepped up lending to agriculture and also depicting greater formalization of credit vis-à-vis informal sources of credit. During the financial year ending, March 31, 2018, banks have disbursed almost Rs.12 lakh crore of agricultural credit. Definitional changes effected to priority sector concept have also resulted in increasing term lending.

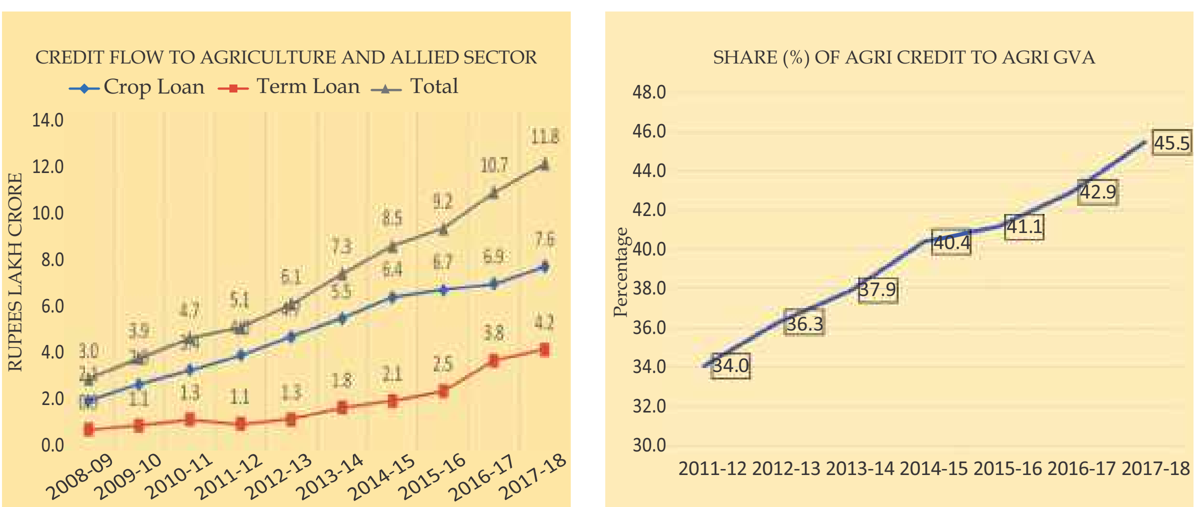
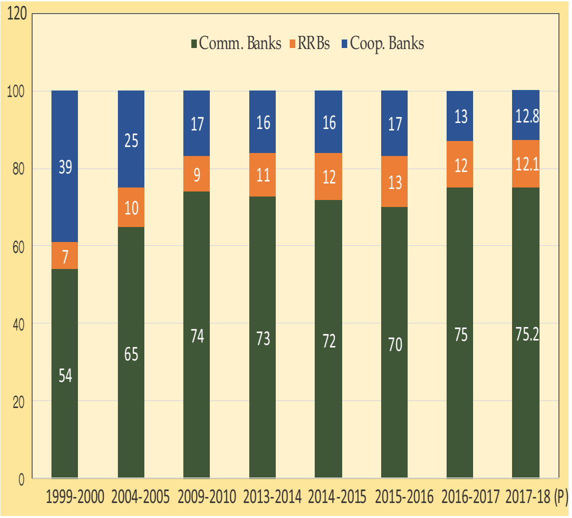
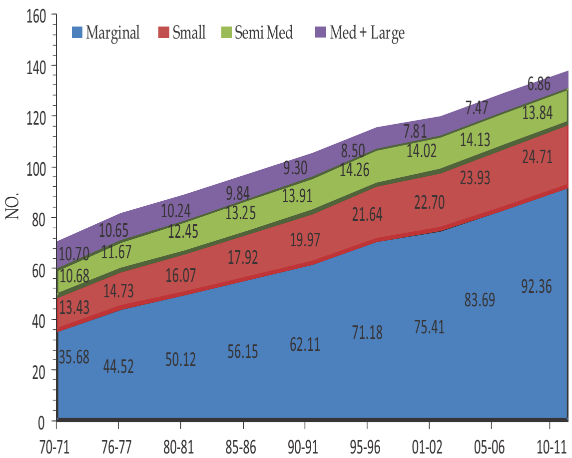


Fig 6: Credit Flow to Agriculture and Allied Sector

9. It is heartening to note that the agricultural credit depicted in the green portion of the bar has increased for commercial banks from 54 per cent to 75 per cent. This share has been weaned from cooperatives and RRBs by commercial banks. The RRBs portion depicted in orange hovered around 12-13 percent. The cooperative credit structure had earlier the largest share in agricultural credit as compared to commercial banks. Many banks classify MFI loans under agriculture. Commercial banks lending to MFIs is mostly for short-term and not necessarily for capital creation though the portfolio may get classified under agriculture for term loans. This is a grey area that we need to analyse further and look into.





Shrinking Land holdings Size

10. The customer base is changing faster than one can imagine. What has happened to Indian agriculture in terms of the land holding size, 1970-71 onwards? By 2010-11, we had only six per cent medium and large category farmers. So, what are the policy implications and strategic implications with respect to the portfolio and its nurturing? The facts indicate this reality and we need to increase agricultural credit only by financing small and marginal farmers.

11. There is data available on how many owners of land actually cultivate. Another dimension which one needs to take note of is that many farmers are not cultivating land themselves. The issue of oral lease and legalising tenancy needs to be addressed. Lending to this category is being done through Joint Liability Groups (JLGs). It is important for Lead Banks and SLBCs to drive home this point with the State Government more aggressively. Let me drive the point through an example of crop loan. For lending to these farmers, the branch manager requires a certificate stating that 'X' is a farmer and *n* number of crops is being grown in his piece of land. Since 'X' does not have any title what options does he/she has to access formal institutional credit? States like Andhra Pradesh did try through loan eligibility certificate for extending formal credit to tenants/oral lessees but I am told that experience has not been very successful as it's just a one-year lease, which is legalized. Now why this issue is important? In states like Bihar, Uttar Pradesh (Eastern parts), Andhra Pradesh and many other States, the percentage of land under oral lease ranges anywhere between 25-40%. So the question arises - can one afford to ignore lending perspective from a situation, where 40 per cent of land

does not conform to normal lending conditions? So, what is the new engineering that needs to be put in place when we go for a product design? We as bankers need to set an agenda for this and get the State Governments on board. A Conference like this can contemplate a declaration, stating say 'CAB Declaration 2018' *"let all efforts go for increasing credit flow to tenant farmers and will bring about policy shift towards that end."* When one declares such an action agenda, it becomes a point on which really RBI, NABARD and others will also rally around. Certainly, crystallising the wish list with needed support is a requirement.

Credit flow to agriculture - Regional Imbalance persist!

12. There are some worrying trends with regard to distribution of agriculture credit. Take the case of Central India. During 2016-17, 14.5 per cent credit has gone into Central India (Table 1) and in terms of accounts, 17 per cent of total accounts are in Central India. However, its share in gross cropped area is 27 per cent. Central region accounts for 31 per cent of total irrigated area and contributes 31 per cent of total food grain production. Thus, the credit flow does not mirror the real contribution of central region. Come to Southern India, 42 per cent credit and 43 per cent of total agri-accounts are in this region. But the region, with only 16 per cent of total irrigated area and 18 per cent of gross cropped area, contributes around 16 per cent of total food grain production. So, would the banks like to repeat the success story of southern India in Central and eastern India? Another 'Declaration' of this summit can be to resolve ourselves to focus on these three regions, i.e., central India, east India and north-east India. NABARD has held meetings with honorable Chief Ministers of Assam and Uttar Pradesh and this point has been brought to their notice, where it was emphasized that banks will be willing to lend more subject to State doing a facilitation role.

Table 1: Linkage between Real Sector and Credit Flow

	Agri. Disbs 2016-17	Agri. A/Cs (2016-17)	Gross Cropped Area	Gross Irrigated Area	Food grain prod.	Rural/ semi urban branches
Northern	21.85	12.71	20.11	26.32	26.58	16.62
North Eastern	0.82	1.37	2.83	0.68	2.02	3.16
Eastern	8.15	14.29	14.65	15.25	16.37	17.99
Central	14.68	17.63	27.26	31.66	30.55	21.51
Western	12.83	10.96	16.47	9.74	8.31	12.98
Southern	41.67	43.04	18.68	16.35	16.17	27.74
Total	100.00	100.00	100.00	100.00	100.00	100.00

13. Commercial banks have done well in recent years with respect to coverage of small farmer loan accounts (Table 2), due to two reasons. One reason is obvious that since majority of farmers in India are of the small and marginal category, they necessarily get financed and the second is the RBI's directive that 8% should flow to small and marginal farmers.

Table 2: Coverage of small and marginal farmers

	SF/MF accounts (lakhs)				SF/MF loan disbursed (Rs. Crore)			
Year	CBs	Coop. Banks	RRBs	Total	CBs	Coop. Banks	RRBs	Total
2014-15	195.4 (426)	202.8 (307)	87.8 (121)	486 (854)	1,97,540	78,736	70,390	3,46,666
2015-16	210.2 (442)	232.9 (324)	97 (133)	540 (899)	2,00,346	97,999	81,653	3,79,998
2016-17	451.9 (618)	171.2 (236)	87.4 (119)	710.5 (974)	3,14,651	78,842	70,333	4,63,827
2017-18 (P)	534.6 (734)	170 (256)	105.5 (151)	810.2 (1141)	3,90,323	97,929	94,034	5,82,285

Let me now quickly go to the part II of my address.

Part II – Way Forward

Joint Liability Groups (JLGs)

14. It is always desirable to analyze data and draw conclusions from it before arriving at decision to lend. I believe that If P for profit does not work, P for 'passion' should work. And one cannot afford to ignore this important segment. Let me take an example, NABARD has supported most of the banks handsomely through the Financial Inclusion Fund (FIF) for promotion of Joint Liability Groups (JLGs). I have been asking my colleagues, do commercial banks need Rs.2,000 assistance per JLG? The point is that at the initial stages, handholding is needed and gives the priority sector in-charge a comfort to convince his/her boss that *main apna paisa nehin laga raha hun*, somebody else is footing the bill. Yes, I think JLG financing has passed that stage as so far 14 lakh JLGs have been financed. Given that average size of land holding is reducing, community agriculture, economies of scale, and custom hiring of farm equipment are declining. Farmers are not going to buy tractors with bank loans as was the case before. Reading this reality, companies like Mahindra have consciously strategized to build a new delivery line, i.e., customer hiring model. The point I am trying to drive is that innovations need to be encouraged within our systems.

Issue of Water

15. NABARD had initiated a massive water campaign last year and requested all CMDs of Banks to join in the water campaign. NABARD had identified and reached 105,000 villages in 250 water stressed districts of India. About 8,000 '*Jaldoots*' were trained, in 30,000 villages, and bank officials had visited these places. It was entirely digitally monitored campaign covering 1 lakh villages. NABARD documented this with a 20-second video of each village covering 100 thousand maps prepared by communities on the agenda of water, where new structures can come up, where existing structures can be renovated, where private investment can happen on private lands.

16. If the issue of water is not dealt timely, it can reach critical proportions for all of us including from the agriculture lending perspective. As a Development Bank and for the portfolio of agriculture credit, water is essential. If agriculture fails, agricultural credit is going to fail. How many of us here have prioritized lending for micro irrigation? How many have prioritized

lending for farm ponds and farm forestry? These questions are critical if we want to safeguard our portfolio and hedge the risks involved. NABARD has been working very closely on the issue of water - Prof. Ashok Gulati and his team from ICRIER have worked out water-use efficiency of 10 major Indian crops across India.

17. The area of counselling farmers assumes importance and the Financial Literacy Centers (FLCs) need to orient their intervention with questions which are relevant locally. For example, FLCs in Marathwada should tell farmers that sugarcane is not the right crop and should not be grown in Marathwada. Inputs like these in the FLCs would also help in protecting the interest of the bank itself by protecting the interest of the farmers. How much of money you would like to pump in on sugarcane?

Farmer Producer Organizations (FPOs)

18. FPO financing is the answer to smaller holdings. Within agriculture, ten years down the line, some of us will not be here, but this is the only way forward that looks promising to overcome the problem of uneconomic size of landholdings. For the current year, NABARD through its Regional Offices shall pick up a theme which is relevant to each State and reach out to every corner of the State with FPO agenda. I firmly believe producers' organization is the solution to look for and every village can resolve to establish one FPO and even FLCs of banks can contribute in building this institution.

Crystalizing Green Policy

19. Climate change issues are increasingly going to dominate the agriculture sector and thereby will have its effect on agriculture lending. NABARD is the only accredited entity in India for receiving money from Green Climate Fund to India. In Odisha, NABARD has supported the first project in India for de-silting of ponds and putting solar pump sets. But as Priority Sector Chiefs, would you like to push this agenda within your bank, asking your bank to crystalize your own green policies? NABARD is setting up a Climate Change Centre at BIRD, Lucknow with the help of German Government and would be more than happy to support banks in defining their green policy.

E-Shakti: Digitizing SHGs

20. Let me just take a few minutes to share with you the immense possibilities that digitization of SHGs offer. How many of you are not familiar with E-Shakti? This is the way forward. Today, SHG women manage a portfolio of Rs.1 lakh crore, comprising Rs.40,000 crore of savings, of which Rs.25,000 crore is in their saving accounts and balance is in rotation within SHGs plus an exposure of almost Rs.65,000 crore. The real issue is that out of 80 lakh SHGs in India, we have financed only 40 or 45 lakh SHGs. One plausible reason for this is that perhaps branch managers do not have confidence on the book-keeping of SHGs and may have reservations on lending to this Group. Now, if that be the case (and moreover branch manager being a busy man) asking him/her to go to every village and do appraisal and monitoring may be asking for too much from him. The answer lies in sharing with him/her the credit history of all SHGs at the click of mouse on his desktop. If the profile is available to bankers in their regional office/s or in branch by mere clicking to E-Shakti portal for which NABARD has already

requested banks to allow access to your branches so that they log in to the portal. This can also act as a mechanism to serve as the early warning system. NABARD is currently implementing this project in 100 districts of India, shortly we will cover another 100 districts to cover all aspirational districts and in next two years will cover the entire India. There is something parallel going on NRLM side too. Unique feature here is that it is a transactional advisory that a branch manager gets sitting in a remote village. Further, NABARD is linking E-Shakti to four Credit Bureaus. NABARD has already held two rounds of discussions with all the Credit Bureaus in which RBI and a few major banks were also present. RBI's requirement of credit history and linking of all SHGs and all members of SHGs to credit bureau will automatically be calibrated. Branch managers are already seeing the comfort in this arrangement and credit has started growing. SBI, BOB, and UCO Bank have already allowed their branches to access the portal. A total of 17 commercial Banks have already enabled use of E-Shakti. Support is available to the SHGs to upload the monthly data using a mobile and It goes to E-Shakti portal wherefrom users like, Banks, NGOs, NABARD, Government can access. About 70 per cent women have given their mobile numbers. Out of three lakh SHGs and 43 lakh women members who have been digitized, 28 lakh have given their mobile numbers. Initially, they were reluctant. Our assessment is that credit linkage has improved from 38 per cent to 59 per cent of the groups in the pilot districts within a short span.

Village Panchayats: Bringing Transparency in Credit Operations

21. Last point that I want to delve about is how we make use of the democratic grass root institution of Village Panchayats. In Panchayats across various States, lots of decentralizations of power has been effected. Can we think of devising some arrangements wherein one can leverage this institution and along with the aspirations of youth, as many young people are now involved with panchayats for development through credit. Fifty per cent private investment in a village happens only through bank loan. We cannot think of a vibrant village without these investments. Let us try a few pilots in some villages and NABARD is willing to partner with banks to take forward this agenda. The central idea is to put across the thought that how credit can be used and leveraged to develop villages and ensuring that repayment is timely done. I believe this route has immense possibilities for banks to work upon.

Thank you so much for providing me this opportunity to share my thoughts on the subject.

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Credit Flow to Tenant Farmers Problems and Potential Solutions

Dr. Subbaiah Singala[1]

Abstract: *Tenancy in farming is significant throughout India, though there are wide variations across the States. However, the issue continues to be largely outside the legal ambit given the various legal restrictions on the same. In the absence of clear legal status of tenancy and proper documents, the tenant farmers are forced out of institutional support including bank credit. As Indian economy makes transition to a more matured and inclusive economy, the tenancy is likely to increase. Hence, reforms in agriculture land leasing is the need of the day. Against this backdrop, the paper analyses credit flow and related issues being faced by tenant farmers and the possible solutions to mitigate them.*

Introduction

Agriculture plays a pivotal role in Indian economy as more than half of its population continues to rely on this sector for employment and livelihood. However, the high proportion of population dependent on the sector juxtaposed with falling share of agricultural output in total national output is a cause of concern for policy makers. Further, productivity in agriculture remains low as compared to global benchmarks for a number of reasons. The sector continues to grapple with a slew of deep-rooted issues, both structural as well as financial. One of the complex problems in the sector is the prevalence of tenant farming, which in many cases is practiced through oral leasing. Owing to highly restrictive legislations on leasing of agricultural land in the country, arrangements made for tenant farming go unreported in legal and official documents (Haque 2013). However, as tenant farming remains quite common across the country, the absence of documentation of tenancy contracts implies that tenants are distanced from institutional mechanisms crafted for agriculture sector, including credit from the banking system. Formal credit remains beyond the reach of many tenant farmers primarily due to the lack of any evidence of cultivation for enabling banks to sanction the loans to them. The Report of the Committee on Medium-term Path on Financial Inclusion recommended digitalisation of land records to increase formal credit supply to all agrarian segments and modification of regulatory guidelines to banks so that they can directly lend to tenants / lessees against credit eligibility certificates (RBI 2015: p 26).

The Haque Committee has recommended in 2016 that tenancy markets be freed from any state regulation. The committee argued that restrictions on leasing of land have resulted in inefficient utilisation of land, and have

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worked against the interests of small landowners. It has proposed that liberalising tenancy markets would allow owners of small, uneconomic holdings to lease out their lands to large landowners, and move to other occupations. Creating a way for small and marginal farmers to leave agriculture, through promotion of reverse tenancy, and thus aiming to reduce the size of agricultural workforce, is also a centrepiece of the government's strategy to double farmers' income (Vaishali, et. al, 2018).

A large number of suicide cases among the tenant farmers are reported to be on account of crop failures and non-coverage of their crops under the crop insurance schemes. Several operational difficulties in the implementation of crop insurance scheme at the level of state governments, banks and insurance companies, coupled with poor settlement record of crop insurance companies and low awareness among the farmers about the benefits of crop insurance schemes are adversely affecting the tenant farmers when their crops fail.

With this background in the section, the paper deals with the trends in tenancy in India, legal status, and credit flow to tenant farmers. Select case studies from Andhra Pradesh and Telangana are also highlighted. A few potential solutions are also offered. All these aspects are covered in 5 different ensuing sections. The last section concludes the paper.

Trends in Tenancy in India

Agriculture tenancy across India is either highly restrictive or prohibited (Niti Aayog 2016, Government of India (GoI) 2016, Haque (2012). Haque argued that at independence, the policy makers focussed on abolition of feudal/semi-feudal agrarian structure with tenancy reforms aimed at conferring ownership right to tenants and prohibiting/restricting future tenancy as well. Consonant with such policies, the data available suggests that the tenancy declined between 1953 and 2003. However, the decade 2003-2013 saw an increase in tenancy in most of the major states as well as at the national level (Table 1). The increasing tenancy in the recent years may be indicative of changing economic landscape of the country. Niti Aayog (2016), Haque (2012) and Haque and Nair (2014) also argued that tenancy in modern time is driven by economic considerations.

Table 1: State-wise Proportion of Operated Area Leased-in (%)

NSSO Reports	Report 36 (8th round)	Report 215 (26th round)	Report 330 (37th round)	Report 388 (48th round)	Report 492 (59th round)	Report NSSO Key Indicators (70th round)
States	**1953–54**	**1972–73**	**1981–82**	**1992–93**	**2002–03**	**2012–13**
Andhra Pradesh	21.2	9	6.2	9.6	9.97	35.7
Assam	43	16.7	6.4	8.9	5.06	4.2
Bihar	12.4	14.5	10.3	3.9	11.76	22.67
Gujarat	19.4	3.9	2	3.3	5.08	5.82
Haryana	39.8	23.3	18.2	33.7	14.38	14.82
Himachal Pradesh	n.a.	15.9	3.2	4.8	2.87	5.33

NSSO Reports	Report 36 (8th round)	Report 215 (26th round)	Report 330 (37th round)	Report 388 (48th round)	Report 492 (59th round)	Report NSSO Key Indicators (70th round)
States	**1953–54**	**1972–73**	**1981–82**	**1992–93**	**2002–03**	**2012–13**
Jammu & Kashmir	22.1	8.1	2.5	3.7	0.32	0.2
Karnataka	21.5	15.9	6	7.4	3.68	6.9
Kerala	20.2	8.6	2.1	2.9	4.18	8.93
Madhya Pradesh	19.8	7.5	6.6	6.3	2.83	5.14
Maharashtra	19.7	6.2	5.2	5.5	4.59	3.44
Odisha	12.6	13.5	9.9	9.5	13.15	16.96
Punjab	39.8	28	16.1	18.8	17.84	24.42
Rajasthan	21	5.3	4.3	5.2	2.81	7.11
Tamil Nadu	27	13.1	10.9	10.9	6.1	13.54
Uttar Pradesh	11.4	13	10.2	10.5	3.49	7.89
West Bengal	25.4	18.8	13.4	10.4	9.42	14.73
All India	20.6	10.6	7.2	8.3	6.6	10.41

Source: Gyanendra (2016)

Owing to restrictions/prohibition on tenancy, tenancy arrangements in the country are mostly informal, insecure and inefficient (Niti Aayog 2016). It has been argued in numerous reports (Niti Aayog 2016, RBI 2015, GoI 2016), as well as academic discourse (Haque 2013, Revathi 2014, Prasad, et.al, 2012, Murty and Reddy 2017) that lack of legal recognition to tenancy kept the tenants outside the ambit of institutional support, including formal credit and other agriculture inputs/support. In the absence of formal contracts, tenant farmers are not able to get benefits under various government schemes like crop insurance and interest subvention. All these factors may have had a role in the high incidence of suicides among tenant farmers. "Data collected a few years ago showed that of 1.7 million tenants, more than one-third are landless and almost half of them have land holdings of their own of less than 0.5 hectares. Such farmers have no access to bank loans, crop insurance, loan waivers or subsidies. In fact, in 2013, of the Rs. 23,000 crore given away as loan waivers, only 0.1% went to tenant farmers, although their share in farmer suicides is almost 80%[2]" (Ranade 2017).

Credit Flow to Tenant Farmers

Availability of timely and adequate credit plays an important role in agriculture as the activities involve upfront costs, but the income starts flowing in after a few months. The Reserve Bank and the Government have accorded high priority to agriculture credit and accordingly it figures in priority sector lending targets, wherein banks are mandated to extend credit as per the limits

[2]Available online at https://www.livemint.com/Opinion/ogSpQ2JJFAs0zTHBmvpCIP/ Loan-for-tenants-small-reform-big-gain.html

specified by the Reserve Bank from time to time. Formal credit plays an important role in safeguarding farmers from money lenders charging exorbitant interest rates. However, since formal credit, in most cases, is reliant on proper documentation and verification procedures of economic activities, many farmers including tenants, share-croppers and oral lessees continue to remain outside its ambit. Two of the institutional schemes available for the tenant farmers in the country are Kisan Credit Card (KCC) and Joint Liability Groups (JLGs) or 'Bhoomi Heen Kisan' scheme through NABARD, which was announced in the Union Budget, 2014-15. The two schemes are discussed below in brief:

Kisan Credit Card (KCC) Scheme: It is a credit delivery mechanism to meet the production credit requirement of farmers in a timely and hassle-free manner. As per the guidelines, tenant farmers, oral lessees, share croppers and JLGs of tenant farmers are also eligible for availing finance under the scheme. As far as the collateral security is concerned, for a card limit up to Rs. 1.0 lakh, hypothecation of crops is to be done. Where there is tie-up for recovery, loans of value up to Rs 3.0 lakh can be sanctioned against hypothecation of crops. In respect of loans above Rs.1.0 lakh without tie-up and above Rs.3.0 lakh in case of tie-up advances banks have the discretion to decide on collateral security. Further, the banks are required to ensure on-line creation of charge on the land records in States where the facility is available. The KCC scheme is also a gateway to interest subvention/ incentives announced by GoI and/or State Govt. from time to time, as also to the crop insurance scheme.

Financing of Joint Liability groups (JLGs) of 'Bhoomi Heen Kisan' (RBI Circular dated November 13, 2014)[3]: A JLG is defined as an informal group of 4 to 10 individuals formed for availing bank credit either on individual basis or as a group mechanism against mutual guarantee, mainly serving as collateral substitute for loans to be provided to the target groups like small, marginal, and tenant farmers, oral lessees, share croppers, etc. Hence, JLG mode of lending leads to mutual trust between banks and target groups, minimizing risks in loan portfolio (Ministry of Agriculture, 2017).The Union Budget, 2014-15 contained a provision for financing of 5 lakh JLGs of 'Bhoomi Heen Kisan' (landless farmers).

Other Measures: Both RBI and Government have taken several other measures to increase institutional credit flow to the farmers including small and marginal farmers, and to bring them within the fold of institutional credit.

I. Under the Interest Subvention Scheme (ISS), subvented interest rate of 7% per annum for a period up to one year is applicable to Short Term Crop loans of upto Rs.3 lakh. In case of prompt repayment, the farmers can avail an additional 'prompt repayment incentive' of 3% per annum which brings down the effective rate of interest on such loans to only 4%.

ii. The ISS is also applicable to post-harvest loans for up to 6 months at the same rate of interest as Short Term Crop loans to KCC holding Small and Marginal Farmers, to encourage them not to resort to distress sale.

Detailed circular available at https://rbidocs.rbi.org.in/rdocs/notification/PDFs/FIDDC42CB1114FL.PDF

iii. Within the 18 percent priority sector target for agriculture, a sub-target of 8 % for small and marginal farmers has been fixed to increase the flow of credit to small and marginal farmers.

iv. As per PSL guidelines, loans to distressed farmers to repay non-institutional lenders are eligible for priority sector classification.

In spite of these measures, the credit flow to tenant farmers is estimated to be very low at less than 3%[4] of the commercials banks' credit to agriculture, even though the tenant farmers share in cultivated land is estimated to be close to 20%.

Legal Status of Tenancy

Restrictive tenancy laws in various states add to the problems of tenant farmers. As discussed in Niti Aayog (2016), while there is no explicit ban on land leasing, the conditions on these leases are highly restrictive. Further, in some states, land leasing is banned except in certain cases. Niti Aayog (2016) suggested a Model Land Leasing Law to give impetus to liberalisation in agriculture land leasing and set up the Expert Committee on Land Leasing in 2015 under the chairmanship of Dr. T. Haque. The Expert Committee was entrusted with the responsibility of drafting Model Agricultural Land Leasing Act, based on critical review of the existing agricultural tenancy laws in practice in various states and considering the need to legalize land leasing. Accordingly, the Expert Committee submitted its report in March 2016, proposing the Model Agriculture Land Leasing Act, 2016 with the following salient features[5]:

1. The Act aims to legalize land leasing to further the cause of agriculture efficiency, equity, poverty reduction, enhancement of agriculture productivity, promoting occupational mobility and facilitating rural change.
2. It clearly defines lease agreement as a contract between land owner – lessor and the lessee cultivator who leases in land for agriculture and allied activities, containing details on location and area of leased land, duration of lease, lease amount, terms and conditions for renewal/extension of lease and defaults which shall invoke termination of lease. Further, the Government will play no role in determination of lease period or amount and same will be mutually agreed between lessor and lessee.
3. The lease agreement shall not be entered into Record of Rights as the leasing for any period whatsoever shall not create any occupancy or protected tenancy or right against lawful eviction or lease termination. Further, the lease agreement shall not be used to establish any permanent right over the land in the court of law.
4. The lessor shall not interfere with the Lessee Cultivator's use and possession thereof so long as the Lessee Cultivator (i) does not default in lease amount payment, (ii) does not damage the soil health, (iii) does not use the land for purposes other than what is agreed upon in the lease agreement and (iv) does not sub-lease the land to any other person. The lessor will be responsible for paying taxes and cess on land.

[4] Author's estimation

[5] Source: Niti Aayog, 2016, Report of the Expert Committee on Land Leasing

5. The lessee shall be eligible to access credit from banks and other financial institutions based on the lease agreement, but without mortgaging the leased in land. The expected value of production / returns from leased in land during the lease period may be used as collateral. She/he shall be entitled to obtain crop insurance, disaster relief or any other benefits or facilities provided to the farmers by the State or Central Government, based on the lease agreement.
6. Tahsildar or a revenue officer of equivalent rank, will be responsible for enforcing lease terms and ensuring return of the leased out land to the lessor on expiry of lease period.
7. The state government shall constitute a special land tribunal, headed by a retired high court or district court judge, which shall be the final authority to adjudicate disputes under this Act. No Civil courts will have jurisdiction over disputes under this Act.

It is understood that several states are in the process of enacting or have already enacted laws enabling land leasing and tenant farming. The steps taken by Andhra Pradesh and Telangana in this direction are quite interesting, though somewhat similar.

Select Case Studies

Yerram Raju (2019) observed that while Kerala is the only State that enacted the Money Lending Act protecting borrowers from usurious rates of interest that incidentally protected tenants from excesses in private debt, both Andhra Pradesh and Telangana have addressed this issue in two different ways.

A. The Case of Andhra Pradesh

GoI (2005, 2008 and 2012) argued for relaxation in agriculture land leasing market as tenant farmers in India are at huge disadvantage. In India, the unified state of Andhra Pradesh was one of the pioneer states to undertake reforms on tenancy farming and enacted the ***Licensed Cultivators' Act, 2011***. One of the most important provisions under the act is provision of **Loan Eligibility Cards** (LECs) to the tenant farmers which could be used for availing institutional supports like credit, crop insurance, and input subsidies by tenant farmers. Revenue officers are responsible for issuing LECs, with the assistance of grampanchayat officials. The list of LEC holders is submitted to public financial institutions, including banks, operating in the area and is now available online as well. The landowners remain eligible to avail loans other than crop loans using their owned land as security. The owner's consent is required for issuance of LEC. In the instances where owner consent is not available, the Agriculture department issues **Certificate of Cultivation** (CoC). The LECs and CoCs can be used by the tenant farmers to avail KCC loans from the banks which are currently valid for one year.

Several studies have found that loan disbursement among tenant farmers remained low. Haque (2013), based on primary as well as secondary data, found that LEC holders did not receive bank loans mainly due to two reasons - first, the land owner is already availing credit on the same plot of land and second, lack of awareness amongst bank officials as well as tenant farmers regarding loan entitlement. Other reasons mentioned in the study included "incorrect evaluation of credit risk by bank's field officers, misinformation by village revenue officers, lack of recommendation by any responsible person and objection of the landowners". Revathi (2014) based on interviews with tenant farmers and discussions with various stakeholders including land owners, government and bank officials, critically evaluated the implementation of the Act, and investigated its impact on tenant farmers in terms of accessibility to formal institutions for agriculture credit. She found that the implementation of LEC scheme remains sub-optimal and access to credit is difficult for tenant farmers in a situation of resistance by land owners. She found that in the absence of legal papers backing the tenancy, it becomes especially difficult for bankers to disburse the loans. She further reported that landowners manage to get agriculture loans as well as other benefits, even if they had given their land on lease, since the tenancy arrangements do not get registered.

From the above analysis, it is evident that though the intent of State government to channelize the benefits to tenant farmers, who are the actual cultivators of land, is laudable, the implementation of the Act leaves much scope for improvement, including the process of issuing LECs/CoCs to the tenant farmers.

Web Land Portal -Use of technology to ensure credit delivery to tenant farmers: The Government of Andhra Pradesh (GoAP) has made available the details of tenant farmers holding LECs and CoCs in the web portal of Agriculture department. The land records have been computerised and made available in the web portal for enabling bankers to check the details of LECs and CoCs. Further, there is a facility of loan charge creation in the portal, where details of the KCC loans extended can be entered and reviewed by the banks to avoid duplication of loans by different banks to the same LEC/ CoC card holder or against the land with same survey number.

Standard Operating Procedure (SOP) for financing Tenant Farmers under LEC/CoC: A Standard Operating Procedure (SOP) to be followed by the banks while extending KCC to tenant farmers holding LEC or CoC was implemented by the State Level Bankers' Committee, Andhra Pradesh in 2017. The SOP is aimed at providing step-wise guidelines to ensure that eligible tenants are provided with credit and at the same time, the banks' risk in providing loans is minimized.

B.The Telangana Model

Digitalization and Cleaning of Land Records: The Telangana Government amended the Telangana Rights in Land and Pattadar Pass Books Act, 1971 through Ordinance promulgated by the Governor on June 17, 2017. The amendment aims to ensure maintenance of the Record of Rights in electronic form in the Telangana Land Records Management System (TLRMS) and to validate the electronically maintained revenue records. It combines Title Deed and Pass Book as Title Deed cum Pass Book, to enable the land holders/owners to obtain electronic Pattadar Passbook cum Title deed. Further, it requires the banks and credit agencies to grant loans based on the revenue records maintained electronically without insisting upon physical production of any type of revenue records from the farmers. The Ordinance has given legal sanctity to the records of rights and revenue records being stored electronically. The disbursal of credit based on the electronic records is expected to help farmers secure loans without delays.

The Telangana Government also embarked on a massive land survey exercise in the last quarter of 2017, aimed at rectification, updation and cleansing of the land records in rural areas. The scheme is expected to settle land disputes and to ensure transparency in sale and purchase of land, registration and inheritance in future. The exercise was conducted in 10,733 revenue villages by 1346 teams. The data of updated and rectified land records have been digitalized and uploaded online. The farmers have been given electronic title deed cum pattadar passbooks. The State Government has also implemented a direct cash transfer scheme to the land owner at the rate of Rs.4000 per season per acre to meet the input needs ahead of the crop season. The State has also put in place a scheme to insure farmers for Rs.5 lakh with LIC. However, tenant farmers were reportedly excluded from both these benefits.

Based on an analysis of the above literature review and case studies, the following possible solutions to address the issues of credit flow to tenant farmers, crop insurance, lack of documentary evidence and institutional support merit attention.

Potential Solutions

Implementation of the following solutions could ensure timely delivery of adequate credit and other benefits, including crop insurance, input subsidy, and interest subvention to tenant farmers.

1. Ensuring short term production credit to cultivators: Many a time, the owners of the leased agriculture land availed crop loans before the tenant farmers could approach banks. Since the owners of the leased agriculture land had already availed crop loans against the specific agriculture land or survey number, banks refrain from extending crop loans to tenant farmers. This means that a significant portion of the crop loans disbursed by banks are not availed by the actual cultivators, but owners of the land. The extant guidelines of the Reserve Bank state that crop loans are to be extended to cultivators. Though the tenant farmers are actual cultivators, several branch managers of banks extend the crop loans to owners, based on their declaration furnished by the land owners that they are the cultivators. Based on the interactions with bankers, it is understood that verification of these declaration is not undertaken in most cases. This has enabled a perverse system of land owners availing crop loans, while depriving the tenant farmers of bank credit, besides violating the Reserve Bank guidelines that crop loans are to be extended to the cultivators. This also leads to overstating the priority sector target achievement of banks since the credit disbursed under priority sector targets for agriculture does not benefit the actual cultivators in many cases, but land owners. This practice also raises concerns about the misuse of interest subvention scheme of the Governments, and possible diversion of funds. For addressing these issues, it is necessary that banks comply with the extant RBI guidelines on KCC and priority sector lending.

2. Developing integrated data base and information systems: In addition to the above problem, the issue of double or multiple financing also reportedly exists in crop loans. While the commercial banks are extending crop loans based on the details available on webportals in some states, other credit institutions such as Primary Agriculture Credit Societies (PACS), District Central Cooperative Banks (DCCBs) and, to some extent, Regional Rural Banks (RRBs) extend crop loans based on pattadar pass books. Co-existence of digital land records and physical pass books, divergent lending practices among different categories of banks and credit societies, prevalence of fake pattadar pass books in some states, etc., leave scope for multiple financing by lending institutions against the same survey number of land. The possibilities of such multiple financing disincentives some bankers from taking efforts to finance real cultivators, including tenant farmers.

The possible solution to address these issues of multiple financing and crop loans against fake pattadar pass books is to create an integrated data base of the agriculture land survey numbers, names of the cultivators, and the short term production credit disbursement by all the regulated entities including PACS. Such a database can be created by the state governments in collaboration with SLBC of the concerned state. Using the data base, the SLBCs and banks could coordinate with the state governments in identifying and lending to actual cultivators only.

To ensure data sharing by the banks for real-time governance, banks need to mandatorily capture two critical data elements in their Core Banking System (CBS), viz., survey number of the farmer and nature of crop for which crop loan is sanctioned. It is also observed during the course of interactions with bankers that at present such details are being captured in manual form. Capturing this data in CBS would also obviate the need for the present practice in banks of porting this information to insurance portal separately and will increase the efficiency of scheme.

Creation of information systems suggested above can play an important role in facilitating credit to tenant farmers, but its actual success largely depends on regular and prompt data entry, as well as its wide adoption by bankers. In states where such web portals are already existing, it is reported by the bankers and government officials that their usage and data reporting mechanism was not up to the mark. Banks, therefore, need to ensure wider usage and acceptance of such technology to identify the cultivators, lend to them to meaningfully comply with the priority sector guidelines and to create their charge on the crops/ land in the web portals to ensure that multiple financing by other banks and institutions is prevented. SLBCs of the state need to take leadership role in this regard to ensure inclusive finance.

3. Legal framework and proof of tenancy: Based on Niti Ayog's Model Tenancy Act and the innovations of state government such as Andhra Pradesh, Kerala and Telangana, a legal framework for tenant farmers need to be enacted and implemented. The proof of tenancy, such as LECs or CoCs, which are being issued in some states can be studied, improvised and emulated by other states. It is observed that even in states where such documents are issued, the validity of these cards was only one year, which is an important deterrent to bankers while extending loans to tenant farmers. State governments need to ensure timely issuance and renewal of documentary evidence of tenancy such as LEC/CoC so that timely credit facility for the relevant crop season can be provided by banks to the tenant farmers.

It is also understood that implementation issues like issuance of duplicate documents of LECs and/or CoC and complaints of not adhering to the prescribed procedure while issuing/ renewing these documents to tenant farmers by some officials of the state governments also need to be looked into by the state governments to enhance implementation integrity.

4. Mobilizing and educating tenant farmers: It is important that tenant farmers are made aware of the various schemes and benefits, including availability of crop loans from banks up to Rs.1 lakh (since revised to Rs.1.6 lakh) without the need for collateral security, features of Kisan Credit Card loans that cover even consumption requirements partly and post-harvest credit needs to avoid distress sale, benefits of interest subvention scheme of Government of India for prompt repayment, and restructuring assistance during natural calamities, etc. The steps taken by the state governments to issue documentary evidence of cultivation such as LECs or CoCs and additional interest subventions benefits for small and marginal farmers including tenant farmers etc., need to be publicised. The availability, benefits, and procedures of crop insurance under PMFBY and other insurance schemes also need to be popularised to protect them from the various risks they face. The field staff of the state agricultural departments, Financial Literary Officers/ Counsellors of banks and Business Correspondents can play an important role in educating the tenant farmers about these schemes and benefits.

The Joint Liability Group mode of lending to tenant farmers can be very useful in both enhancing the income of farmers and recovery of dues by the bankers (due to peer pressure of members).For the financially excluded groups, financing them through group mode like JLG to cover the maximum number of tenant farmers is one of the feasible options. NABARD's promotional grant assistance of Rs.2000 per JLG to banks needs to be enhanced to incentivise the banks to actively resort to the JLG mode of lending to tenant farmers.

Banks can also explore formation and financing of Farmer Producer Organisations (FPO)/Farmer Producer Companies comprising of tenant farmers. A separate promotional assistance from NABARD for this purpose may incentivise the banks in this direction.

Since the documentary evidence of cultivation by tenant farmers in the form of LEC/CoC is usually valid for a period of one year and has to be renewed every year, the bank managers have been reluctant to actively accept such evidence to extend credit to tenant farmers. It is observed that a structured recovery mechanism, if put in place by the state governments to assist the bankers in recovery of dues, would infuse confidence in bankers to lend to tenant farmers. Enforcing the Revenue Recovery Act for recovery of overdues of banks, formation of recovery committee at village level with due representation of the bank managers, prominent local persons or farmers and revenue officials, and preventing mis-utilisation of loans/wilful default by tenant farmers through appropriate measures would be useful steps in the right direction. Leveraging technology to link the web portal across the states could also be explored to ensure credit flow and recovery of the dues.

5. Crop Insurance, Guarantee Fund and Institutional arrangements: The worst affected in case of crop failure are the tenant farmers. Several operational difficulties in the implementation of crop insurance scheme at the level of state governments, banks and insurance companies coupled with poor settlement record of crop insurance scheme and low awareness of farmers about the benefits of the scheme affect the livelihood of tenant farmers when the crops fail. Yerram Raju (2019) observed that tenant farmers with no documentary evidence became ineligible for crop insurance under PMFBY. He suggested that agricultural insurance needs to be decoupled from crop loans. Farmers' assets — crop husbandry, animal husbandry, poultry, horticulture and family assets — need to be insured irrespective of owned or leased-in to insulate farmers from the debt burden. Such a comprehensive insurance of farmers with bankloans up to Rs. 1 lakh, will cover the small, marginal and tenant farmers, and protect them in case of a natural calamity, crop failure or such an adverse event. The suggested group crop insurance scheme would enable reduction in the insurance premium, 100 per cent coverage of the marginal, small and tenant farmers and faster settlement of claims to farmers in case of crop failures due to economies of scale.

A dedicated Fund called "Tenant Farmers Development Fund" may be created with NABARD to meet the requirements of payment of crop insurance on behalf of the tenant , marginal and small farmers for loans up to Rs. 1 lakh, promotional assistance for JLGs, RMGs, SHGs, and FPOs, promotion of financial literacy of tenant farmers, and handholding and promotion of credit linkage of tenant farmers either individually or in group mode with banks.

Conclusions

In order to ensure the overall well-being of tenant farmers, adequate credit flow and insurance, in addition to hand holding and institutional support are needed. Putting in place legal framework recognizing tenancy and enabling issuance of necessary documents to evince proof of cultivation by the tenant farmers, similar to the LECs and CoCs issued in Andhra Pradesh, digitization of land records and creation of web portals containing the details of the documents issued to tenant farmers with charge creation module for banks, verification and cleaning of land records, earmarking part of the short-term production credit for the tenant farmers, formation of JLGs and FPOs, and rigorous follow-up of the issues in the SLBC meetings are some of the notable steps that can be taken to address the problems of tenant farmers.

Several legal and institutional initiatives are required to ameliorate the conditions of tenant farmers and thereby reduce the incidence of these farmers quitting farming, and in some unfortunate cases, their lives. In addition, proper and timely implementation of existing policies and potential solutions suggested in this paper would mitigate the problem to a great extent.

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Transforming Indian Horticulture Through Alternative Agrifinance Delivery Models

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Abstract: *Indian horticulture contributes as much as 30 per cent of value added from Agriculture. There has been a spectacular change in terms of adoption of new technologies, production methods and availability of horticulture produce. The production of horticulture crops outpaced the production of foodgrain continuously since 2012-13. The sector being capital and credit intensive,requires long-term funding. The alternative avenues for financing horticulture sector include contract farming, agri-value chains, farmer producer organizations, organic farming, soil-less farmings such as hydroponics and aeroponics, etc. Against this background, the paper analyses the performance of horticulture, followed by alternative financing models and suggestions for a promising future of horticulture.*

I. Introduction:

Agricultural production in India has been undergoing significant and rapid transformation, primarily driven by changes in consumer preferences, both in urban and rural India. A significant development during the past decade is the growing importance of high value agriculture (HVA), particularly, horticulture due to increased thrust by the Government through National Horticulture Mission (NHM) and National Horticulture Board (NHB), increased government investments in infrastructure such as irrigation facilities, warehousing, cold storage, etc. Horticulture accounts for 30 per cent of GDP from agriculture (Table 1).

Table 1: Value of Output of Horticulture Crops (At 2011-12 Prices)

(₹'00 Crore)

No	Particulars	2011-12	2012-13	2013-14
1	All Agricultural Crops	11915 (100)	11986 (100)	12436 (100)
a	Total Fruits and Vegetables	2662 (22.3)	2796 (23.3)	2863 (23.0)
b	Total Condiments & Spices	385(3.2)	377 (3.1)	406 (3.3)
c	Total Floriculture	174 (1.5)	173 (1.4)	180 (1.4)
d	Total Plantation	257.0 (2.2)	252.4 (2.2)	256.0 (2.1)
2	Total Horticulture (a+b+c+d)	3478(29.2)	3599 (30.0)	3705 (29.8)

Source: Horticulture Statistics at a Glance 2017, Figures in the parentheses are percent share to total.

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India has emerged as the second largest producer of fruits and vegetables in the world, contributing 11.8 per cent and 13.4 per cent of the total world production of fruits and vegetables respectively (GoI 2017). There is immense potential to leverage high returns, especially, from horticulture. However, the flow of finance (farm credit) plays an important role and need to be adequately emphasized. With the increased commercialisation and growing importance of high value horticulture crops, supply chain issues need to be given adequate thrust. Designing of standardised credit products by banks for financing supply chain related projects should be adequately addressed (Badatya 2014). The avenues for financing horticulture encompass alternative financing models, viz., contract farming, agri-value chain financing, financing farmer producer organizations, organic farming, including soil-less farming models, like, hydroponics, aquaponics, etc.

Given this background in this section, rest of the paper is organised into three other sections. The section to follow provides an overview of horticulture. The third section highlights emerging areas of financing horticulture, viz., contract farming, agri-value chain financing, financing through farmer producer organizations, organic farming, etc. The last section concludes the paper.

II. Indian Horticulture

After independence, major emphasis was laid on achieving self-sufficiency in food grains production. Accordingly, the Green Revolution technology also favoured wheat and paddy more than any other crop. Diversification towards horticulture got real boost only in early 1990s, coinciding with economic reforms (Chand et al 2008). Development of rainfed and irrigated horticulture was one of the objectives of new agricultural policy resolution, 1992. Later, the National Horticulture Mission (NHM) as a centrally sponsored scheme was launched in 2005-06 with the objectives to enhance horticulture production and improve nutritional security and income support to farm households through area based regionally differentiated strategies. All the states and the three UTs of Andaman and Nicobar islands, Lakshadweep and Puducherry were covered under the mission except eight North Eastern states including Sikkim and the States of Jammu & Kashmir, Himachal Pradesh and Uttarakhand. The latter were covered under the Horticulture Mission for the North East and Himalayan States (HMNEH). However, since 2014-15, both NHM and HMNEH have been subsumed into the Mission for Integrated Development of Horticulture (MIDH), which is being implemented in 372 districts in the country (GoI 2016).

a. Trends in Area, Production and Productivity

The production of horticultural crops increased from 92.8 million MT in 1991-92 to 295.2 million MT in 2016-17 at a compound annual rate of growth (CARG) of 4.6 per cent. The area under horticulture increased from 6.5 million ha. in 1991-92 to 24.9 million ha. in 2016-17, with a CAGR of 2.7 per cent (Table 2). The production of vegetables increased from 58.5 million tonnes to 175 million tonnes during 1991-92 to 2016-17 at a CAGR of 4.5 per cent as against fruits which grew at a CAGR of 4.8 per cent from 28.6 million MT to 92 million MT during the same period. The per capita availability of fruits and vegetables increased from 391 gram/

day in 2004-05 to 578 gram/ day in 2016-17 (NHM 2017). The CAGR in production was highest in the case of flowers and aromatics (13.4%) during 2001-2017.

Table 2: Area, Production and Productivity of Horticulture (1991-92 to 2016-17)

A : Area in 'million ha.', P : Production in 'million MT & Y: Yield in MT/ha.

Year	Fruits			Vegetables			Flowers& Aromatics			Plantation Crops			Spices			Total		
	A	P	Y	A	P	Y	A	P	Y	A	P	Y	A	P	Y	A	P	Y
1991-92	2.9	28.6	10.0	5.6	58.5	10.5				2.3	7.5	3.3	2.0	1.9	1.0	12.8	96.6	7.6
2001-02	4.0	43.0	10.7	6.2	88.6	14.4	0.0	0.5	5.1	5.1	9.7	3.3	3.2	3.8	1.2	16.6	145.8	8.8
2011-12	6.7	76.4	11.4	9.0	156.3	17.4	0.8	2.2	2.9	2.9	16.4	4.6	3.2	6.0	1.9	23.2	257.3	11.1
2016-17	6.5	92.8	14.3	10.3	175.0	17.0	0.9	3.3	3.3	3.5	16.9	4.6	3.5	7.1	2.0	24.9	295.2	11.8
CAGR	3.3	4.8	1.4	2.5	4.5	1.9	2.4	13.4	-2.9	1.7	3.3	1.3	2.3	5.4	2.8	2.7	4.6	1.8

Source: Horticulture Statistics at a Glance 2017, CAGR: Author's own calculation based on data from Horticulture Statistics at a Glance 2017

There is good scope of growing medicinal and aromatic plants. India is the largest producer, consumer and exporter of spices and is also the largest producer of coconut, arecanut and cashew nut in the world. The share of vegetables remains highest (59 - 61%) in horticulture crop productions over the last five years(Figure 1).

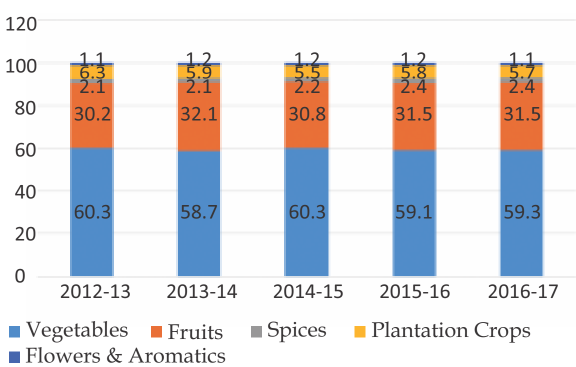

Fig 1: Production Share of various Horticulture crops

The total horticultural production is highest in UP (37.1 million tonnes with 12.6% share) followed by West Bengal (30.1 million tonnes with 10.2 % share) and MP (24 million tonnes with 8.1% share).The vegetable production is the highest in Uttar Pradesh (26.4 million tonnes with 15.1% share) followed by West Bengal (25.5 million tonnes with 14.6% share) and MP (16.7milion tonnes with 9.5% share). These three States produce almost 40 per cent of total vegetables in India. The total fruit production was highest in case of Andhra Pradesh followed by Maharashtra and UP. These three States account for 35 per cent of total production of fruits in India (Table 3).

Table 3: Ranking of States in Horticulture Production (2016-17)*

Rank	Fruits	Vegetables	Spices	Plantation Crops	Flowers	Total Horticulture
1	AP (12.1) (13.0)	UP (26.4) (15.1)	AP (1.1) (14.8)	Kerala(5.3), (31.7)	TN (0.4) (18.6)	UP (37.1) (12.6)
2	Maharashtra (10.48), (11.2)	WB (25.5) (14.6)	Rajasthan (0.94), (13.3)	TN (4.2), (24.8)	Karnataka (0.39), (12.5)	WB (30.1) (10.2)

Rank	Fruits	Vegetables	Spices	Plantation Crops	Flowers	Total Horticulture
3	UP (10.35), (11.2)	MP (16.7) (9.5)	Gujarat (0.87) (12.3)	Karnataka (4.1), (24.6)	WB (0.27) (12.1)	MP (24.0) (8.1)
3 States Total	32.9 (35.5)	68.6 (39.2)	2.7 (38.6)	13.6 (80.5)	1.07 (32.4)	91.2 (30.9)

**Provisional, Figures in parentheses: 1. Production in million tonnes, 2. Share (%) to total production. Source:Author's own calculation based on data from Horticulture Statistics at a Glance 2017,*

b. India's Position in World Horticulture

India is the second or third-largest producer in the World in about 13 crops (Table 4). India was making its presence felt as the second largest producer of vegetables and fruit. During 2016-17, its contribution in the world production of fruits & vegetables was 13 per cent and 11 per cent, respectively (Mohan 2016).

Table 4: India's Position in World Horticulture

Vegetables			Fruits		
	India share %	Rank		India share %	Rank
Vegetables	10.8	2	Fruits	13	2
Brinjal	27	2	Banana	24.5	1
Cabbage	12.5	2	Orange	10.1	3
Cauliflower	35.2	2	Citrus Fruits	11.2	3
Onion	21.5	2	Sapota	1.8	
Peas	2.5	1	Grapes	3.1	16
Tomato	11.1	1	Mango	22.1	1
Potato	12	2	Papaya	44..4	1
Sweet Potato	0.7	9	Pineapple	6.8	7
okra	66.3	1	Guava	17.9	1
Cassava	8	8	Lemon & Lime	17.5	1

Source: Horticulture Statistics at a Glance 2017

c. Growth in Supporting Infrastructure

Storage plays an important role in horticulture crops, because of demand and supply gap and seasonality and perishable nature of horticulture crops. The number of cold storages in the country has gone up from 5,480 in 2009 to 7,913 in 2017, at an annual growth rate of 5.5 per cent. Total cold storage capacity increased from 24.45 million MT in 2009 to 34.67 million MT in 2017 with an annual growth rate of 5.2 per cent. The State of UP (2285) has the highest number of cold storages followed by Gujarat (753) and Punjab (655). Region-wise, share of number of cold storages is highest in Central region (33.8%), followed by Western region (19.3%), Northern region (15.7%), Eastern region (13.2%), Southern region (12.0%) and

North-East region (0.8%)(Table 5). In terms of cold storage capacity created, it has gone up from 24.45 million MT in 2009 to 34.67 million MT in 2017, at an annual growth rate of 5.2 per cent. Region-wise, share of number of cold storages is highest in Central region (45.8%), followed by Eastern region (23.5%) and Western region (12.4%).

Table 5: Distribution of Cold Storages as at end March 2017: Region-wise & Agency-wise

Region	Up to 2009*		2009-10 TO 2016-17						Total	
			NHB		NHM		MOFPI			
	No.	Capacity (Mln. MT)	No.	Capacity (Mln. MT)	No.	Capacity (Mln. MT)	No.	Capacity (Mln. MT)	No.	Capacity (Mln. MT)
SR	805	1.60	61	0.37	114	0.67	14	0.06	994	2.71
	15.0	6.6	6.9	8.1	10.0	13.0	10.4	12.0	12.6	7.8
WR	1003	2.15	106	0.37	374	1.66	41	0.13	1524	4.31
	18.6	8.8	11.9	8.2	32.5	32.1	28.4	26.4	19.3	12.4
ER	857	7.29	50	0.20	128	0.58	11	0.06	1046	8.13
	15.8	29.8	5.5	4.3	10.8	11.3	6.4	12.6	13.2	23.5
CR	1855	11.27	539	3.16	268	1.40	15	0.05	2677	15.88
	34.2	46.1	59.2	69.1	22.4	27.1	8.4	10.2	33.8	45.8
NR	819	2.08	115	0.38	257	0.85	48	0.18	1239	3.42
	15.0	8.2	11.9	8.4	21.1	16.5	25.6	36.3	15.7	9.9
NeR	42	1.34	15	0.089	1	100	5	0.01	63	0.23
	0.8	0.5	1.5	1.9	0.1	0.0	2.3	2.5	0.8	0.7
Total	5480	24.45	981	4.57	1239	5.17	213	0.48	7913	34.67
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100	100.0

Source: Horticulture Statistics at a Glance 2017, Author's own calculation based on data from Horticulture Statistics at a Glance 2017based on data from Horticulture Statistics at a Glance 2017

Special thrust may be given for development of marketing infrastructure for horticulture products, one of the thrust areas for purveying credit (Badatya 2010). Cold storage infrastructure needs to be coupled with logistical support to facilitate smooth transfer of harvested value from farms to distant locations. This includes: (i) pack-houses for packaging and preparing fresh produce for long distance transport, (ii) refrigerated transport such as reefer vehicles, and (iii) ripening chambers to ripen raw produce before marketing. A total of 20,437 pack houses and 106 integrated pack houses have been created under MIDH as at end March 2017. Region-wise distribution of pack houses and integrated pack houses created under MIDH is presented in Table 6.

Table 6: Pack Houses/Integrated Pack Houses under MIDH as at end Mar 2017- Region-wise

	Region	Pack House (No.)	Share (%)	Integrated Pack House (No.)	Share (%)
1	SR	5111	(25.0)	55	(51.9)
2	WR	5720	(28.0)	35	(33.0)
3	ER	2629	(12.9)	1	(0.9)
4	CR	4113	(20.1)	1	(0.9)
5	NR	1910	(9.3)	7	(6.6)
6	NER	954	(4.7)	7	(6.6)
	Total	20437	100.0	106	100.0

Source: Horticulture Statistics at a Glance 2017

While there are sufficient cold storages in the country, there are wide gaps in the availability of other associated infrastructure. This implies that even though almost 90 per cent (32 million tonnes) of cold storage capacity is available for use, only 15 per cent of the required refrigerated transport exists. Further, the gap in the availability of infrastructure necessary for post-harvest handling, like pack-houses and ripening chambers, is over 90 per cent (Table 7).

Table 7: Gaps in cold chain infrastructure (2014)

Cold chain infrastructure facility	Required	Available	Gap (%)
Cold storage (in million MT)	35.1	31.8	3.2 (9.3
Pack-houses (No.)	70,080	249	69,831 (99.6)
Reefer vehicles (No.)	61,826	9,000	52,826 (85.4)
Ripening chambers (No.)	9,131	812	8,319 (91.1)

Source: Standing Committee on Agriculture 2018

d. Growth in Value Addition and Food Processing

The number of registered Food Processing Industries (FPIs) has gone up from 26,219 during 2007-08 to 38,608 as on June 28, 2017, growing at a CAGR of 5.7 per cent (Table 8). Fruit processing industry has been regarded as a sunrise sector and several schemes have been formulated to provide financial support for establishing processing infrastructure. GoI has approved a new central sector scheme, Pradhan Mantri Kisan SAMPADA Yojana (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) with an allocation of ₹ 6,000 crore during the period 2016-20. PM Kisan SAMPADA Yojana (PMKSY) is a comprehensive package which would result in creation of modern infrastructure with efficient supply chain management from farm gate to retail outlet (GoI, 2018).

Table 8: Estimated No. of Registered Food Processing Industries

(As on 28.06.2017)

No.	Description	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	CAGR (%)
1	Meat	77	90	85			140		170	11.98
2	Fish, Crustaceans and Molluscs Production thereof	340	352	359			462		427	3.31
3	Fruits and Vegetables	735	709	832			1110		1133	6.38
4	Vegetable & Animal Oils and Fats	2515	2429	2421			3312		3240	3.68
5	Dairy Products	1096	1100	1112			1695		1783	7.20
6	Grain Mill Products	12807	13464	13397			18131		18953	5.76
7	Starches & Starch Products	442	589	670			723		699	6.77
8	Bakery Products	955	993	1056			1519		1613	7.78
9	Sugar	778	733	744			859		763	-0.28
10	Cocoa, Chocolate and Sugar Confectionery	404	456	466			539		594	5.66
11	Macaroni, Noodles, Couscous & Similar Farinaceous Products	73	61	51			129		91	3.20
12	Prepared Meals & Dishes	-	45	139			352		277	35.38
13	Food Products N.E.C.	4091	4290	4225			5251		5765	5.02
14	Prepared Animal Feeds	555	547	606			873		881	6.82
15	Distilling, Rectifying & Blending Of Sprits	280	291	296			365		395	5.04
16	Manufacture of Wines	64	79	69			78		74	2.10
17	Manufacture of Malt Liquors and Malt	120	96	117			154		153	3.53
18	Production of Mineral Water & other Soft Drinks	887	896	834			1483		1597	8.76
	Total	26219	27220	27479			37175		38608	5.68

Source: Horticulture Statistics at a Glance 2017, CAGR: Author's own calculation based on data from Horticulture Statistics at a Glance 2017

III. Emerging Agrifinance Delivery Models

The emphasis has been put on horticulture (both from the Government and private sector through bank finance) during the last one decade. The importance of horticulture was felt due to the following reasons,

- The sector generates employment through labour input in production, processing, packaging, marketing, etc. which is twice per ha. as compared to cereals (WB's Rural Investment Climate Surveys 2003).
- Income and returns on land from horticulture increases by ten-fold compared to cereals (WDR 2008).
- Horticulture crops are best suited for contract farming and Farmer Producer Organizations (FPOs), which enable small/marginal farmers to overcome market linkage related problems.
- Horticulture crops provide both food and nutrition security and give good returns.
- Horticulture crops cure "Problem soil", resulting from the side effects of cereal production-based "Green Revolution" cultivation practices.

The investment in horticulture has gone up significantly from ₹0.24 billion in Seventh Five Year Plan (1985-90) to ₹168.40 billion during 12th Five Year Plan (2012-17). Horticulture grew at 4.1 per cent during 2007-08 and 2016-17 compared to growth of foodgrains at 1.9 per cent during the same period. The production of horticulture crops outpaced the production of foodgrain since 2012-13 (Figure 2). This implies that there is compositional shift within agriculture. The sector, being more capital and credit intensive requires long term funding (Dave 2018). Despite the deficit monsoon, unseasonal rains and hailstorm, the production of horticulture crops outpaced the production of foodgrains. The foodgrain output reported a decline during 2014-15 (-4.9%) as compared to 2013-14, whereas, there has been an increase in horticulture production during 2014-15 (1.3%) compared to 2013-14 (GoI 2016).

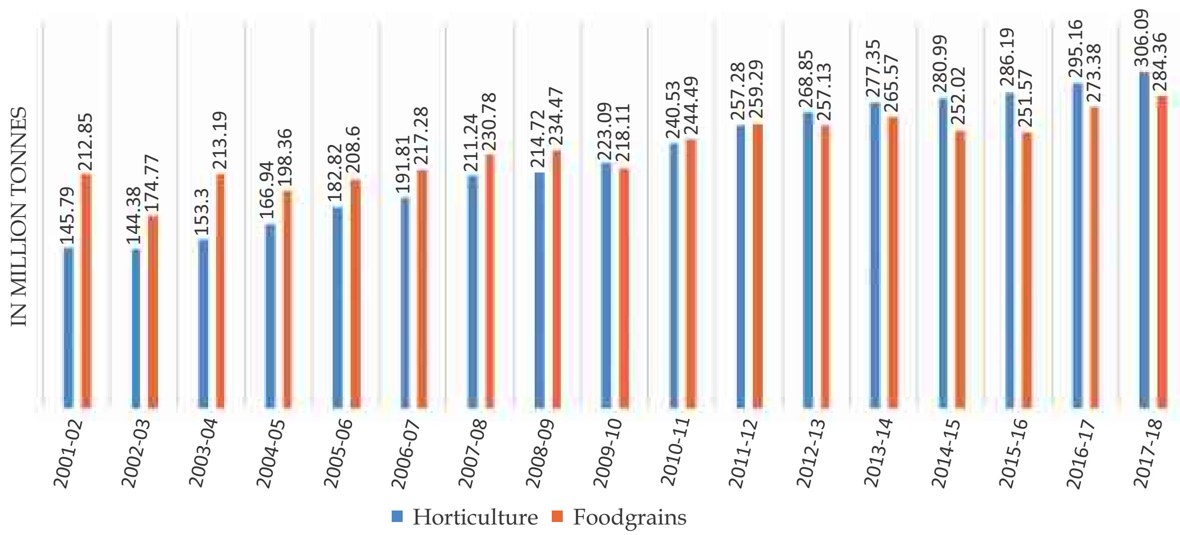

Fig 2: Production of Horticulture vis-à-vis Foodgrains

Sources: For figures upto 2016-17, Horticulture Statistics at a Glance 2017. For 2017-18, Third Advance Estimates of Area & Production of Horticulture Crops, Ministry of Agriculture & Farmers Welfare, Govt. of India.

Indian horticulture is expected to generate better momentum in the years to come due to increased investments in infrastructure such as irrigation network, warehousing and cold storage, agro-processing, etc. Since horticulture crops are perishable in nature, risk is high. Necessary support mechanism through development of varied financing models need to be the overriding priority (Badatya 2017).Alternative avenues for financing horticulture now include contract farming, value chain financing, financing through FPOs, organic farming, soilless farming like, hydroponics, etc. The section to follow discusses about these alternative avenues of financing horticulture.

A. Contract Farming (CF)

The National Agriculture Policy (NAP) envisages that "private sector participation will be promoted through contract farming and land leasing arrangements to allow accelerated technology transfer, capital inflow and assured market for crop production, especially of horticultural crops, oilseeds and cotton" (GoI 2000). Horticulture crops are suitable for contract farming (CF) scheme under which production is carried out according to an agreement between the buyer and farmers including conditions on production practices and marketing of the produce. There is no data or information available regarding area under contract farming in India. The total area under contract farming was 4.26 lakh ha. most of which was in three states of Tamil Nadu (2.37 lakh ha.), Punjab (1.21 lakh ha.) and Orissa (0.60 lakh ha.)(Acharya, 2007). There were 18 companies/organizations like Hindustan Unilever, WIMCO, Pepsi, Food Pro, NDDB, Maxworth Orchards, Cadbury India, BILT, ITC, JK Paper, AV Thomas, Reliance Agrotech, Godrej Agro, United Breweries, DCM Sriram, L&T and Escorts, etc. are involved in contract farming.

There are many issues to be addressed before making CF schemes more acceptable to farmers. The type of contract is an important issue. The retailers are reluctant to enter into a formal contract because of the non-enforceability issue (Badatya 2009).Government has now released the Model Contract Farming Act, 2018, which lays emphasis on protecting the interests of farmers, and in addition to contract farming, services contracts all along the value chain, including pre-production, production and post-production, have been included.

B. Value Chain Financing (VCF)

Value chain encompasses the activities from production to distribution that bring '*agri-horti*' produce from the farm to the table (Aramyan et al 2006). Organizing horticulture along the value-chain framework is one of the ways to realize the full potential of the sector. Value chains in fruits and vegetables not only provide an avenue for diversification of agriculture but can also generate employment, foreign exchange and help combat challenges of food and nutrition security. There is a strong case for a horticulture value chain framework in India where farmers produce crops like fresh fruits and vegetables in large quantity that have higher potential for value addition, processing and exports as compared to conventional crops. If adequate access is available to processing, marketing and distribution, it would ehance the value of the final products and contribute significantly to the growth of the sector. However, for an optimum outcome, adequate flow of finance at each stage of the value chain is required through varied financial products (Table 9). These financial instruments can be used in isolation but the use of multiple instruments within a value chain is more common. Most of these instruments are used in many types of finance; hence they are not exclusive to AVCF (Miller 2011).

Table 9:Types of financial instruments commonly used in AVCF

Category	Instrument
Product financing	Trader credit, Input-supplier finance, Marketing and wholesale company finance, Lead-firm financing
Receivables financing	Trade-receivables finance, Factoring, Forfaiting
Physical-asset collateralization	Warehouse receipts finance, Repurchase agreements (repos), Financial leasing (lease–purchase)
Risk mitigation products	Insurance, Forward contracts, Futures
Financial enhancements	Securitization instruments, Loan guarantees, Jointventure finance

Source: Miller (2011)

There are five main players in a value chain. Input suppliers with forward linkage represent the beginning or upstream section of a value chain, while retail distributors to end consumers are at the tail or downstream. It is possible that the same individual/firm perform more than one role, e.g., a trader/aggregator can be an input supplier; a processor might also be a wholesaler or exporter. Five main players in the value chain, their features, financial requirements, etc. are summarized in Table 10.

Table 10: Value chain participants, main features and demand for financial services

Participant	Main features	Demand for financial services
Input suppliers	Provideto farmers inputs for production. They vary in size, have differentfinancial needs.	ST Working Capital (STWC), Mid-term financing (MTF) (equipment dealers), Payments, transfers
Producers/ farmers	Engage in primary production includingtheir families and are seasonal/part-time workers.	ST Working Capital, Mid-term financing, Deposit accounts (value storage, commitment savings) Payments, transfers
Aggregators, traders	Buy produce from the farmers or coops and bulk it before selling.	ST Working Capital, Mid-term financing (storage facilities, vehicles), Deposit accounts (checking) Payments, transfers
Processors	Add value to a raw product. Small-scale processors to invest money in equipment.	ST Working Capital, Mid-term financing (equipment) Deposit accounts (checking) Payments, transfers
Retailers, wholesalers, exporters	Sell the processed product to supermarkets and retailers which in turn sell to consumers.	ST Working Capital, Mid-term financing (equipment) Deposit accounts (checking) Payments, transfers

Source: Carlos Cuevas and Maria Pagura, (2016) (abridged version)

However, AVCF has risks too, which require (i) a comprehensive assessment and understanding of the value chain, (ii) leveraging aggregation to diversify risk and reduce costs of delivery, (iii) using tailored financial products and services that meet the needs of the chain and finally, (iv) examining the flow of goods, information and money up and down the value chain. The main challenges for agri-food chain are product perishability, seasonability, inadequate infrastructure and low market links at the farmer level. Food safety and quality play crucial role in value chain of horticulture. Therefore, it is important to identify the risks inherent in the value chain. Among the more important risk categories that financial institutions should consider are 1) production-level risk; 2) side-selling risk 3) aggregator risk; 4) downstream market-level risk; 5) client-level risk; and (6) reputation risk.

C. Financing of FPCs/FPOs

The purpose of forming Farmer Producer Organization (FPO) is to ensure better income for the farmers. The basic purpose envisioned for the FPOs is to "collectivize small farmers to facilitate backward linkage for inputs like seeds, fertilizers, credit, insurance, knowledge, extension services, etc., and forward linkages such as collective marketing, processing and market-led agriculture production, etc". Producer Organizations/Companies are considered to be institutions that have "all the significant features of private enterprise while incorporating principles of mutual assistance in their mandate similar to cooperatives" (Pustovoitova 2011). POs, therefore, are "non-political entities that aim at providing business services to small farmers, founded on the principle of self-reliance", (Onumah et al 2007).

There are about 6,000 FPOs in the country (Srinivasan and Srinivasan, 2017). However, only a little over 4,000 FPOs are registered. NABARD, Small Farmers Agri-business Consortium (SFAC), State Governments with fund support from international donor organisations are involved in promotion, hand-holding, nurturing of FPOs (Table 11& Fig. 3).

Table 11: No. of Registered FPOs- Agency-wise

State	No. of FPOs
SFAC	847
NABARD	2076
Others	1280
Total	4205

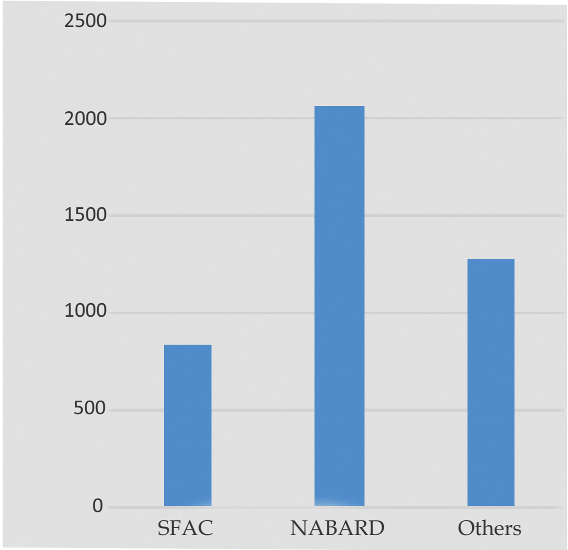

Fig 3: No. of FPOs

These FPOs mostly take over the responsibility of any one or more activities in the value chain of the produce from procurement of raw material to delivery of the final product at the ultimate consumers' doorstep. They undertake activities like, (i) procurement of inputs, (ii) aggregation and storage of produce, (iii) primary processing like drying, cleaning, grading, sorting, etc. (iv) packaging, labeling and standardizing with proper quality control, (v) marketing to institutional buyers, (vi) participate in commodity exchanges, (vii) collaborate with export houses and arrange for exports. All these interventions result in more income to the farmer producers.

FPOs play a significant role in facilitating access to finance for its own members. At the '*early stage*' of formation of FPO, finance is required for mobilizing farmers, registration cost, costs of operations and management, training, exposure visits, etc. Funding mostly comes from supporting agencies like NABARD, SFAC, State Governments, etc. In the 'e*merging & growing stage*', FPOs require working capital to begin early stage business activities such as the bulk purchase of inputs for members. As FPOs expand and reach the 'm*atured and business expansion stage,* they need finance to improve and diversify business. In addition to short term working capital, term loans are required to build infrastructure. A plethora of business opportunities gradually opens up to FPOs. as they advance to maturity stage (Table 12).

Government, over the last few years, has also created an enabling environment for proper functioning of FPOs (Table 13).

Table 12: Business Opportunities for FPOs

No.	Business Opportunities for FPOs
1	Input Dealership for sale of inputs
2	Market linkage for produce as an aggregator (tie-up, direct marketing, export, e-trading)
3	Procurement for government agencies
4	Seed production for seed companies
5	Contract farming for processor, export
6	Custom hiring of farm implements
7	Building processing and grading units, storage and transport facilities
8	Post-Harvest activities – secondary processing

Table 13: Enabling Policy Environment for FPOs

No.	Enabling Policy Environment
1	National Policy & Process Guidelines in March 2013 (DAC&FW)
2	Equity Grant Scheme (EGS) and Credit Guarantee Fund Scheme (CGFS) (GoI, Union Budget 2013-14)
3	PRODUCE Fund with NABARD for promoting 2,000 FPOs in two years (GoI, Union Budget 2014-15)
4	Authorizing FPOs for procurement operations of pulses, oilseeds under the MSP (GoI, Union Budget 2018-19)
5	Scheme for Creation of backward and forward linkages, setting up of primary processing centres, etc. (GoI, MoFPI)
6	NRLM, value chain development, interventions focusing on livestock, NTFP, etc.
7	100 % tax deduction for next five years (2017-18 to 2021-22) the launch of 'Operation Greens' for tomato, onion, and potato (TOP), by promoting FPOs (GoI, Union Budget 2018-19)
8	RBI Guidelines on PSL includes a loan up to `2 crore to FPOs as priority sector lending

D. Organic Farming

India accounts for 30 per cent of the total organic producers in the world, but shares just 2.6 per cent (1.5 million ha.) of the total organic cultivation area of 57.8 million ha. (FiBL 2018). Organic farming has become increasingly important in India given the rising number of concerns with the use of chemical fertilizers and pesticides. Government has initiated many initiatives, like the launching of Paramparagat Krishi Vikas Yojana (PKVY) in 2015, as an extended component of Soil Health Management (SHM) under the Centrally Sponsored Scheme (CSS), National Mission on Sustainable Agriculture (NMSA).

Several new and unique projects may be financed under organic agriculture. However, banks may be keen to explore increased surpluses from organic agriculture at the farmer level. An analysis of costs by Murray (2006) brought the dimension of "viability" of organic agriculture (Table 14). The "coefficient of variation (CV) in organic agriculture (26%) was much less as compared to inorganic agriculture (58%), indicating better yield stability in organic agriculture compared to inorganic agriculture".

Commercial production units of organic inputs such as bio-fertiliser units, vermicomposting hatcheries, fruits and vegetables waste compost units under the Capital Subsidy scheme of the National Project on Organic Farming (NPOF) have good scope for financing by banks. Farm level pre-processing of sorting, grading, packing and pre-cooling need to be developed to build an effective supply chain for organic produce. These activities, if undertaken by farmers' collectives, could be more viable. Under organic agriculture, every individual farmers produce would be unique and may have features that would attract consumers to demand produce from a particular farmer. Such farmers can even develop their own signature brands, as has been done by an enterprising apple farmer[2] in Himachal Pradesh and grape growers[3] in Maharashtra.

Hydroponics and Aeroponics, as soil-less farming technologies for growing plants in nutrient solutions (water containing fertilizers) without any soil as 'growing medium', are best suited for organic farming. Hydroponics plants are grown in nutrient solutions usually indoors, completely free from chemicals and pesticides making them much safer. Such tool kits also present a financing option for banks.

Table 14: Economics of Organic & Inorganic Agriculture: A comparison of sugarcane in Jalgaon, Maharashtra (Rs. ha.)

Particulars	Organic	Inorganic
Total Cost of Cultivation	35632	42115
Of which		
Manures	10534	5242
Chemical Fertilisers	0	8980

[2]'Royal Delicious', 'Red Delicious' are a few known signature apple brands from Himachal Pradesh having export value.

[3]The vineyard owners of Maharashtra created the export market for Grapes with their own brand, Mahagrapes

Particulars	Organic	Inorganic
Yield(tones/hectare)	106.7	114.9
Gross Value of Production	122705	120687
Gross Profit	87073	78572
Coefficient of Variation (CV)		
CV in Yield	26.32	57.71
CV in Profits	44.35	91.15

Source: Murray (2006)

IV. Conclusion

Several hurdles need to be overcome to make horticulture more promising. Almost 85 per cent of land holdings are marginal or small where collectivization can help achieve economies of scale in production. Secondly, concern for food safety, traceability and assured year-round availability of quality agri-produce at reasonable prices are important aspects of the supply chain. Third, the fragmented agricultural marketing value chain with a large number of intermediaries is another major constraint, leading to low returns to producers. Fourth, the wastage of perishables such as fruits and vegetables, which range from 18% to 40%, need to be contained on a priority basis with adequate investments on logistics. Finally, the production and price risks are the most vital areas requiring attention. However, the growing demand for quality agricultural products creates an opportunity to reduce risk in horticulture through integration of producers on the one hand and retailers and processors on the other.

Horticulture can help diversification in agriculture. However, such diversification is not possible in the absence of infrastructure facilities and marketing systems. The e-NAM initiatives of GoI is a positive step in this regard.

Contract farming, FPOs, AVC with proper financing can help in ensuring value additions. The Model Act 2018 will give a new direction to CF models. The challenge before AVCF is to address the risks associated with the value chain. The wastage is high due to poor cold chain infrastructure. The Standing Committee on Agriculture (2017) observed that such wastages can be reduced with adequate food processing facilities.

There are many issues coming in the way of financing of FPOs. FPOs lack (i) collateral as security, (ii) information on credit history, (iii) strong balance sheet, etc. Numerous challenges in terms of information asymmetry, weak financials, lack of professionalization, lack of legal/ technical knowledge, statutory compliances, etc. are to be addressed while financing FPOs. Developing standardized rating tools, greater sensitization of the farmers and the bankers, inculcating professionalism among FPOs, etc. will work towards betterment of financing avenues for FPOs.

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Financing Prospects of Precision Farming Technologies in India

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Abstract: *Precision farming is a site specific farming technology where all critical decisions relating to farming are taken based on data analysis and interpretation by using the satellite images, sensor fitted equipment, drones, Internet of Thing (IOT) devices etc. A number of agri-tech startups are promoting the geo-spatial technologies through their technology platforms. There is ample scope and potential for the bankers to finance the precision farming technology especially for high value agricultural crops with appropriate support both from the research and government extension wings. Individual farmers or group of farmers can be financed by the banks based on the learnings from government initiatives such as Tamil Nadu Precision Farming Project (TNPFP), Precision Farming Development Centres (PFDCs) etc. Banks may also finance agri- startups promoting precision farming technologies or they may finance the IOT and drone devices to individual farmers facilitating promotion of precision farming in India.*

1. Introduction

1.1 The Precision Farming is defined as information and technology based farm management system to identify, analyze and manage variability within fields for optimum profitability, sustainability and protection of the land resource (*Anil Kumar Singh, Water Technology Centre, IARI, New Delhi*).In the traditional farming, cropping practices such as planting, harvesting, irrigation and applying pesticides and fertilizers are carried out for the entire field based on regional conditions and historical data. Where as in the precision farming, Global Positioning System (GPS) mapping tools, remote sensing data and sensors are used to collect information on individual plants within a farm plot in real time and deliver inputs in calibrated doses to only those areas that need it. Simply stated precision farming is "doing the right thing in the right place at the right time" in the farm operations by using the technological tools. Thus, precision farming has the potential to maximize the crop output, reduce the production cost, conserve natural resources and will have economic and environmental benefits. This paper is an attempt to provide a profile of technologies available for precision farming, initiatives of government in this regard, agri start-ups involved in precision farming and financing prospects for the banks for these technologies.

2. Principles of Precision Farming

2.1 The Precision Farming is based on two main principles viz., (i) Collection of information by using inputs from geospatial data and analyzing the data and (ii)

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Differential farming operations carried out with the help of sensor fitted farm machinery and implements.

Collection of data: The following data is captured on the spatial variation in soil and crop features using Global Positioning System (GPS).

- Crop characteristics like stage / health/ nutrient requirement.
- Soil – physio-chemical properties- depth, texture, structure, nutrient status, salinity, acidity.
- Weather data – temperature, wind, humidity.
- Surface / sub-surface drainage conditions, water availability.

Differential action: In response to spatial variability, farming operations, such as sowing rate, fertilizer, pesticide and lime/ zinc application, tillage and water use, can be varied by map based or real time sensor-based control systems across an agricultural field.

- Map based controls: Variation in treatment corresponds to the mapped variation in the field attributes measured.
- Real time sensor-basedcontrols: Sensors attached to the equipment receive signals from the computer system (with software) mounted on the tractor and accordingly regulate the application of inputs to the field.

3. Geo-Spatial Technology tools for Precision Farming:

The following are the geo-spatial technology tools used for the precision farming.

1. Remote Sensing (RS).
2. Global Positioning System (GPS).
3. Geographical Information System (GIS).
4. Sensor based Variable Rate Applicator (VRA).

3.1 Remote Sensing (RS)

Remotely-sensed data provide a tool for evaluating soil and crop conditions. The plant stress related to moisture, nutrients, compaction, crop diseases and other plant health concerns are easily detected in remote sensing images. These images are captured with specific colors and are interpreted to (i) distinguish crop species (ii) to locate stress conditions (iii) to discover pests, weeds and (iv)to monitor drought conditions. Government of India (GOI) had established [i]Mahalanobis National Crop Forecast Centre in Department of Agriculture & Cooperation for operational use of space technology, to provide country wide land use mapping, inventory of horticultural crops, in–season crop forecasts, monitoring, crop production forecasting and inputs for agro-advisory services. Major application of this technology is crop area / output estimation, drought assessment and supporting data for crop damage assessment by GOI. Commercial availability of high resolution imagery has propelled the use of remote sensing images such as vegetation index, rainfall data, solar radiation etc. by certain start-ups for crop monitoring and extending agromet-advisory services to farmers.

3.2 Global Positioning System (GPS)

Global Positioning System (GPS) satellites broadcast signals that allow GPS receivers to calculate their current location and collect

[i]https://nrsc.gov.in/Agriculture (accessed on January 14, 2019)

information on soil type, water availability, nutrient status etc. The system allows farmers to reliably identify field locations so that inputs (seeds, fertilizers, pesticides, herbicides and irrigation water) can be applied to an individual field, based on field status and performance criteria. The GPS mapping is used in detecting the disease affected areas very quickly and accurately than the conventional methods like for instance in mapping the Sugarcane Yellow Leaf Virus (SCYLV) affected areas. Sugarcane infected with SCYLV rarely produces visual symptoms until late in the growing season (Viswanathan et a;l 2008). The GPS images provides in such cases an early rapid alternative method to determine the SCYLV affected population in the sugarcane crop and accordingly facilitates timely application of remedial measures to control the disease.

3.3 Geographical Information System (GIS)

Geographical Information System (GIS) is a database management software that helps in developing a decision framework for managing variability like soil fertility, soil moisture status, plant nutritional requirements, disease and pest attack, etc., on the spatial scale. The GIS Database Management System (software) converts the digital information to a form that can be recognized and used to decide what to be done with various elements affecting a crop at that specific site. For instance, the GIS can be used as a key enabling technology in the sugarcane industry to forecast the area, yield and accordingly plan for the marketing of sugar. Mitr Phol Sugarcane Research Center, Thailand has developed "Sugarcane Information and Management System (SIMS)" with integrated remote sensing and GPS data to map the cane area, soil characteristics and build database of contract farmers to advise them on the suitable cultural practices, varieties to be grown etc., (Weerathaworn, et al., 2006).

3.4 Variable-Rate Application Equipment

Information from the GIS is picked up by the sensors that are fitted to the farm machines which control processes such as seeding, fertilizer and pesticide application, herbicide selection and application, at a variable (appropriate) rate in the right place at the right time. Main components of the variable rate application (VRT) equipment are (i) computer (controller) and (ii) farm machines with sensor. The sensors guide farm machines along a track hundreds of metres long making only centimeter-scale deviations on the rate of delivery of farm inputs depending on the soil type. [ii]Using sensor systems for variable rate application (VRA) is becoming more popular for cotton production. Three critical inputs for cotton production namely plant growth regulators, defoliants/boll openers and nitrogen can be very well monitored with the variable rate application technology.

4. Precision Farming – Indian Context

4.1. The precision farming is practiced in large individual farm holdings in USA, Australia and Europe with huge capital expenditure on geospatial technologies and

[ii]Potential of Variable Rate Application Technology in India by Sushil Sharma, R.M Sharma, S.S Manhas, Shiv Kumar Lohan, accessed at https : / / www. Researchgate . net / publication / 268079034 Potential _of _Variable _Rate Application_ Technology_in_India on January 14, 2019

sensor fitted farm machinery. However, in India such large scale farming is not possible as the size of land holdings are very small. Hence the precision farming in the Indian context can be redefined as "*application of precise and correct amount of inputs like water, fertilizer, pesticides etc. at the correct time to the crop for increasing its productivity and maximizing its yields" (Anil Rajvanshi, Director, NARI, Maharashtra)*. The precision farming, as redefined above, can be practiced in India either on a compact area basis involving a group of farmers focusing on high value crops like the Tamil Nadu Precision Farming Project (TNPFP) or by creating a technology platform by an entrepreneur and connecting large number of farmers for extending the precision farming tools to them. Both the above approaches are elaborated in the following paragraphs (para 4.2 and 4.3).

4.2 Tamil Nadu Precision Farming Project (TNPFP)

One of the earliest applications of the precision farming techniques in India is a research & development project undertaken by MS Swaminathan Research Foundation (MSSRF), Chennai in 1999-2000 covering 280 acres in Dindigul District of Tamil Nadu. This was followed by the launching of "*Tamil Nadu Precision Farming Project (TNPFP)*"by Government of Tamil Nadu during 2004-07which was one of the significant interventions for large scale commercial application of the precision farming technology in small farms. The project was taken up on a pilot basis with cluster approach covering 400 ha. and 23 crops. The components of TNPFP included the following:

- **Satellite Based Soil Maps:** Fertilizer application and soil management based on the satellite-based soil maps. This technology helped in identifying the exact nutrient status of the particular soil in the area.
- **Chisel ploughing:** Due to the usage of tractor for many years and flood irrigation practices, the upper layer of the soil up to 45 cm had become hard. It affects proper drainage and aeration of soil. Chisel ploughing is recommended twice a year which helps in overcoming this problem.
- **Drip irrigation:** It is the key component of micro irrigation and one of the most important component under TNPFP
- **Community nursery:** Community nurseries were developed by the precision farmers with the guidance of the university scientists to produce 100% healthy vegetable seedlings.
- **Pest and disease control:** Precaution measures based on the climatic conditions and need based application of pesticides and fungicides helped in reducing one third of expenses
- **Cluster approach:** Precision Farmers Associations were formed for operational convenience, institution building, better logistics and collective marketing
- **Market support:** Exposure visit organized for beneficiary farmers to major markets like Cochin, Chennai (Koyambedu) Bangalore (Safal) and Coimbatore and sensitized them on the importance of grading, sorting and timely delivery to the market.

The[iii] TNPFP recorded 60 to 80 percent higher yield in all the crops and 90 percent increase in the high grade marketable produce with 5-6 days more shelf life. The weight by volume was 25 percent higher which fetched 30 percent premium price in the market. There was less labour dependence and use of water for irrigation dropped by 30 to 40 percent when compared to conventional irrigation methods.

4.2.1 Precision Farming –Government initiatives

Some of the Government initiatives for promotion of precision farming are indicated below:

- Micro irrigation is an important technology component under precision farming. The total potential for micro irrigation is assessed at 69.5 million ha (drip irrigation – 27 million ha, sprinkler - 42.5 million ha) of which existing coverage is 7.73 million ha (March 2015) leaving huge gap to be exploited through appropriate interventions[iv]. Government of India has created enabling environment for promotion of micro irrigation through subsidy support since 2005-06 through Centrally Sponsored Scheme (CSS) for Micro Irrigation which was later upgraded to National Mission on Micro Irrigation from the year 2013-14 and Pradhan Mantri Krishi Sichai Yojana (PMKSY) from 2015 onwards[v]. These programmes offered scope for effective convergence for promotion of precision farming.
- Ministry of Agriculture, Govt. of India has established Precision Farming Development Centres (PFDCs) to promote "Precision Farming and Plasticulture Applications for Hi-Tech Horticulture[vi]". These centres are located in different states and have been operating as hub-centers of precision farming in respective states. The functional role of PFDCs includes undertaking field trials, crop specific demonstrations, training, awareness creation and technology transfer through satellite-based soil mapping in identified areas wherever possible. PFDCs are involved in developing regionally differentiated technologies for their validation and dissemination. PFDCs will be equipped with necessary hardware and software needed for generating information on precision farming techniques on the farmers' field. The ultimate goal is to provide requisite information to farmers so that they are in a position to apply necessary inputs. The financial assistance is provided to PFDCs from Mission for Integrated Development of Horticulture (MIDH) on project basis through the State Horticulture Mission (SHM). PFDCs will take up the activities such as trials, demonstrations for precision farming

[iii]http://agritech.tnau.ac.in/tnpfp-ENG/index.html#

[iv]Report of Task Force on Micro Irrigation, Dept. of Agril. & Cooperation, Ministry of Agriculture, Govt. of India, 2004, pp. 115..

[v]Study titled "Accelerating Growth of Indian Agriculture-Micro Irrigation, an Efficient Solution" by FICCI and Irrigation Association of India)

[vi]website of National Committee on Plasticulture Applications in horticulture.

technologies for horticulture crops, survey to ascertain field adoption of the technology, training of farmers/ officials, display centre, publicity etc.

4.3 Precision Farming through Agri-Tech Startups

There are a number of startups promoting the precision farming technology for high value agricultural crops. Mobile penetration and the increasing role of digitization in agriculture is boosting growth in the agritech space. According to AgriTech Report (2017) released by [vii]Inc42-Data Labs, the entrepreneurial activity in Indian agritech reached a new peak with around \$36 million invested by 15 startups mainly through cloud funding and venture capital funding in the year 2017. These agritech startups are working towards solving problems of Indian agriculture by leveraging technology. The startups in this space are also leveraging technology in the area of market linkages such as retail, the B2C and B2B marketplaces. Accenture estimates that the digital agriculture services market will hit the mark of \$4.55 billion by 2020, thus highlighting the ample scope of growth for agri-tech startups in the country. Some of the startups and their ventures promoting the precision farming in India are furnished below[viii].

Aibono

Aibono is an agrotech startup that provides farm related intelligence, technology, expertise and gadgets to farmers. The company is engaging a large number of small farmers in precision agriculture by charging commission which helps the company gain economies of scale by sharing resources and expertise. The startup company advices the farmers on the right type and amount of inputs to be used for maximizing yield. The company began in the niche area of providing farm management-as-a-service whereby, a farmer gets to outsource his entire production management and decision-making processes to a service provider.

CropIn

CropIn is a Bengaluru based agritech company engaged in precision farming. It is integrating the agricultural sector with Information and Communication Technology (ICT) by putting a network of ERP (Enterprise Resource Planning) and BI (Business Intelligence) across rural India. By doing so, the agritech startup collaborates with the different value chain participants along the supply chain to monitor farm produce status closely. CropIn allows farm businesses to take advantage of real-time data and insight from farms (an accurate view of their operation throughout the growing season) and improve financial, operational, and agronomy aspects. The company is harnessing cutting-edge technologies like Big Data Analytics, Artificial Intelligence, Geo-tagging and Satellite Monitoring to revolutionize the agri-ecosystem. CropIn is currently present in 12 countries and enriching the lives of more than 5,00,000 farmers. The startup claims to have digitized about 2.1 million

[vii]https://inc42.com/features/union-budget-agritech-startups/

[viii]AgriTech Report 2017 by Inc42-Data Labs

acres of land to facilitate data-driven farming in Southeast Asia and African countries, CropIn is one of the promising agri startups that could effectively bring the benefits of precision farming within the reach of small farmers.

Full-Stack AgroTech – Webonise: Full-stack Agro-tech addresses technology needs of the farmers that spans across inputs, farm machines and the supply chain. The Farm Portfolio Management (FPM) of the agro-tech gives users the ability to easily visualize and compare uploaded agricultural data and get a timeline of events that has taken place in a given field. Based on satellite data the FPM monitors parameters like potential yield data, soil parameters, potential pest attacks, macro fertilizer recommendations, crop stress index and reasons (water; nutrient; pest attack).The Agri-Services and Products Marketplace plat form provided by the aggrotech serves as a common solution for enlisting products and services relevant to farmers which can be accessed by corporates and individuals.

Intello Labs

The Bengaluru based agritech startup offers a product called "**Digital Agri**" which uses computer vision algorithms to assess in minutest detail the crop quality parameters like pest infestation, nutrient deficiency, time for harvest etc. The startup uses satellite and drone images for yield estimation and water requirements. Farmers, procurers, field agents or quality professionals can just click an image of the crop or harvested produce and Intello Labs can provide precise insights from the images. Thus it has immense potential in digital agriculture in the country, in eliminating wastage, in food grain quality grading, and in reducing crop losses due to diseases. Artificial Intelligence (AI) can enable farmers to switch to smarter techniques to control crop infestation and reduce human interference.

Stellapps Technologies Private Limited: Stellapps is incubated by IIT Chennai, Rural Technology Business Incubator (RTBI) and funded by Omnivore Capital. The company offers solutions to reduce production costs in dairy by automation of milking procedures and fodder management modules to ensure low input cost per litre.

5. Precision Farming–Financing opportunities.

There is ample scope and potential for the bankers to finance the technology especially for high value agricultural crops with appropriate support both from the research and government extension wings.

5.1 Financing individual or group of farmers based on TNPFP model.

Individual farmers or group of farmers can be financed based on the learnings from TNPFP. The following technology options can be considered for financial assistance by the banks for wider adoption of precision farming in Indian context.

- Special land preparation equipment like chisel plough, laser guided land leveler, paddy transplanter.
- Soil testing and water testing, satellite-based soil maps and chromatographsas components of crop cultivation expenses may be considered for financing.
- Micro irrigation facilitating fertigation and integrated nutrient management.
- On-site and offsite crop advisory services.

Since several components of precision farming like micro irrigation, nursery production, post-harvest management, etc., qualify for incentives extended under National Mission on Micro Irrigation (NMMI), National Horticulture Mission (NHM) and Rastriya Krishi Vikas Yojana (RKVY), banks may ensure convergence with these programmes where ever feasible while financing.

5.2 Financing Internet of Things (IOT) & Drone devices.

5.2.1 Internet of Things (IOT): The[ix] IOT devices are used in Irrigation Systems to determine best time to water plants depending by taken the data from the moisture sensors in the soil. Similarly, the IOT devices with sensors are used to determine custom fertilizer profiles based on soil chemistry, to determine optimum time to plant and harvest and for reporting weather conditions. The IOT devices are used in livestock management also. Cattle can be fitted with sensors to monitor their health. External sensors track movement pattern to determine cattle fitness, sense physical injury and optimal time for breeding etc.

5.2.2 Unmanned Aerial Vehicles (UAVs) / Drones in agriculture: [x]Unmanned aerial vehicles (UAVs)—better known as drones are used in agriculture for proper planning based on gathering and processing real-time data. Following are a few ways of usage of drones in agriculture.

- **Soil and field analysis:** The soil / field analysis by using the 3-D maps generated by drones will be helpful for planting, irrigation and nutrition management.
- **Pesticide spraying:** The ultrasonic or laser equipment installed enables a drone to scan the ground and spray the correct amount of liquid, modulating distance from the ground and spraying in real time for even coverage. This results in increased efficiency with a reduction of the amount of chemicals penetrating into ground water. Experts estimate that aerial spraying can be completed up to five times faster with drones than with traditional machinery.
- **Crop monitoring:** Time series animations captured through drones can show the precise development of a crop and reveal production inefficiencies, enabling better crop management.
- **Irrigation:** Drones with hyper spectral, multispectral, or thermal sensors can identify which parts of a field are dry or need irrigation.
- **Health assessment:** By scanning a crop using both visible and near-infrared light, drone-carried devices can identify which plant reflects different amounts of green light and Near Infra-Red (NIR) light. This information can produce multispectral images that track changes in plants and indicate their health. A speedy response can save an entire orchard. In addition, as soon as a sickness is discovered, farmers can apply and monitor remedies more precisely. These two possibilities increase a plant's ability to overcome disease. And in the case of crop failure, the farmer will

[ix]There are a number ofIOT devices such as smart thermostats, spectroscope and lighting systems which are making their way into agriculture and livestock farms. These IOT devices are used with sensors and farm management software in various applications such as fertilizer application, irrigation etc.

[x]https://www.technologyreview.com/s/601935/six-ways-drones-are-revolutionizing-agriculture/

be able to document losses more efficiently for insurance claims.

5.2.3 The Ministry of Civil Aviation has approved regulations/policy on the commercial use of drones or the Remotely Piloted Aircraft System (RPAS) which comes into operation from December 2018[xi]. Under the new policy, for higher weight category UAVs, operators will need a one-time registration of their machine on a web portal. The Directorate General of Civil Aviation (DGCA) will set up a platform called Digital Sky for drone user registrations.

5.2.4 There is a big opportunity for banks to finance the IOT and UAV devices for application in farm and livestock management or finance the agri startups implementing the precision farming technology platforms for the benefit of small farmers.

6. Conclusion

Precision farming is an emerging concept in modern agriculture which is a micro farm management system using the geospatial technologies, sensors fitted to farm implements and machinery, Internet of Things (IOT) devices and Unmanned Area Vehicles/Drones (UAVs). Agriculture productivity and farmers income depends to a large extent on adoption of new technology and optimum use of agricultural inputs. In this context, the Precision Farming or Precision Agriculture (PA) holds promise for profit / income maximization for the farmers in a sustainable and environmental friendly way. While the government is promoting the precision farming by setting up Precision Farming Development Centres (PFDCs), bankers may utilize the opportunity for financing precision farming ventures for bringing in much needed push for agriculture.

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[xi]https://www.financialexpress.com/industry/drones-commercial-use-to-be-legal-from-december/1294491/

Leveraging Cooperative Advantage in Banking: Challenges, Prospects and Global Paradigm

Dr. Ashish Srivastava[1]

The cooperative movement is one of the most successful models globally for organising and conducting a wide cross-section of economic activities through a social enterprise. With its quintessential vision of balancing the typical profit goals with broader social objectives, the cooperative business model has tremendous scope to offer innovative solutions to various economic challenges. In case of banking and financial sector, the challenges relating to financial inclusion, funding gap at the grass-root level, and participative economic development, can be effectively managed through co-operative banking model with professional ethics and sound governance standards. This paper presents an analysis of cooperative banking structure in India to bring out its key challenges and prospects in juxtaposition to the global paradigm of cooperative banking.

1. Cooperatives: Concepts and Principles

Cooperation is defined as working or acting together for a common purpose or benefit. Cooperation in general terms determines the extent to which economies of scale and scope are exploited and the degree to which complementarities are recognised, exploited and utilised[1]. Co-operatives are businesses owned and run by and for their members. Whether the members are customers, employees or residents, they have an equal say in the business and a proportionate part in the profits. As businesses are driven by values, not just profit, cooperatives share internationally agreed principles and act together to build a better world through cooperation.

2. The emergence of Cooperatives: Global Scenario

Cooperative institutions were born in the late 18^{th} and 19^{th} century when the people of smaller means and peasants, who were socially and financially excluded from the mainstream, voluntarily organized themselves into groups/societies. The voluntary nature, mutual help, service

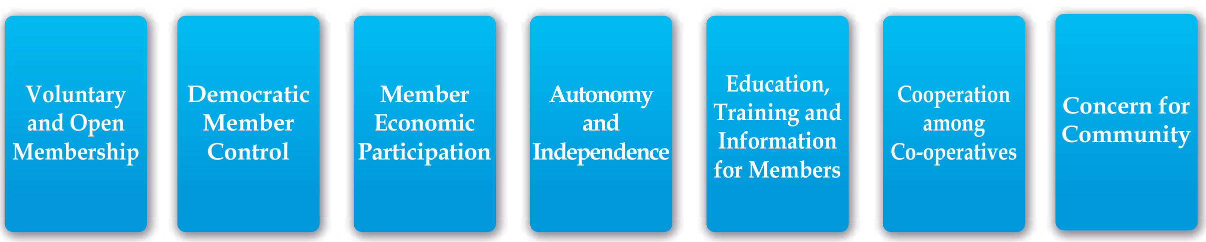

Fig 1: Seven Cooperative Principles

(Source - International Cooperative Alliance)

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orientation and not for 'profit alone' approach of the cooperative institutional model immensely appealed to the vulnerable sections of the society and they readily embraced it. Based on the idea of German social reformer Friedrich Wilhelm Raiffeisen (1818-1888), who advanced the principle of self-help in times of great economic difficulties, the first cooperative bank was founded in Anhausen in Germany in 1862, primarily as rural savings and credit cooperative, and agricultural cooperative. Later, Hermann Schulze-Delitzsch established the first urban cooperatives, such as a shoemaker's cooperative, and savings and credit cooperatives. Subsequently, Viktor Aimé Huber was the founder of housing cooperatives in the mid-19th century whereas, Eduard Pfeiffer exerted a dominating influence on the development of consumer cooperatives. Households, farmers, retailers and craftsmen joined their forces with the principles of Raiffeisen and Schulze-Delitzsch. Raiffeisen intended these organisations to necessarily have a social function besides the business functions. Like many of his contemporaries, Raiffeisen emphasised the importance of schooling and education, and in 1866 he published his book titled *Die Darlehnskassen-Vereine*. This book contained blueprints for an agricultural credit cooperative. In later editions, he integrated the effects of new German laws and regulations on his cooperative philosophy. Middle and East European countries took the German cooperative law of 1889 as a model, originally designed by Schulze-Delitzsch. The movement gradually spread to other neighbouring European countries and the first Raiffeisen Banks in the territory of Austria at that time were established in Mühldorf during 1866.While initially the cooperative institutions floated by Raiffeisen and Delitzsch operated in the rural and urban areas respectively, during 1972 they both merged to form a single form of cooperatives in Germany.

The emergence of Raiffeisen-styled agricultural credit cooperatives in the Netherlands was closely connected to the modernisation of the agriculture sector between 1880 and 1914 and with faltering credit provision in some regions. Farmers and horticulturalists needed capital to make technological improvements in their operations and to adapt their businesses but lack of lending in rural areas was a structural problem. In Netherland, the Rabo bank emerged from the Raiffeisen bank and the Boerenleen bank, two banks modelled on an agricultural credit cooperative. Rabobank, as we know it today, was created on 1 January 2016 through the legal merger of 106 local cooperative Rabobanks.

In the United Kingdom (UK), cooperatives followed a set of principles best defined in 1844 by co-operators in Rochdale, England. The most important of these principles was that members in a co-operative had one vote each regardless of their investments, free and open membership was available, surpluses or profits were distributed to members according to their levels of participation, and co-operatives would undertake educational activities for their members. The Industrial and Provident Societies Act, 1862 further enabled co-operative societies to invest in other co-operative societies, thereby permitting co-operative federations. The North of England Co-operative Wholesale Industrial and Provident Society Limited was launched in Manchester by 300 individual co-operatives in Yorkshire and Lancashire during 1863.The Scottish Co-operative Wholesale Society was founded in 1868.

Following the British footprints, Farmers were the first Canadian group that successfully developed co-operatives. Between 1860 and 1900, farmers in Ontario, Québec and Atlantic Canada developed over 1200 co-operative creameries and cheese factories to meet the needs of the rapidly growing dairy industry[2]. Over the period, cooperatives have grown in a variety of fields and also in the arena of banking and finance. The followings are the ten largest co-operatives in Banking and Financial Services by turnover (2015) on a global scale.

Table 1: Ten Largest Global Banking and Finance Cooperatives

Sr.	Organisation	Country	Turnover (USD Bn)
1	Groupe Credit Agricole	France	49.92
2	National Association of German Cooperative Banks (BVR)	Germany	44.81
3	Groupe Credit Mutuel	France	31.21
4	Groupe BPCE	France	26.41
5	Desjardins Group	Canada	11.85
6	Rabobank Group	Netherlands	10.08
7	Federal Farm Credit Banks Funding Corporation	USA	7.68
8	Raiffeissen Bank International (RZB)	Austria	5.72
9	Navy Federal Credit Union	USA	4.06
10	Raiffeisen Group	Switzerland	2.92

Source – World Cooperative Monitor Report 2017, International Cooperative Alliance

3. International Cooperative Alliances

International Cooperative Alliance was established in 1895 as an independent association which unites, represents, and serves cooperatives. It is the apex body representing cooperatives and works with governments worldwide to facilitate cooperatives to form, operate, and grow.

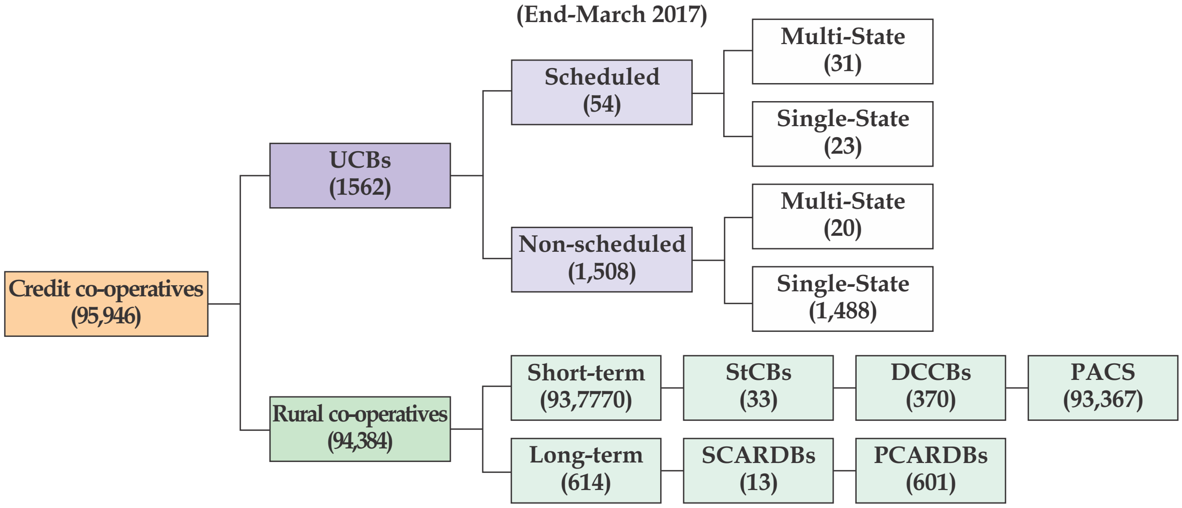
International Confederation of Popular Banks (CIBP) was founded in 1950 and is an international, non-government organization recognized by the UNO. It associates co-operative banking and financial institutions and organizations whose aim is to encourage the development of small and medium-sized companies and individual customers. The European Association of Co-operative Banks (EACB) represents, promotes and defends the common interests of its member institutions and of cooperative banks, with regard to banking as well as to co-operative legislation. Founded in 1970, today the EACB is a leading professional lobbying association in the European banking industry. The European Association of Co-operative Banks currently gathers 29 organisations from 23 different countries. The EACB represents the common interests of co-operative banks and acts as their official spokesperson towards the European institutions. Other tasks include providing a platform for the exchange of their experiences and points of view as well as promoting and developing the co-operative principles in the banking sector at European and international level. According to the EACB's governance principles, each full member is given the same weight in the decision-making process, regardless of its size, country of origin or its financial contribution.[3]

4. Cooperative Credit Structure in India

Inspired by the success of movements in Europe, the movement in India began as a means of providing affordable credit to people of smaller means. This was achieved through individuals pooling their resources and organising themselves as cooperative societies for the mutual benefit of their members.

The first known mutual aid society in India was the 'Anyonya Sahakari Mandali' organised in the erstwhile princely State of Baroda in 1889 under the guidance of Shri. Vithal Laxman, also known as Bhausaheb Kavthekar. Urban co-operative credit societies, in their formative phase, came to be organised on community lines to meet the consumption-oriented credit needs of their members. Salary earners' societies inculcating the habit of thrift and self-help played a significant role in popularizing the movement, especially amongst the middle class as well as organized labour. From its origins, till date, the thrust of UCBs has been to mobilize savings from the middle and low-income urban groups and provide credit to their members - many of whom belonged to weaker sections.

The enactment of the Cooperative Credit Societies Act, 1904, gave real impetus to the cooperative movement. The first urban cooperative credit society was registered in Canjeevaram (Kanjivaram) in the erstwhile Madras province in October 1904. Amongst the prominent credit societies were the Pioneer Urban in Bombay (November 11, 1905), the No.1 Military Accounts Mutual Help Co-operative Credit Society in Poona (January 9, 1906). Cosmos in Poona (January 18, 1906), Gokak Urban (February 15, 1906) and Belgaum Pioneer (February 23, 1906) in the Belgaum district, the Kanakavli-Math Co-operative Credit Society and the Varavade Weavers' Urban Credit Society (March 13, 1906) in the South Ratnagiri (now Sindhudurg) district. The most prominent amongst the early credit societies was the Bombay Urban Co-operative Credit Society, sponsored by Shri Vithaldas Thackersey and Shri Lallubhai Samaldas, was established on January 23, 1906.The Cooperative Credit Societies Act, 1904 was amended in 1912, with a view to enabling the organisation of non-credit societies. The Maclagan Committee of 1915 was appointed to review their performance and suggest measures for strengthening them. The committee observed that such institutions were well suited to cater to the needs of the lower and middle-income strata of the society and would inculcate the habit of banking amongst the middle classes. The committee also felt that the urban cooperative credit movement was more viable than agricultural credit societies. The recommendations of the Committee went a long way in strengthening the urban cooperative credit movement in India.[4] Of-late, Malegam Committee and Gandhi Committee have delved into various issues concerning the cooperative banking in India. Following is the present-day structure of credit cooperatives in India.



StCBs: State Co-operative Banks: DCCBs: District Central Co-operative Banks: PACS: Primary Agricultural Credit Societies: SCARDBs: State Co-operative Agriculture and Rural Development Banks: PCARDBs: Primary Co-operative Agriculture and Rural Development Banks.

Notes: 1. Figures in parentheses indicate the number of institutions at end-March 2017 for UCBs and at end-March2016 for rural co-operatives.

2. For rural Co-operatives, the number of co-operatives refers to reporting co-operatives.

Fig 2: Structure of Credit Cooperatives in India (March 2017)

Source: Report on Trend and Progress of Banking in India, 2016-17

5. Genesis of Urban Cooperative Banking in India

The term Urban Co-operative Banks (UCBs), though not formally defined, refers to primary cooperative banks located in urban and semi-urban areas. These banks, till 1996, were allowed to lend money only for non-agricultural purposes and were traditionally sprung on community lines and were situated in localities and workplaces of the community which set them up. They essentially lent to small borrowers and businesses within their community and locality. However, over the years their scope of operations has widened considerably and these banks have grown in size and have not restricted their service to a particular community. Cooperative societies are based on the principles of cooperation, mutual help, democratic decision making and open membership.[5]

The constitutional reforms, which led to the passing of the Government of India Act in 1919, transferred the subject of "Cooperation" from Government of India to the Provincial Governments. The Government of Bombay passed the first State Cooperative Societies Act in 1925 which gave the movement its size and shape, augmented cooperative activities and stressed on the basic concept of thrift, self-help and mutual aid. Other states followed. There was a general realization that urban banks have an important role to play in economic development. This was asserted by a host of committees. The Indian Central Banking Enquiry Committee (1931) felt that the urban cooperative banks have a duty to help the small business and middle-class people. The Mehta-Bhansali Committee (1939) recommended that those societies which had fulfilled the criteria of banking should be allowed to work as banks and recommended an association for these banks. The Co-operative Planning

Committee (1946) went on the record to say that urban banks have been the best agencies for small people in whom Joint-stock banks are not generally interested. The Rural Banking Enquiry Committee (1950), impressed by the low cost of establishment and operations, recommended the establishment of such banks even in places smaller than taluka towns.

The first study of the Urban Co-operative Banks was taken up by the RBI in the year 1958-59. The Report published in 1961 acknowledged the widespread and financially sound framework of urban co-operative banks and emphasized the need to establish primary urban cooperative banks in new centres and suggested that state governments lend active support to their development. In 1963, Varde Committee recommended that such banks should be organised at all the urban centres with a population of 1 lakh. The committee introduced the concept of minimum capital requirement and the criteria of the population for incorporation of UCBs. Towards the late 1960s, there was much debate regarding the promotion of the small scale industries. UCBs came to be seen as important players in this context. The Working Group on Industrial Financing through Co-operative Banks (1968), known as Damry Group attempted to broaden the scope of activities of urban co-operative banks by recommending that these banks should finance the small and cottage industries. This was reiterated by the Banking Commission (1969).The Madhavdas Committee (1979) evaluated the role played by the urban co-operative banks in greater details and drew a roadmap for their future role recommending support from the RBI and government in the establishment of such banks in backward areas and prescribing viability standards. The Hate Working Group (1981) desired better utilisation of banks' surplus funds and recommended that the percentage of the Cash Reserve Ratio (CRR) and the Statutory Liquidity Ratio (SLR) of these banks should be brought at par with commercial banks, in a phased manner. While the Marathe Committee (1992) redefined the viability norms and ushered in the era of liberalization, the Madhava Rao Committee (1999) focused on consolidation, control of sickness, better professional standards in urban co-operative banks and sought to align the urban banking structure with commercial banks.

6. Statutory and Regulatory Provisions

The subject of co-operation falls under the state list in the constitution of India[6] and, therefore, each of the state government has enacted its own Co-operative Societies Act. Management related functions of the co-operative banks are governed by the respective state co-operative societies acts, whereas their banking related activities are under the purview of the Banking Regulation Act, 1949 (B. R. Act) (As Applicable to Cooperative Societies (AACS), a central act, which is administered by the RBI. UCBs also having a branch presence in the states other than the state of registration are governed by the Multistate Co-operative Societies Act, 2002. The registration, membership, election of directors, constitution of the board, disqualification/ removal of the director, supersession of the board, audit, winding up/amalgamation, liquidation etc., of co-operative banks, are governed by the provisions of the respective State Co-operative Societies Act or the Multistate Co-operative Societies Act, 2002, as the case may be.

Banking related functions of these institutions were brought under the Banking Regulation Act, with effect from March 1, 1966 and the RBI was vested with the powers to regulate and supervise operations such as acceptance of deposits, maintenance of cash reserves and liquid assets, regulation of loans and advances, opening of new places of business, calling for returns on banking operations, on-site inspection of books of accounts, publication of audited balance sheet and profit and loss account etc. As such, B.R. Act, 1949 (AACS) provides the basic legal framework of cooperative banking in India.

7. Legal Framework and Operations of Cooperative Credit Institutions in India

It is important to understand the terminologies and their specific legal meaning in the context of the B. R. Act, 1949 (AACS). Following are some of the important terms.

•**Co-operative bank** means a state co-operative bank, a central co-operative bank and a primary co-operative bank. *[Section 5(cci), B. R. Act, 1949 (AACS)]*

•**Co-operative credit society** means a co-operative society, the primary object of which is to provide financial accommodation to its members and includes a co-operative land mortgage bank. *[Section 5(ccii), B. R. Act, 1949 (AACS)]*

As such, a co-operative credit society is not a bank and hence, it cannot accept chequable deposits and cannot directly participate in the payment & settlement system. Deposits placed with a co-operative credit society are not covered under the deposit insurance.

•**Co-operative society** means a society registered or deemed to have been registered under any Central Act for the time being in force relating to the multi-State co-operative societies, or any other Central or State law relating to co-operative societies for the time being in force. *[Section 5(cciia), B. R. Act, 1949 (AACS)]*

•**Primary agricultural credit society** means a co-operative society, –

(i) the primary object or principal business of which is to provide financial accommodation to its members for agricultural purposes or for purposes connected with agricultural activities (including the marketing of crops); and

(ii) The bye-laws of which do not permit admission of any other co-operative society as a member: Provided that this sub-clause shall not apply to the admission of a co-operative bank as a member by reason of such co-operative bank subscribing to the share capital of such co-operative society out of funds provided by the State Government for the purpose. *[Section 5(ccvi), B. R. Act, 1949 (AACS)]*

•**Primary co-operative bank** means a co-operative society, other than a primary agricultural credit society,--

(i) The primary object or principal business of which is the transaction of banking business;

(ii) The paid-up share capital and reserves of which are not less than one lakh of rupees; and

(iii) The bye-laws of which do not permit admission of any other co-operative society as a member: Provided that this sub-clause shall not apply to the admission of a co-operative bank as a member by reason of such co-operative bank subscribing to the share capital of such co-operative society out of funds provided by the State Government for the purpose. *[Section 5(ccv), B. R. Act, 1949 (AACS)]*

•**Primary credit society** means a co-operative society, other than a primary agricultural credit society,--

(i) The primary object or principal business of which is the transaction of banking business;

(ii) The paid-up share capital and reserves of which are less than one lakh of rupees; and

(iii) The bye-laws of which do not permit admission of any other co-operative society as a member:

Provided that this sub-clause shall not apply to the admission of a co-operative bank as a member by reason of such co-operative bank subscribing to the share capital of such co-operative society out of funds provided by the State Government for the purpose. *[Section 5(ccvi), B. R. Act, 1949 (AACS)]*

If any dispute arises as to the primary object or principal business of any co-operative society referred to in clauses (cciv), (ccv) and (ccvi), a determination thereof by the Reserve Bank shall be final.

At present, cooperative banks are regulated by the RBI with a differential regulatory approach as these banks are not subjected to the full rigour of updated Basel guidelines.[7] While commercial banks are subjected to Basel III guidelines, the cooperative banks are being regulated under Basel I with slight improvements. Further, the supervision of rural cooperatives is vested with the National Bank (NABARD) while the urban cooperative banks are supervised by the RBI. Supervisory approach for the urban cooperative banks in India includes a mandatory share-linking to borrowing (with some relaxation for banks with more than 12% capital adequacy), certain restrictions on unsecured lending, various exposure ceilings and lending caps. UCBs have no access to capital markets and there is no market valuation of their shares. Membership remains an essential requirement for obtaining credit form an urban cooperative bank. However, in most of the cases, active members usually remain a small fraction of their total membership. Therefore, despite being cooperative institutions, these banks are generally far from having a true cooperative character. Considering such constraints, Reserve Bank has made provisions for the voluntary conversion of bigger urban cooperative banks, with a net worth in excess of Rs 500 million, into small finance banks.[8] A natural question, therefore, is that if cooperative banks could grow into big financial institutions in Europe, why the story is a little different in India. To understand this paradox, let's examine the salient features of the operations of cooperative banking in Europe.

8. Operations of Cooperative Banking in Germany and other parts of Europe

As discussed in Sections 2 of this paper, the cooperative banking in Europe has largely developed on the lines of German Cooperative Banking. A summary of the key features of the cooperative banking in Germany and other parts of Europe is presented in the following paragraphs.

Fig 3: Fundamental Tenets of Cooperative Banking in Europe

The German Banking Sector comprises of three pillars, namely, Private Banking Sector (10% domestic market share), Cooperative Banking Sector (24% domestic market share), and Public Banking Sector (36% domestic market share) during the year 2015. The remaining market share is catered by Foreign Banks. With about 972 cooperative institutions and 11787 branches, the German Cooperative financial network represents one of the biggest bank-service-network in Europe.[9] Self-Help, Self-Responsibility, Self-Administration, and Regional-Focus remains the key driving force of the cooperatives and their membership is voluntary. Unlike in India, there is no need to become a member of a cooperative bank in Germany as also in the Netherlands, to obtain their services and there is also no borrowing-linked share capital. These institutions are deeply rooted in the local/regional economy.

In Germany, the DZ Bank operates as a financier and lender of last resort for its member cooperative banks. A horizontal integration of cooperative banks with the DZ Bank at the apex level is the basic structure of the German Cooperative Banking System. However, in Netherland, the Rabo Bank is the single vertically integrated cooperative bank. The Rabo Bank provides a variety of support to members and associated institutions through its Rabo Partnerships. In contrast, there are a large number of small cooperative banks in India and despite having their democratically elected federations, no effective umbrella organization exists.

Coming to supervision, banks in Europe are subject to a three-tier supervisory mechanism with a single supervisory focus. So, there are no differential regulations and all the banks are subjected to the same set of regulations. The top layer of the supervisory mechanism is formed by the European Central Bank (ECB), followed by the national Central Banks, and further by the national financial supervisory authorities. In Germany, for example, the supervisory mechanism includes ECB, Bundesbank, and Ba-Fin. Ba-Fin is the financial sector supervisor in Germany which is completely funded by the supervised institutions and not from the nation's tax resources. Ba-Fin comprises three directorates, namely, Banking Supervision, Insurance Supervision, and Market Supervision. One of the key requirements for a bank is to have a minimum of EUR 5 million as own capital on a continuous basis besides various other control measures.

Strong focus on the governance remains a key strength of the cooperative financing institutions in Germany and the Netherlands. While the membership is voluntary, the role of the elected boards is limited to the extent of policy formulation and providing a broad strategic direction to the bank. They get some sitting fee and allowances but no salary or incentives are paid to them. All the executive powers vests with the supervisory boards of the respective banks with a minimum of two managers (executives) which are appointed and paid remuneration. There is a stringent requirement for auditing, which is done by the Audit Federations but the banks cannot choose their own auditors. There is a clear thrust on the consolidation and gradually the number of cooperative banks are coming down due to mergers, albeit not in terms of the volume of business. A key driver for the mergers is efficiency and the significant cost of regulatory compliance. In a nutshell, the cooperative banking in Europe boasts of a self-driven true regional cooperative character, client focus, member welfare, robust governance structure, professional management, and strict supervisory oversight.

9. Way Forward for Cooperative Banks in India

Professional management and high standards of the corporate governance is accepted as the sine qua non for success in the long run. The Reserve Bank has also underscored the fact that professionalization is key to effective governance systems in co-operatives and accordingly it has made conscious efforts in this direction. However, professional management and governance remain key challenges and a critical growth-impediment for cooperative banks in India. Governance is broadly considered to be based on the following three basic tenets[10] and in these areas improvements are needed in the cooperative banking sector in India:

- Transparency in decision-making.
- Accountability which follows from transparency so that responsibilities could be fixed easily for actions taken or not taken.
- Processes for safeguarding the interests of the stakeholders and the investors/ depositors.

In line with the BIS guidelines, the Reserve Bank of India has issued a comprehensive set of guidelines especially oriented towards the board of directors of the co-operative banks.[11] These prescribe certain do's and don'ts for the board of directors, the necessity of undertaking periodic reviews, and need for at least two professional directors, besides a prohibition on the sanction of loans and advances to the board members. Donations to the trusts and institutions, where directors are interested parties, are also prohibited. Boards of the co-operative banks are expected to establish a high level of governance and control standards through various committees such as the audit committee and committee to monitor high-value frauds.

The high powered committee[12] set up by the RBI in January 2015 recognized that a weak corporate governance has been one of the major factors plaguing the co-operative sector and has led to bank failures/ unsatisfactory growth of the sector. Moreover, co-operation being a state subject, RBI does not have adequate control over the management of these banks and the provisions of Section 10A of the BR Act, 1949 are not applicable to them. The criteria for CEO/Board members as envisaged in Section 10B of the Act are also not prescribed. To address this problem, the Malegam Committee had suggested a new organizational structure for Urban Co-operative banks (UCBs) consisting of a Board of Management, in addition to the Board of Directors. RBI has subsequently come up with draft guidelines on the Board of Management for UCBs[13]. The objective is to separate the supervisory and executive functions of the boards of UCBs by constituting a Board of Management consisting of members with special knowledge and practical experience in banking to facilitate professional management and focussed attention to banking-related activities of UCBs.

The proposal to constitute a Board of Management (BoM) is a welcome step for strengthening the governance in UCBs. As discussed above, countries such as Germany and Netherlands having a thriving co-operative banking sector have a similar arrangement whereby the executive functions have been fully vested with professional managers while the elected board formulate policies and provide an overall direction to the bank. In order to further strengthen the arrangements and enhance efficiency, such BoM when constituted should endeavour to clearly delineate the roles and responsibilities between the elected board and board of management so as to avoid any conflict of interest. There should be a representation of depositors (non-members) in the BoM, i.e., at least one member of the BoM should not be a regular member of the bank/society. Moreover, such person should not be a part of BoM of more than one UCB. Further, any member of the BoM, if removed by the RBI, should not be eligible for re-appointment either in the BoM or in the elected Board for a period of 5 years from the date of such removal. An elected Board member, if removed from the BoM should not be eligible to participate in the periodic Board meetings for his remaining term. In addition, the regulatory restrictions on loans as applicable to Board members should also apply to the BoM, except as admissible to the staff of the bank (for BoM members who are employees of the bank). It is also important that a reasonable and genuine economic incentive is created whereby instead of a sitting fee, the BoM may receive allowances as a percentage of the bank's annual net profit after taxes, as performance incentives. However, there must be a clause for return (claw-back) of the performance-based remuneration of the members of BoM, for the last 3 years, if they acted in a manner that caused, or materially contributed to, any losses or impairment to the interests of depositors and such act was done intentionally, recklessly or negligently, in the opinion of RBI. There should be no need for ratification of BoM's executive decisions from the elected Board, as the executive decisions are to be within the broad policy framework put in place by the elected board. The elected boards should continue to monitor the bank's performance through periodic reviews, as hitherto. For smooth functioning, all the committees, except the Audit Committee, should be subsumed within the BoM, which could constitute sub-committees, if required. A similar model of having a Supervisory Board and Executive Board is quite successful in bringing professionalism and accountability in almost all the European cooperative banks and there is no reason why the same cannot be successful in India.

In addition to the issues concerning professionalism and governance which could be successfully tackled with the BoM model, there are certain other critical issues concerning the financing and operations of the UCBs.

The cooperative philosophy rooted in community welfare and its not-for-profit motive is a globally successful business model. However, in order to ensure its success, there is a need for the development of an eco-system of cooperative institutions not only in banking but also in other spheres of economic activity, such as retailing, food-processing, supply-chain, etc. There is a need for the development of cooperative value-chains with focus on self-help, self-governance, and self-sufficiency. As the rural cooperatives in India in its present form have a significant dependence on the governments and refinancing institutions, the divide between rural and urban cooperative banking can also be dispensed with, as done in Germany in 1972 by merging of Raiffeisen and Delitzsch institutions which previously operated in the rural and urban areas of Germany respectively.

Coming to operations and finances, there is a need to delink membership from business operations of the UCBs to broad-base their business potential without compromising on their regional character. A client whether a borrower or depositor need not be forced to become a member unless one is really interested to be a part of the society and contribute to its objectives. To some extent, such delinking exists in rural cooperatives for their non-agricultural lending portfolio. In a true sense, a cooperative should engage with its members through various extension, education, and welfare measures. For instance, in the Netherlands, Rabo Partnerships create business potential for its members and affiliates to offer consultancy and advisory services to the clients of the bank. This not only helps in boosting commission income for the bank but also aids its clients to get expert advises and support for their business under a single roof, which in turn helps the bank to maintain a healthy credit portfolio. In a true cooperative banking model, the bank remains close to its clients and members through its lending model, extension initiatives, and a network of members and affiliates.

In respect of finances and share capital, while the initial capital contribution should come from the members, the borrowing-linked capital model does not help as it mostly remains a non-cash flow book-entry in the balance sheet. Theoretically, it may be possible for a bank to create an unlimited amount of such share capital through this process of share linking to borrowing. This should be substituted by other instruments such as membership certificates, long-term subordinated bonds, and other innovative capital instruments which might attract investors based on their potential for offering handsome and stable returns.

10. Conclusion

Cooperative banking has a tremendous scope and ability to contribute towards financial inclusion and credit delivery. However, in order to be viable, successful, and reliable, the cooperative banks need to improve their governance standards, bring professionalism, and streamline their finances. In the true spirit of cooperation, these banks should promote the involvement of the people and should stand close to their members and clients in their journey to economic prosperity.

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Article in Brief

डिजिटल बैंकिंग और वित्तीय समावेशन

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बैंकिंग किसी भी विकासशील अर्थव्यवस्था की प्रगति में जीवन रेखा के सदृश होती है। भारत में भी आर्थिक विकास की प्रक्रिया बैंकिंग व्यवस्था के इर्द–गिर्द ही केन्द्रित रही है। वर्ष 1991 की मध्यावधि से आर्थिक उदारीकरण के आरंभ के पात सम्पूर्ण वित्तीय क्षेत्र, विशेषकर बैंकिंग में व्यापक संरचनात्मक एवं परिचालनात्मक परिवर्तन आए हैं। वित्तीय तकनीकी (फिन–टेक) एवं डिजिटल बैंकिंग का उदय ग्राहक सेवा का अभूतपूर्व स्तर ले कर आया है जो वित्तीय समावेशन के उद्देश्य की प्राप्ति में एक महत्वपूर्ण साधन बनकर उभरा है। परंपरागत शाखा बैंकिंग से डिजिटल बैंकिंग में आए परिवर्तन को संक्षेप में चार्ट–1 में प्रस्तुत किया गया है।

चार्ट–1: शाखा बैंकिंग बनाम डिजिटल बैंकिंग

शाखा बैंकिंग	डिजिटल बैंकिंग
ब्रिक–मोर्टार (शाखागत) बैंकिंग	डिजिटल / ई–बैंकिंग
विकासपरक उद्देश्य	विपणन आधारित बैंकिंग
ग्राहक सेवा पर अधिक ध्यान नहीं	मानव संसाधन के व्यवसायपरक एवं तकनीकी ज्ञान पर बल
श्रम संघो का हस्तक्षेप	मानवीय श्रम का कमतर उपयोग
प्रतियोगिता का न होना	ग्राहक सेवा सर्वोपरि
स्वायत्तता का अभाव	ई–कॉमर्स द्वारा बैंकिंग की प्रगति

वर्तमान में गरीबी उन्मूलन एवं आर्थिक संवृद्धि के लिए डिजिटल बैंकिंग एवं वित्तीय समावेशन की प्रासंगिकता नीति निर्माण एवं आर्थिक शोध में प्रमुख स्थान प्राप्त कर चुकी है। वित्तीय सेवाओं की डिजिटल माध्यम से उपलब्धता सभी वर्गों के व्यक्तियों के लिए इनकी सुलभता सुनिश्चित करती है और बैंको तथा फिन–टेक सेवाप्रदाताओं द्वारा की जाने वाली वित्तीय मध्यस्थता की लागत भी कम करती है।

भारत में डिजिटल बैंकिंग का उदय

भारतीय रिज़र्व बैंक द्वारा पंचवर्षीय अवधि 1985 से 1989 के बीच बैंकिंग उद्योग मे कंप्यूटरीकरण तथा मशीनीकरण के लिए एक चरणबध्द योजना का निर्माण करने हेतु तत्कालीन गवर्नर डॉ. सी. रंगराजन की अध्यक्षता मे एक उच्च–स्तरीय समिति गठित की गई थी। कंप्यूटरीकरण के आरंभिक मॉडल मे सफलता प्राप्त करने के बाद वर्ष 1988 मे गठित द्वितीय रंगराजन समिति ने बैंको के कंप्यूटरीकरण और अन्य क्षेत्रों में स्वचालन जैसे कि धन–हस्तांतरण, ई–मेल, बैंकनेट, स्विफ्ट, एटीएम, और इंटरनेट बैंकिंग आदि के लिए एक विस्तृत योजना बनाई।

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*सहायक महाप्रबंधक, भारतीय रिज़र्व बैंक, कानपुर। लेख में व्यक्त विचार, लेखक के निजी विचार हैं, एवं वे आवश्यक रूप से भारतीय रिज़र्व बैंक के विचारों का प्रतिनिधित्व नहीं करते हैं। सामान्य अस्वीकरण लागू होते हैं।

वर्ष 1991 में वित्तीय प्रणाली के उदारीकरण हेतु श्री एम.नरसिम्हन की अध्यक्षता में एक समिति का गठन किया गया और बैंकिंग जगत में अनेक नए उत्पाद एवं सेवाएँ प्रारंभ की गईं। वर्ष 1998 में द्वितीय नरसिम्हन समिति की सिफ़ारिशों को लागू करने के पश्चात भारतीय बैंकिंग में युगांतरकारी परिवर्तन आए। इलेक्ट्रॉनिक लेनदेन तथा इलेक्ट्रॉनिक वाणिज्य के अन्य साधनों को कानूनी मान्यता देने के लिए भारत सरकार ने सूचना प्रोद्योगिकी अधिनियम, 2000 (जिसे सामान्यतः आईटी अधिनियम 2000 कहा जाता है) लागू किया। इसके पश्चात भारतीय रिज़र्व बैंक ने इंटरनेट बैंकिंग पर एक कार्यदल का गठन किया जिसकी रिपोर्ट वर्ष 2001 में जारी की गई। इस कार्यदल की संस्तुतियों को स्वीकार करते हुए भारतीय रिज़र्व बैंक ने 'भारत मे इंटरनेट बैंकिंग' पर दिशा–निर्देश जारी किए। वर्ष 2007 में भुगतान एवं निपटान प्रणाली अधिनियम के अवतरण के पश्चात भारतीय रिज़र्व बैंक को भारत में सभी भुगतान एवं निपटान प्रणालियों के विनियमन एवं पर्यवेक्षण के अधिकार प्राप्त हो गए और इस हेतु एक बोर्ड (बीपीएसएस) की स्थापना की गई। इसी अवधि में भारत में डिजिटल बैंकिंग का काफी प्रसार हुआ ।

डिजिटल बैंकिंग का विकास

बैंकिंग का वर्तमान युग बैंको में डिजिटल बैंकिंग के विकास का युग है। विमुद्रीकरण के दौरान डिजिटलबैंकिंग ही नकदी का सर्वश्रेष्ठ विकल्प था। वर्ष 2015 में भारत सरकार ने 'डिजिटल इंडिया' नाम के कार्यक्रम का प्रारम्भ किया था जिसके अंतर्गत देश को और विशेषकर ग्रामीण क्षेत्रों को तीव्र गति वाले इंटरनेट से जोड़ा जाना है। इस डिजिटल इंडिया कार्यक्रम के उद्देश्यों में डिजिटल आधारभूत ढांचे (इन्फ्रास्ट्रक्चर) का निर्माण,डिजिटल माध्यम से सेवाओं को प्रदान करना एवं डिजिटल साक्षरता प्रमुख थे।

डिजिटल बैंकिंग के द्वारा बैंकिंग के क्षेत्र मे सेवाओं को डिजिटल अर्थात इलेक्ट्रॉनिक माध्यम से प्रदान किया जाता है। वित्तीय स्थिरता एवं विकास परिषद (एफ़एसडीसी) की दिनांक 26 अप्रैल 2016 की बैठक में डिजिटल बैंकिंग पर एक कार्यदल गठित करने की अनुशंषा की गई थी। इसी कड़ी मे भारतीय रिज़र्व बैंक ने 14 जुलाई 2016 को वित्तीय तकनीकी तथा डिजिटल बैंकिंग से संबन्धित विनियामक मुद्दों के अध्ययन के लिए एक अंतर–विनियामक कार्यदल गठित किया।

वित्तीय तकनीकी के लिए आजकल 'फिन–टेक' (फाइनेंशियल टेक्नॉलॉजी) नाम प्रचलित हो गया है। वर्तमान युग वित्तीय तकनीकी (फिन–टेक) के नए उद्यमों का है। यह उद्यम बैंको के साथ मिलकर डिजिटल–बैंकिंग मे नवोन्मेष ला रहे हैं। वित्तीय तकनीकी और डिजिटल बैंकिंग का वर्तमान स्वरूप कुछ ऐसा हो गया है कि कोई उपभोक्ता अपने मोबाइल पर बैंक का ऐप्लीकेशन डाउनलोड करके, आधार और पैन नंबर की जानकारी दे कर खाता खोल सकता है और लेनदेन कर सकता है। ये नए जमाने की नई बैंकिंग है। ये बैंकिंग का डिजिटल रूप है। भारतीय बैंकिंग में डिजिटल बैंकिंग के बढ़ते अवसर चार्ट–2 मे दिखाये गए हैं और इनकी विस्तृत विवेचना की गई है।

चार्ट–2: भारतीय बैंकिंग में डिजिटल बैंकिंग के बढ़ते अवसर

डेबिट तथा क्रेडिट कार्ड

डेबिट तथा क्रेडिट कार्ड का प्रयोग भारतीय जनता के जीवन मे डिजिटल–बैंकिंग का प्रारम्भिक चरण है। इनका उपयोग ऑनलाइन भुगतान के लिए तो किया ही जाता है साथ ही छोटी–बड़ी हर खरीददारी के लिए इनका उपयोग प्वाईंट ऑफ सेल पर करना डिजिटल बैंकिंग के बढ़ते अवसरों की पहचान है। हाल ही में विमुद्रीकरण के दौरान रुपे कार्ड से होने वाले लेनदेन 3.85 लाख प्रतिदिन से बढ़कर 16 लाख प्रतिदिन हो गए थे।[1]

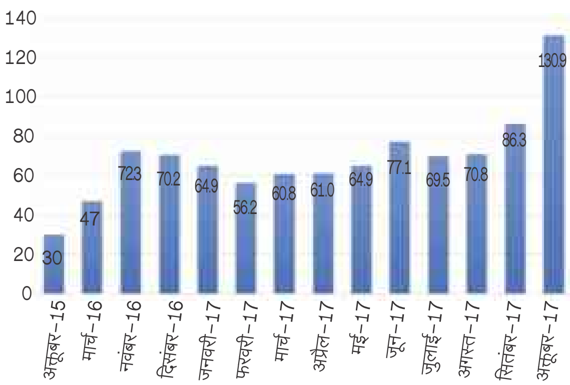
इंटरनेट तथा मोबाइल बैंकिंग

भारतीय रिज़र्व बैंक ने वर्ष 2008 में मोबाइल बैंकिंग पर प्रथम दिशानिर्देश जारी किए थे। तबसे अब तक मोबाइल बैंकिंग ने सतत प्रगति की है। आज मोबाइल बैंकिंग के अंतर्गत कई उत्पाद उपलब्ध हैं। इसमे प्रीपेड मोबाइल वैलट और कार्ड रहित एटीएम लेनदेन तो हैं ही, साथ ही आईएमपीएस (इमीडिएट पेमेंट सर्विस) नामक विशेष सेवा

[1]टाइम्स ऑफ इंडिया, 09 दिसंबर 2016

भी है जो भारतीय राष्ट्रीय भुगतान निगम द्वारा संचालित की जाती है। इसके लिए ग्राहकों को एमएमआईडी (मोबाइल मनी आइडेंटिफ़ायर) कोड जारी किया जाता है।

भारतीय इंटरनेट एवं मोबाइल संघ (आईएएमएआई) एवं आईएमआरबी इंटरनेशनल की एक रिपोर्ट मे बताया गया है कि भारत मे 77% शहरी उपभोक्ता तथा 92% ग्रामीण उपभोक्ता इंटरनेट हेतु मोबाइल को प्राथमिक स्त्रोत मानते हैं। मोबाइल बैंकिंग मे लेनदेन के परिमाण मे वृद्धि को चार्ट–3 मे दर्शाया गया है।[2] स्पष्ट है की मोबाइल बैंकिंग का परिमाण लगातार बढ़ रहा है जो डिजिटल–बैंकिंग मे बढ़ती ग्राहक संतुष्टि का परिचायक है। विशेषकर विमुद्रीकरण के बाद मोबाइल बैंकिंग मे परिमाण मे तीव्र वृद्धि परिलक्षित होती है। मोबाइल बैंकिंग के लेनदेन अक्तूबर 2015 से अक्तूबर 2017 के बीच 2 वर्ष की अवधि में 30 मिलियन से बढ़कर 130 मिलियन हो गए थे।



चार्ट–3: मोबाइल बैंकिंग लेनदेन मे वृद्धि – परिमाण (वॉल्यूम) (मिलियन में)

फ़ीचर फोन (गैर–स्मार्ट फोन) के द्वारा बैंकिंग

मोबाइल बैंकिंग की सतत वृद्धि के उपरांत भी ऐसे भी अनेक उपभोक्ता हैं जो मोबाइल इंटरनेट एवं स्मार्टफोन का प्रयोग नहीं करते। ऐसे फीचर फोन उपयोग करने वाले उपभोक्ताओं के लिए भी ऐसी तकनीकी उपलब्ध है जिससे वे मोबाइल बैंकिंग कर सकते हैं। इस तकनीक में फीचर फोन मे बैंकिंग के लिए एक अनुसूची बनाई जाती है और बैंकिंग सेवा एसएमएस के द्वारा कार्य करती है। *99# सेवा इसी प्रकार की यूएसएसडी आधारित सेवा है।

प्रीपेड कार्ड्स, एम–वैलट तथा ई–वैलट

प्रीपेड भुगतान लिखत अथवा पीपीआई (प्रीपेड पेमेंट इन्स्ट्रुमेंट) ऐसे भुगतान माध्यम हैं जो उनमे निहित मूल्य के द्वारा वस्तुओं और सेवाओं को खरीदने की सुविधा प्रदान करते हैं। इन्हे सामान्य भाषा में प्रीपेड कार्ड भी कहा जाता है। पीपीआई स्मार्ट कार्ड, मैग्नेटिक स्ट्रिप कार्ड, इंटरनेट वैलट (ई–वैलट) अथवा मोबाइल वैलट (एम–वैलट) के रूप में जारी किया जा सकता है। विमुद्रीकरण की अवधि के दौरान ई– वैलट से होने वाले लेनदेन 17 लाख प्रतिदिन से बढ़कर 63 लाख प्रतिदिन हो गए थे।

नीयर फील्ड तकनीकी (एनएफ़सी)

क्रेडिट / डेबिट कार्ड से किए जाने वाले लेनदेनों मे एक बड़ा जोखिम कार्ड स्वाइप करते हुए रहता था। नीयर फील्ड तकनीकी (एनएफ़सी) ने इस जोखिम को पूरी तरह से दूर कर दिया है। एनएफ़सी सक्षम डेबिट कार्ड को स्वाइप करने की आवश्यकता नहीं पड़ती। इसे केवल मर्चेन्ट टर्मिनल / पीओएस मशीन के पास ले जाना होता है।

भारत बिल पेमेंट सिस्टम (बीबीपीएस)

वर्तमान मे हमारे देश मे बिल भुगतान के मामले में इंटर ऑपरेबिलिटी नहीं थी, जिससे लोगों को अलग–अलग सेवाओं के बिल की रकम चुकाने में दिक्कत होती थी। इस समस्या से निपटने के लिए भारतीय रिज़र्व बैंक ने 'भारत बिल पेमेंट सिस्टम' (बीबीपीएस) प्रारम्भक है। बीबीपीएस के तहत लोग एक ही जगह पानी, बिजली और मोबाइल बिल के साथ–साथ स्कूल फीस और इंश्योरेंस प्रीमियम तक का भुगतान कर सकते हैं।

यूनिफ़ाइड पेमेंट इंटरफेस (यूपीआई)

यूनिफ़ाइड पेमेंट इंटरफेस (यूपीआई) के द्वारा भुगतान के क्षेत्र मे एक युगांतरकारी परिवर्तन आया है। हाल ही मे लोकप्रिय हुआ 'भारत इंटरफेस फॉर मनी' (भीम) ऐप यूपीआई पर ही आधारित है। डिजिटल बैंकिंग की यह नई तकनीकी निम्न प्रकार से ग्राहक सेवा को उत्कृष्ट बनती है:

[2]मासिक मोबाइल बैंकिंग के आंकड़े, भारतीय रिज़र्व बैंक की वेबसाइट से प्राप्त

- उपभोक्ता को केवल बैंक खाते, स्मार्टफोन एवं यूपीआई ऐप की आवश्यकता होती है।
- धन के अंतरण के अनेक विकल्प उपलब्ध होते हैं।
- बैंक खाते की संख्या एवं शाखा कोड आदि की आवश्यकता नहीं होती।
- प्रायः नकद से किए जाने वाले छोटे धन अंतरण ई–माध्यम से किए जा सकते हैं।
- यह विभिन्न सिस्टम (जैसे कि मास्टर कार्ड / वीसा / मोबाइल वैलट आदि) के बीच सुगमता से कार्य कर सकता है।
- एक ही यूपीआई ऐप मे एक से अधिक बैंक खाते जोड़े जा सकते हैं।

ई–वाणिज्य मे वृद्धि

ई–वाणिज्य की वर्तमान बैंकिंग में महत्वपूर्ण भूमिका है। इंटरनेट और मोबाइल के माध्यम से जितना अधिक क्रय–विक्रय होगा, उनके भुगतान के लिए डिजिटल–बैंकिंग का भी उतना ही अधिक उपयोग होगा। चार्ट–4 में भारत में ऑनलाइन रीटेल बाज़ार की वृद्धि दिखाई गई है। वर्ष 2013 के मुक़ाबले वर्ष 2018 मे ऑनलाइन रीटेल बाज़ार का आकार लगभग पाँच गुना हो जाने का अनुमान लगाया गया है, जोकि डिजिटल–बैंकिंग के बढ़ते अवसरों को दिखाता है।[3]

चार्ट–4: भारत मे रीटेल ई–वाणिज्य की प्रगति

डिजिटल बैंकिंग के माध्यम से वित्तीय समावेशन

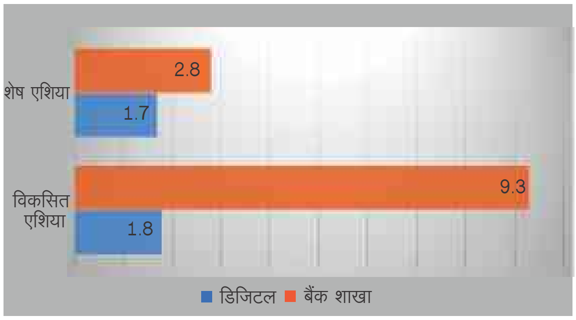
भारतीय रिज़र्व बैंक की वित्तीय समावेशन पहल तथा सरकार की 'प्रधान मंत्री जन–धन योजना' के अंतर्गत बड़ी संख्या में नए बैंक खाते खोले गए हैं। इन खातों में समय–समय पर केवाईसी अभिलेखों को अद्यतन किया जाना तथा उनकी निगरानी आवश्यक है ताकि इन खातों का दुरुपयोग न हो सके। इसके अतिरिक्त अभी भी दुर्गम क्षेत्रों में बैंकिंग की पहुँच के लिए पुरजोर प्रयास करने हैं। डिजिटल–बैंकिंग की सरलता और सुलभता को रेखांकित करते हुए उपभोक्ता मे बैंकिंग की आदत विकसित की जा सकती है। उपभोक्ता के पेशे, बैंकिंग आदत एवं आवश्यकता के आधार पर उसे उसी प्रकार की डिजिटल – बैंकिंग सेवा दी जा सकती है।

ग्राहकों का इस नई बैंकिंग से जुड़ना और उनकी संतुष्टि इस बात पर भी निर्भर करती है कि उसे क्या–क्या सुविधाएं प्राप्त होंगी। उसे इस बात का यकीन होना चाहिए कि यह बैंकिंग पुराने जमाने की मूर्त बैंकिंग की तुलना मे कही अधिक लाभप्रद और उपयोगी है और वह घर बैठे बैंक द्वारा दी जा रही अनेक सुविधाएं इसके माध्यम से प्राप्त कर सकता है। डिजिटल –बैंकिंग का सरल और सुविधाजनक होना भी आवश्यक है। बैंको को इसकी रचना इस प्रकार करनी चाहिए ताकि नए उपभोक्ताओं को इस से प्रथम बार जुडने मे कोई परेशानी ना महसूस हो। आवश्यकता महसूस होने के साथ–साथ इसकी सरलता और सुगमता ही इस पर उपभोक्ताओं का विश्वास कायम कर सकेगी। डिजिटल बैंकिंग की पहुँच और प्रगति के हाल के आंकड़े इस संबंध में आशाजनक तस्वीर प्रस्तुत करते हैं।

मैककिंसे एशिया पर्सनल फाइनेंशियल सर्विसेस सर्वेक्षण–2017 के अनुसार एशिया में डिजिटल बैंकिंग की पहुँच 2014 से 2017 के बीच लगभग तीन गुनी हो गई है। विकसित एशिया[4] में यह लगभग 97 प्रतिशत, और शेष एशिया[5] के लिए 52 प्रतिशत है। डिजिटल बैंकिंग के सभी माध्यमों के बीच स्मार्टफोन बैंकिंग में अधिक तेज़ी से वृद्धि

[3] www.emarketer.com
[4] विकसित एशिया– (आस्ट्रेलिया, हाँग–काँग, जापान, न्यूज़ीलैंड, सिंगापुर, दक्षिणी कोरिया, ताइवान)
[5] शेष एशिया – (भारत, चीन, इन्डोनेशिया, मलेशिया, म्यांमार, फिलीपींस, थायलैंड, वियतनाम)

हुई है। डिजिटल बैंकिंग और समावेशी विकास के लिए यह असीम संभावनाओं का संकेत है। विकसित एशिया में प्रति व्यक्ति प्रति माह बैंक शाखा में जा कर किया जाने वाला लेनदेन मात्र 1.8 है जबकि डिजिटल बैंकिंग का प्रति व्यक्ति प्रति माह लेनदेन 9.3 है। दूसरी ओर शेष एशिया के लिए यह आंकड़े क्रमशः 1.7 और 2.8 हैं।[6] इस से ज्ञात होता है की इन देशों (जिनमे भारत शामिल है) में बैंको में डिजिटल बैंकिंग को बढ़ाने एवं इसमें अधिक से अधिक लोगों को जोड़ने की काफी संभावनाएं हैं। यह आंकड़े चार्ट–5 में प्रस्तुत किए गए हैं।



चार्ट–5: प्रति व्यक्ति प्रति माह औसत लेनदेन (शाखा बनाम डिजिटल)

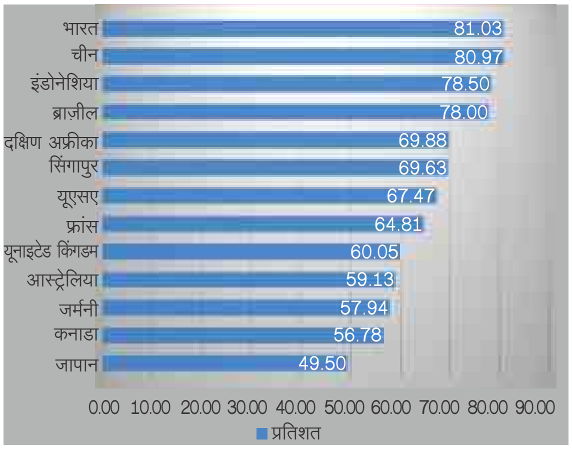
डिजिटल बैंकिंग की चुनौतियाँ

वित्तीय समावेशन तथा समावेशी विकास की प्राप्ति में सहायक बनने में डिजिटल बैंकिंग के समक्ष कुछ चुनौतियाँ भी हैं। एक बड़ी चुनौती यह भी है कि फिन–टेक सेवा प्रदाता मूलतः लाभ–प्राप्ति के उद्देश्य से कार्य करते हैं और बहुधा उच्च–आय तथा मध्यम–आय वर्ग के उपभोक्ताओं को ध्यान में रखते हुए अपने उत्पाद तैयार करते हैं। उनके विपणन की नीतियाँ भी इसी आय–वर्ग को ध्यान में रख कर बनाई जाती हैं। ऐसे में *99# जैसी सामान्य (गैर–स्मार्ट फोन) द्वारा दी जाने वाली डिजिटल बैंकिंग की सुविधाओं का स्थान प्रासंगिक हो जाता है। साथ ही विनियामक प्राधिकरणों तथा सरकार की भूमिका भी महत्वपूर्ण हो जाती है ताकि सभी वर्ग के लोगों के लिए डिजिटल बैंकिंग की उपलब्धता सुनिश्चित की जा सके।

चार्ट–6: डिजिटल बैंकिंग की चुनौतियाँ

नवोन्मेष और गैर–बैंकिंग फिन–टेक उद्यमों का उदय

गैर–बैंकिंग भुगतान उद्यमों का उदय पूरे विश्व में तेज़ी से हो रहा है। हाल ही में, लोकप्रिय हुआ 'पेटीएम' इस उदय और सफलता का अप्रतिम उदाहरण है। वर्ष 2010 में मोबाइल रिचार्ज के उत्पाद के रूप में पेटीएम का प्रारम्भ हुआ था जो अब भुगतान, धन–अंतरण और ई–वाणिज्य की अनेक सुविधाएं देता है जिनमें मोबाइल–वैलट भी शामिल है। इस समय पेटीएम के 20 करोड़ से अधिक उपभोक्ता हैं। डिजिटल बैंकिंग के नए उत्पादों और नवोन्मेषों के प्रति उदारता और उन्हे अपनाने की आकांक्षा के उच्च स्तर का यह अप्रतिम उदाहरण है। वस्तुतः डिजिटल नवोन्मेषों के प्रति उदारता भारत में सर्वाधिक 81% के स्तर पर है जबकि यूएसए में यह केवल 67% और जापान जैसे तकनीकी रूप से अग्रणी देश में भी केवल 49.5% है।[7]



चार्ट–7: डिजिटल नवोन्मेषों के प्रति उदारता (प्रतिशत में)

[6]ग्लोबल बैंकिंग (अप्रैल, 2018), मैककिंसे अँड कंपनी
[7]ओरेकल फाइनेंशियल सर्विसेस वैश्विक रीटेल बैंकिंग सर्वेक्षण – 2018

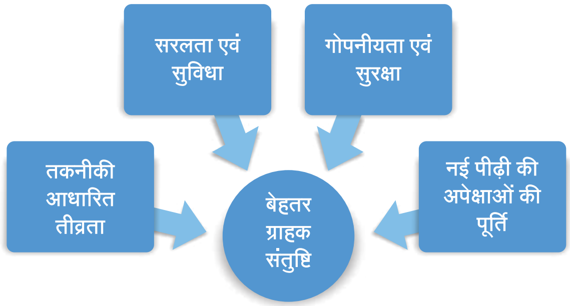
नई पीढ़ी की अपेक्षाएँ और सोशल मीडिया

वित्तीय समावेशन की प्राप्ति में नई पीढ़ी की अपेक्षाओं का ध्यान रखना आवश्यक है। डिजिटल– बैंकिंग का विकास नई पीढ़ी की बैंकिंग जगत से अपेक्षाओं की ही देन है। डिजिटल बैंकिंग में नई पीढ़ी की अपेक्षा ऑनलाइन फ़ोरम, ब्लॉग और स्वचल सलाह की है। सोशल मीडिया आज की पीढ़ी की दिनचर्या का एक अभिन्न अंग बन चुका है। यह पीढ़ी सोशल मीडिया के द्वारा बैंकिंग सेवाएँ भी प्राप्त करने की अपेक्षा रखती है। इस पीढ़ी के दैनिक जीवन का एक बड़ा हिस्सा सोशल मीडिया पर व्यतीत होता है। विभिन्न सेवाओं और दैनिक आवश्यकताओं के लिए भी वे सोशल मीडिया का ही प्रयोग करना चाहते हैं फिर चाहे कुछ खरीदना हो, बैंकिंग हो या कुछ सवालों के जवाब ढूँढना। वर्ष 2017 मे भारत मे 196 मिलियन लोग सोशल मीडिया का उपयोग कर रहे थे और वर्ष 2022 तक इस संख्या के दोगुने हो जाने का अनुमान है।[8] कुछ बैंको ने एक ट्वीट के द्वारा बैंक खाते के शेष की सूचना देने की सुविधा प्रारम्भ की है। भारत में कुछ बैंको ने अपने उपभोक्ताओं को एक फेसबुक बैंकिंग एप्लीकेशन के जरिए खाते की जानकारी, बैंकिंग स्टेटमेंट हासिल करना, डेबिड कार्ड अपडेट करना और चेक बुक संबंधीपूछताछ सुविधाएं उपलब्ध कराई हैं।

एक सर्वेक्षण के अनुसार बैंको द्वारा सोशल मीडिया के उपयोग के मामले में भारतीय स्टेट बैंक का विश्व के प्रमुख बैंको के बीच प्रथम स्थान है और ऐसे अग्रणी बैंको में से कुल 6 बैंक भारतीय हैं।[9] यह डिजिटल बैंकिंग को बढ़ाने के लिए सोशल मीडिया के उपयोग की संभावनाओं को दर्शाता है।

बेहतर ग्राहक संतुष्टि

बैंको में डिजिटल बैंकिंग ने ऐसी ग्राहक सेवा उपलब्ध कराई है जो सुलभ है, त्वरित है,नई तकनीकी पर आधारित है,



चार्ट–8: डिजिटल–बैंकिंग और ग्राहक संतुष्टि

और *''कहीं से भी, कभी भी बैंकिंग''* की सुविधा प्रदान करती है। इसके द्वारा अधिकांश बैंकिंग सेवाएँ घर बैठे प्राप्त की जा सकती हैं जिनके लिए कभी बैंक जाने की जरूरत पड़ती थी। उपभोक्ता सेवा, उपभोक्ता संतुष्टि, उभोक्ताओं का जुड़े रहना और नए उपभोक्ताओं को आकर्षित करना डिजिटल बैंकिंग को आगे बढ़ाने के लिए अति आवश्यक है। डिजिटल– बैंकिंग के क्षेत्र मे ग्राहक सेवा को बेहतर बनाने वाले घटक चार्ट–8 मे दिखाये गए हैं।

उपभोक्ता संरक्षण एवं सुरक्षा

साईबर हमलों के मामले मे भारत का विश्व मे तीसरा स्थान है।[10] डिजिटल बैंकिंग मे सरलता के साथ साथ जोखिम निवारण और सुरक्षा भी बहुत महत्वपूर्ण है। सरलता की लागत कभी भी सुरक्षा नहीं होनी चाहिए । जहां बैंको को अपनी डिजिटल– बैंकिंग सेवाओं मे सभी आवश्यक एनक्रिप्शन एवं अद्यतन सुरक्षा उपाय करने चाहिए वहीं दूसरी ओर उपभोक्ताओं को भी सभी सावधानियाँ बरतनी चाहिए। सुरक्षा से ही जुड़ा हुआ मुद्दा गोपनीयता का है। उपभोक्ता को यह विश्वास दिलाना होगा कि ई– बैंकिंग द्वारा किया जा रहा लेन–देन पूरी तरह गोपनीय है। उसके खातों की जानकारी पूरी तरह सुरक्षित है और उसे कोई और प्राप्त नहीं कर सकता। इसके अतिरिक्त ई–बैंकिंग के उपभोक्ताओं के लिए शिकायत निवारण की उचित व्यवस्था होनी चाहिए।

[8] www.statista.com
[9] https://thefinancialbrancd.com/power-100/ (पावर – 100 सर्वेक्षण – 2018)
[10] सीमेंटेक इंटरनेट सिक्योरिटी थ्रेट रिपोर्ट – 2018

सुरक्षा एवं जोखिम से जुड़ा एक हाल का ही मामला सत्यायभासी मुद्रा का है जो सुर्खियों में रहा है। सत्याहभासी मुद्रा (वर्चुअल करेंसी) जैसे कि बिट्क़ॉईन एक प्रकार की डिजिटल मुद्रा है जिस पर फिलहाल कोई नियंत्रण या नियमन नहीं है। इसके जोखिमों को ध्यान में रखते हुए भारतीय रिज़र्व बैंक के 6 अप्रैल 2018 के अनुदेशों द्वारा यह निर्णय लिया गया है कि भारतीय रिज़र्व बैंक द्वारा विनियमित संस्थाएं तुरंत प्रभावी रूप में, वर्चुअल करेंसी में लेनदेन में भाग नहीं लेंगी।

डिजिटल–बैंकिंग में भाषा की सुगमता

डिजिटल बैंकिंग की सफलता और ग्राहक संतुष्टि के लिए आवश्यक है कि तकनीकी आधारित सभी बैंकिंग उत्पादों पर उपभोक्ताओं को उनकी भाषा मे ही शिक्षित किया जाये अन्यथा उपभोक्ता इनसे जुडने मे सहजता नहीं महसूस करेगा। लगभग सभी बैंक अपने ऑनलाइन बैंकिंग के लॉग–इन पृष्ठ पर ऑनलाइन बैंकिंग मे आवश्यक सावधानियाँ एवं इस से जुड़े हुए जोखिम के बारे मे बताते हैं। भारतीय रिज़र्व बैंक की वैबसाइट पर ''आम जनता के लिए के लिए एक पृथक पृष्ठ 13 भाषाओं में उपलब्ध है जिसमे बैंकिंग से जुड़ी अनेक जानकारी दी गई है। डिजिटल बैंकिंग के कुछ आधारभूत घटकों जैसे की एटीएम एवं डेबिट कार्ड आदि पर कॉमिक पुस्तक भी अनेक भाषाओं मे जारी की गई हैं। इसी प्रकार यूपीआई तथा *99# सेवा जैसे ई–बैंकिंग के उत्पादों के बारे मे भी सरल हिन्दी मे जानकारी दी गई है

उपसंहार

इस प्रकार भारतीय जनता के जीवन मे बैंकिंग अपने प्राचीन शाखा बैंकिंग के स्वरूप से निकल डिजिटल बैंकिंग के रूप में पहुँच चुकी है और वित्तीय समावेशन के नित नए अवसर प्रदान कर रही है। यह 'कहीं से भी, कभी भी' बैंकिंग की सुविधा देती है और सभी के लिए बैंकिंग सेवाओं की उपलब्धता सुनिश्चित करती है। विमुद्रीकरण के पश्चात इसमे अभूतपूर्व वृद्धि देखी गई है। इस वृद्धि को सतत रखना वित्तीय समावेशन के लक्ष्य की प्राप्ति के लिए आवश्यक है। ग्राहकों की आयु, पेशा, आवश्यकताओं और कठिनाइयों को ध्यान मे रखते हुये इसे और अधिक सरल, सुविधाजनक और विशिष्ट बनाया जा सकता है। डिजिटल बैंकिंग से और भी अधिक लोगों को जोड़ने तथा ग्राहक संतुष्टि का स्तर बढ़ाने के लिए पुरानी पीढ़ी के ग्राहकों मे इसके प्रति विश्वास जगाना होगा और नई पीढ़ी की अपेक्षाओं का भी ध्यान रखना होगा। डिजिटल बैंकिंग के भविष्य में जहां एक ओर फिन–टेक और सोशल मीडिया जैसा नया अवसर है वहीं नई चुनौतियाँ भी हैं जिनके लिए ठोस कदम उठाते हुए वित्तीय समावेशन और ग्राहक संतुष्टि के लक्ष्य प्राप्त किए जा सकते हैं।

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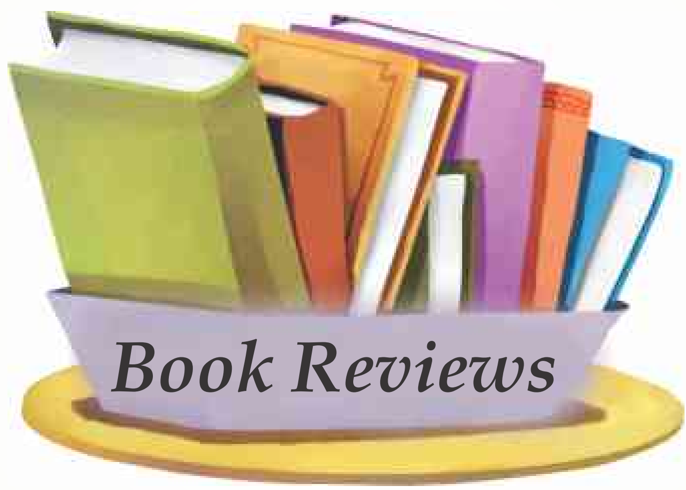
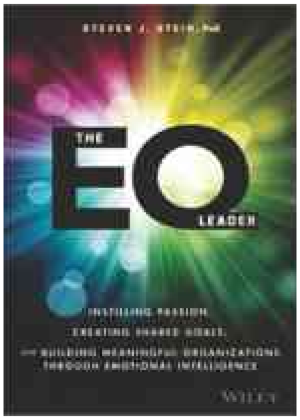

Book Reviews



The EQ Leader

Instilling Passion, Creating Shared Goals, and Building Meaningful Organizations through Emotional Intelligence

Author Name: Steven J Stein, PhD
Publisher: Wiley India Pvt Ltd; Macmillan, 2018
ISBN-13: 978-1119349006

Mohan V.K.[1]

"If your actions inspire others to dream more, learn more, do more and become more, you are a leader" – John Quincy Adams

The EQ leader (hereinafter referred to as the "book") offers an evidence based model for acquiring skills needed to become an exceptional leader. The book is filled with illustrative examples and steps for developing competencies that define successful leaders. Apart from referring to well acclaimed resources, the author has relied upon new data from his own research into executive functioning.Steven J. Stein, PhD, the authorof the book is a clinical psychologist and the founder- CEO of Multi-Health Systems (MHS), Inc.

2. In the first two chapters of the book, Dr. Stein explains about leadership and what it takes to be a successful leader in today's organization. He explains that the biggest leadership needs include developing new leaders faster, globalizing leadership programs, and building deeper bench strength for succession planning. He further rationalizes that without a willingness to invest in selecting and training leaders, companies are likely to suffer the adverse effects of poor leadership. Filled with illustrative examples, the book discusses about various leadership styles and explains what led to their success or failure.In the second chapter of the book, Dr. Stein defines leadership as behaviours used in any situation where you influence the thoughts, behaviours, or feelings of one or more people. In this chapter, the author examines what causes leaders to stand out; how the approval of leaders is determined; what constitutes an effective leader; and the performance outcomes of teams. In simple terms, the author is of the view that successful leaders put their egos behind their missions, move forward with the times, and aren't afraid to alter their positions as necessary.

3. In the third chapter, Dr. Stein discussed why emotional intelligence (EI) is important for Leadership. While explaining the evolution of intelligences, the author helps us understand the concept of EI and how the MSCEIT (Mayer-Salovey-Caruso Emotional

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Intelligence Test) model of EI relate to leadership. The chapter also deals with the tool called "Emotional Intelligence Quotient Inventory" or EQ-i by Reuven Bar-On, which was used to measure emotional strengths that would be more predictive of performance and resilience. The fourth chapter is on how workplaces have a mood and how emotions spread at work. Dr. Stein states that mood generated in an organization comes from the top. It is quoted in this chapter that positive emotions are consistently associated with better performance, quality and customer service. The book discusses about the EI of Steve Jobs and Carly Fiorina and their impact on Apple and HP, respectively.

4. In the fifth to the ninth chapter of the book, the author deals with the building blocks of EI. The *Self-perception* module deals with our ability to know and manage ourselves.The *Self-Expression* module deals with the way we face the world. The Interpersonal module concerns our "people skills"- our ability to interact and get along with others. The *Decision-Making* module involves our ability to use our emotions in the best way to help us solve problems and make optimal choices. The *stress management* module concerns our ability to be flexible, tolerate stress and have a positive outlook.

5. In the tenth to the fourteenth chapter, the author walks us through the four pillars of successful leadership. The author states that by being authentic, supporting employees' needs, communicating with purpose, and fostering ingenuity, one can become a successful leader for the future. In the eleventh chapter, Dr Stein has explained about *"Authenticity",* which is the first pillar. It means today's leaders must be authentic, real, credible and fair. It further states that people will respect authentic leaders more and go the extra mile for them. Such leaders act as role models, inspire fair and moral behavior and command esteem and confidence. The twelfth chapter discusses about the second pillar i.e. *"Coaching",* which means going out of the way to make sure people realise their full potential. The leaders with this competency operate as mentors, respond to concerns and queries and support employee needs. The thirteenth chapter discusses about the third pillar i.e. *"Insight",* which means truly understanding the vision, mission, goals and values of an organisation and communicating those messages in a form that will inspire employees, customers and suppliers. Insightful leaders express a hopeful view of the future and compel employees to reach and exceed goals. The fourteenth chapter discusses about the fourth pillar i.e. *"Innovation",* which means being innovative and encouraging the employees to think creatively and champion new procedures, products and services. Innovative leaders realise the importance of taking risks, spur ingenuity, imagination and autonomous thinking, value knowledge and see challenges as learning opportunities.

6. In the Fifteenth chapter, the author discusses about the 360-degree feedback and the tool that was developed, "Emerging Leaders Profile" (ELP), which gathers the opinions of others-bosses, peers and direct reports- and plays back the aggregate information to emerging leaders who want to improve their effectiveness. ELP is stated to be an useful tool for honing in on specific behaviours that new leaders need to develop and it does this by collecting multiple sources of feedback. The chapter also

elaborates the international trends in leadership. The sixteenth chapter deals with Entrepreneurial Leadership and EQ. This chapter reveals four key areas which are important for becoming a successful entrepreneur. These include a) *right mindset* –to act on their own hunches and pursue calculated risks, b) *self-management* –to follow their own paths and using stress as a motivator, c) *dealing with others-* to be excited to engage others in their ideas and d) *business orientation* – to be drawn to big picture thinking, strategic and proactive thinking.

7. In the last chapter, the author had discussed about various aspects which are trending in the field of leadership such as the brain-behaviour relationships to understand an individual's functioning across a wide variety of areas, tools which have helped individuals and organisations better manage the change process and relationship between servant leadership and EI. This chapter also discusses about the top three EQ challenges of Board of Directors of organisations, viz. empathy, interpersonal relationship and emotional expression. The author has emphasized that Generation Z (born between 1990 – 2000) is catching the attention of the market and as they enter the workforce, it is time to evaluate how they stack up to previous generations and how leaders may need to prepare for the changing capabilities of their workforce. The author has identified gaps in the areas such as *independence* – tend to rely on others than their predecessors and less sure of themselves and want to confirm that they are making the right moves, *problem solving* – letting emotions get in the way of sound decision making and *stress tolerance* – avoid the stress rather than deal with it and if they choose not to avoid, they may not adequately manage the situation.

8. The book provides valuable information that can be used in our quest to become a better leader. The book helps us understand what EI is and how EI encompasses behaviours that facilitate leadership effectiveness for both individuals and the organisation. The book in a lucid fashion offers valuable advice and practical examples for improving EI and acquiring essential competencies for becoming an emotionally intelligent leader.

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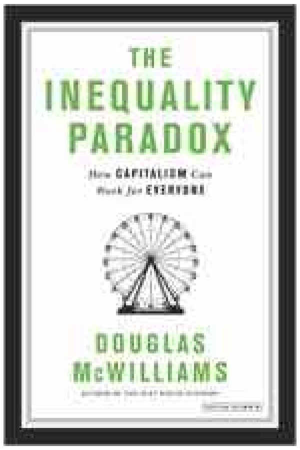

The Inequality Paradox

How Capitalism Can Work for Everyone

Author Name: Douglas McWilliams
Publisher: Harry N. Abrams, 2018
ISBN-13: 978-1468314984.

N. C. Pradhan[1]

1. The book is all about why inequality is massive in some nations and less pronounced in others and how inequality gaps are closing among traditionally unequal nations. The author also addresses the confusion regarding the phenomena of inequality and poverty. He also relied on earlier theories, his own research, the research of other economists, and aggregate data from sources such as the United Nations and regional financial institutions.

Piecemeal Approach

2. Douglas McWilliams, the author of the book, tries to drive home so many hypotheses in the book, the effect might be tiresome for general readers. However, he alleviates some of these difficulties by including clearly written introductions to each of the book's four parts. In Part I, the author distinguishes among types and causes of inequality and then explains why understanding the nuances of income inequality truly matters to individuals as well as entire nations. He specifically discredits some of the influential theories of Thomas Piketty's bestselling book *Capital in the Twenty-First Century* (2014). President Barack Obama in a scintillating speech declared that economic inequality was "the defining challenge of our time." Appeals like this are grounded in a well-documented gulf between the one or ten percent and everyone else, a gulf that has been highlighted by the work of economists like Thomas Piketty, Emmanuel Saez, Joseph Stiglitz including many others.

3. During the Great Recession and its aftermath, overall support for programs to reduce inequality has dropped. That suggests a disturbing disconnect between the concern about income inequality and the proposals to reduce it. According to the Gallup poll in 2000, 56 percent of respondents thought that "the distribution of wealth and income in this country should be more evenly distributed among a larger percentage of the population" and 38 percent respondents thought the distribution was "fair." Currently, 63 percent think income should be more evenly distributed and only 31 percent think the distribution is fair. But what about support for measures that would reduce income inequality? There is

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continuing support for increasing the minimum wage even in emerging markets and developing economies like India.

4. There is all out opposition to measures that would reduce inequality by directly aiding the poor or low-income people. In the General Social Survey (as a part of the book's description), respondents were asked whether Washington should do anything possible to improve the standard of living of the poor. Only 33 percent respondents agreed or strongly agreed in 2008, which was the highest percentage since 1990. By 2014, only 28 percent respondents agreed to improve the standard of living of the poor. Another question, about whether government should “reduce income differences between the rich and poor,” elicited similar responses. Why is there only marginal support for reducing inequality by raising taxes on the rich and opposition to government measures that would narrow the gap between rich and poor? As Louis Hartz showed in his monumental work, The Liberal Tradition in America, this distrust dates back to the American Revolution and helps explain American resistance to European social democracy, but it has been rising intermittently since the mid-1960s and has recently accelerated during the Great Recession. The same is also reflected in present day France under Emanuel Macron.

5. In Part II, McWilliams challenges readers to understand a paradox: While poverty is falling worldwide, inequality is rising in many areas. The economists found a statistical correlation between the level of distrust for government and opposition to these government initiatives. “The aversion to government intervention,” they wrote, “is due to a deep level of distrust of government.” Priming the respondents with information about inequality and the government's ability to reduce it through raising taxes made them more aware of “areas of society where government intervention may be needed, but simultaneously made them trust government less.” The respondents did support one measure for reducing inequality – raising the minimum wage. But this exception proved the rule, because increasing the minimum wage doesn't require government spending or taxing.

6. Opposition to these kinds of liberal transfer initiatives dates back to the Civil Rights Movement and to Lyndon Johnson's Great Society. Resistance to welfare spending helped trigger the collapse of the Democrats' New Deal majority and rise of conservative Republicans in the 1980s. In 1985, after Ronald Reagan won a landslide victory over Walter Mondale, Stanley Greenberg conducted focus groups among white working-class voters in Macomb County outside of Detroit. Many of these voters had been loyal Democrats but had backed Reagan. Greenberg found that Mondale's Rawlsian appeal to “fairness” in income distribution had been understood by these voters to mean higher taxes on themselves to finance special favours to minorities.

7. In Part III, the author narrows his focus and tries by trying to grasp how the wealthy accumulated so much capital and whether their exalted status can be reduced in future generations. The answer is yes, but the number of generations is probably five. The public's disapproval of the Obama administration's Affordable Care Act stems from this peculiar web of distrust. While the program was sold as a quasi-universal

benefit, it was widely seen as forcing middle class and senior citizens on Medicare to subsidize the costs of medical insurance for the poor and uninsured. The Obama administration reinforced this measure with provisions like the so-called "Cadillac tax," which penalized many middle-class, as well as Cadillac-owning, policy-holders in order to fund the overall program. In other words, attempts to use government support to reduce inequality mean different things to different groups of Americans. Some Americans see these efforts as meeting a great moral challenge, but others see them as surreptitious initiatives designed to get them to subsidize people who either don't deserve subsidies or who should be subsidized by those who can better afford it.

8. There is an assumption that this opposition to government programs to reduce economic inequality rises with income. According to the General Social Survey, higher-income Americans have been more opposed to government helping the poor or reducing the income gap between rich and poor than other overall income groups. However, if you break the groups down by race and education, you get a much more complicated result – one that better mirrors the political debate between Republicans and Democrats over these issues. The two groups most supportive of government programs to reduce inequality are minorities, particularly African Americans, and people with advanced college degrees, many of whom are professionals such as teachers or engineers.

9. In Part IV, McWilliams offers a range of potential solutions: the most promising is his suggestion for equal access to quality education from childhood through college. Throughout the book, the author alternates between abstraction and explanations of how economics plays out in real life, with a memorable opening example from the realm of professional soccer. That suggests as these fast-growing immigrant groups rise up in the educational ladder they will join their white counterparts in opposing government efforts to reduce income inequality. That's good news for conservative Republicans, who have benefited since 2008 from the movement of college-educated voters away from the Democrats and into their column.

10. In an essay, "Political and Policy Response to Problems of Inequality and Opportunity," McCall turns this observation into a proposal for addressing inequality. She distinguishes between proposals that would create equality of outcomes and those that would create equality of opportunity. Politically, Americans have been averse to proposals that would simply create equality of outcomes, but they have been receptive to proposals that would widen economic opportunity. McCall argues that proposals that raise taxes on the wealthy in order to widen economic opportunity or promote economic growth (which is seen as increasing opportunity) have the best chance of winning public support. She calls her strategy "equalizing outcomes to equalize opportunities."

Synthesising the Book

11. To be sure, Americans have adopted measures that have dramatically reduced inequality. They did so during the two world wars and during the height of the Cold War, when the America's leaders attempted to unite the country in a spirit of common sacrifice. During World War II, the top marginal income tax rate rose to 94

percent. But outside of wartime, Americans have only backed populist measures during the progressive era from the 1890s until World War I, during the New Deal of the 1930s, and during the 1960s.

12. There were three conditions that prevailed during the Progressive and New Deal eras. First, there were sharp downturns and panics. There was a depression in the 1890s, a financial panic in 1907, and the Great Depression spanned the 1930s. Second, there was genuine immiserating. During the progressive era and the first six years of the Great Depression, unemployed Americans had to fall back on charity in order to survive. Americans at both times stood in danger of losing their life savings from bank runs. Americans in the 1930s, historian Alan Brinkley wrote in Voices of Protest, "stood in danger of being plunged back into what they viewed as an abyss of powerlessness and dependence." Third, there were large, powerful movements demanding the reduction in economic inequality: the Populists, the Socialist Party, and American Federation of Labour during the progressive era, and the fledgling industrial union movement. During the 1960s, there was no economic downturn, but America's leaders had to unite the country to fight a war and maintain peace at home in the face of a large anti-war movement and civil rights movement.

13. If you look at America today, the only one of these conditions that prevails is the first one. During the Great Recession, unemployment did climb to ten percent, and the overall labour participation rate plummeted. But the unemployed and the working and middle class were protected from misery by the "safety net" that was erected over the last century. From 2007 to 2009, when the recession was at its height, after-tax income of the middle fifth fell only 1.4 percent. When transfers, including Medicare, Medicaid, unemployment compensation and social security are included, the median income fell less than one percent between 2007 and 2010. By 2014, according to economist Scott Winship of the Manhattan Institute, total income for the middle third was back to where it was in 2007.

14. Circumstances could, of course, change. The recovery from the Great Recession has been weak and could halt together in the face of a slumping world economy. A prolonged economic slowdown could have unexpected effects – among them, a growing cry, heard in the early 1930s, that government not continue to shrink and withdraw but instead do something to turn the country around. Reducing economic inequality could become not merely a moral, but a political imperative. But in the meantime, the politics of inequality are clouded and confused, and those politicians who hope to win national or state election by making appeals to reduce inequality must proceed with care.

Summing Up

15. The most common explanation for the trends shown above, a phrase uttered by politicians, policy makers, and economistsis: "technology and globalization." But this explanation is opaque at best; at worst, it is both misleading and too benign-sounding."Technology" captures the idea that employers' demand for specific skill sets that complement technology in the workplace. Think IT, how it is pushing up the wages of highly educated workers relative to everyone else. There's obviously

something to this explanation. Those with college degrees consistently make more than those without, and for years, that differential has been rising. However, demand for tech skills was only one reason for rising pays of more highly educated workers, and one thing I can assure you: if we're going to understand the factors driving inequality, we're going to need most of the blackboard. This phenomenon can't possibly be described by one or two developments.

16. In other words, employers' skill demands were and are but one factor in play. While this may sound obvious, I cannot overemphasize its importance. One reason it has been so hard to craft and implement policies to fight back against rising inequality is because of the misdiagnosis which solely emphasizes the role of unmet skill demands. This emphasis leads to "more education" as the fix-all response. Of course, it is a valid and much needed response, especially for those facing barriers to quality education (starting with pre-school). But it cannot be the sole solution. The book is a challenging monograph that will reward diligent readers.

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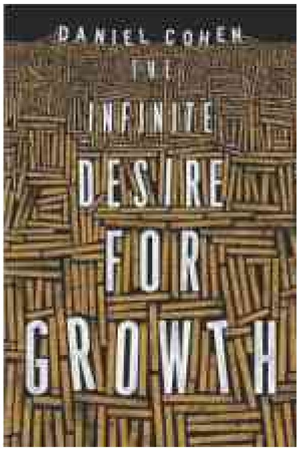

The Infinite Desire for Growth

Author Name: Daniel Cohen
Princeton University Press, 2018
ISBN-13: 978-0691172538

Dr. Ramesh Golait[1]

1. 'Is growth obsolete?' The provocative title of the paper by William Nordhaus and James Tobin (1973) reflects the radical questioning of growth as an engine of well-being. Although the authors answer this question in the negative, many economists and social scientists have come to the conclusion that, in developed countries, economic growth per se has little impact on well-being and should therefore not be the primary goal of economic policy. The transformation of the world economy in the course of the twentieth century would have been impossible for even the most acute observer living in 1900 to forecast or perhaps even to imagine. Per capita output, the structure of production, and the domestic and international financial systems that sustained the growth of economic activity over this period have been altered almost beyond recognition. The two most striking characteristics of twentieth-century economic growth are its staggering size and acceleration when compared with developments in previous centuries, and its uneven distribution among different countries and regions of the world. Growth of Output and Population Using conventional GDP estimates over a long historical period, the total amount of goods and services produced in the twentieth century is estimated to have exceeded the cumulative total output over the preceding recorded human history. Between the years 1900 and 2000 world GDP at constant prices has increased about 19-fold, corresponding to an average annual rate of growth of 3 percent. Hundreds of millions of citizens have seen their living standards lifted out of the vulnerability of poverty. This performance is even more remarkable when set against the long-term patterns of history. These global rates of growth are nearly four times larger than the average pace of economic development between the 18th and 20th century. However prospects are changing. The consequences of the global economic crisis, the impact of technology in the workplace and shifting demographics are now raising profound questions about the nature of growth. Economies can, and will, still grow. But volatility could become a “new normal” as the tone of global trade and politics changes. At a time of such change the function and inclusivity of growth is now

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intensely contested. This is changing politics, eroding stable political party loyalties and structures.

2. The latest contribution to this debate is The Infinite Desire for Growth by the renowned French economist Daniel Cohen. The opening words locate growth as central to the organisation of society: Economic growth is the religion of the modern world, the medicine that eases the pain of social conflicts, the promise of indefinite progress, which is a catching elegance is a hallmark of this book. The book has structured around three main concepts namely i) Growth as an inherent human desire; ii) The growth as a goal in economic theories since World War II; and iii) The formulation of a future model of growth. The author, splits the book into three parts. First, the origins of economic growth are grounded in the emergence of civilisation in the Fertile Crescent – the area surrounding the Euphrates, Tigris and Nile Rivers – as well as through the Scientific Revolution and rapid demographic changes in the eighteenth and nineteenth centuries. Second, the paradox of the promised 'second scientific revolution' from the development of computers and the stagnant growth of the last three decades in the West is placed alongside the rapid economic and demographic growth of the 'Third World' since 1945.

3. Are happiness and economic growth positively related? Attempts to answer this question are often based on the point-of-time bivariate relation between happiness and real GDP per capita, where the basic data are mean values of these two variables for each of a wide range of countries at a given date. Third, a broad and rather undefined model of future growth based on standard of living and happiness is envisioned, which aims to solve the Easterlin Paradox. Although the above sections are separated from one another and are rarely linked together, the book is meant to provoke thought on a possible outcome for economic theories, rather than propose a new and completely fleshed-out model. The growth is more important than wealth for the functioning of our societies; growth gives everyone the hope, short-lived but always revived, of rising above one's psychological and social condition. It is the promise that soothes worries, not its fulfilment.

4. This book offers a historical and philosophical account of the adoption of growth as a principle and goal in economic theory from the Enlightenment to the present day. While the essays at times overlook the specific historical and political contexts in which the concept of growth emerged and developed, the collection is thought-provoking and will contribute to contemporary debates around growth. A decade after the 2008 Financial Crisis and ensuing Great Recession, economic growth as a principle and goal in economic theories is being questioned from numerous angles. Instead of accepting rapid, consistent GDP growth as the norm, heterodox economists, including Daniel Cohen, have formulated different goals. While many of these economists propose new theories in a framework highly influenced by economics and the social sciences, author adopts a more historical and philosophical approach. The links between economic growth and institutions, culture, society and international factors have been investigated by economic historians. Cohen, however, grounds himself in the Easterlin Paradox, which argues that wealth does not bring happiness. Rapid

economic growth allows people to think this might be so, but when growth turns weak and wealth decreases for many, the illusion is shattered.

5. The author attempts to synthesize a long term analysis of the idea of growth by situating it as an inherent human desire and by tracking this phenomenon from the enlightenment to the present-day emergence of populism after the global financial crisis. Instead of positioning pure GDP growth as the sole finality of economic theories, Cohen argues that 'we must try to imagine a world in which happiness and satisfaction with one's life are less dependent on the expectation of constantly earning more'.

6. The third section of the book is the most thought-provoking. Instead of doubting the theoretical foundations of economic growth, the anxieties and effects of an unfulfilled promise of steady and proportional increases in the standard of living in relation to GDP growth are briefly examined. These concerns, such as global warming, lack of trust in government institutions and diminishing worker satisfaction, indirectly reinforce one another because national GDPs have continued to slowly grow while the standard of living has steadily declined in the West since the 1970s.

7. Using the Easterlin Paradox, these anxieties are tied to economic theory through happiness and people's decision-making based on their relation to their neighbours. Cohen argues that people account for their happiness and their relative position in their community when making economic decisions. In short: 'if they attempt to get rich to save themselves from want, the position they acquire quickly becomes a new point of reference, and they must begin all over again'. Typically, mainstream economists would answer by suggesting GDP and wage growth would eventually offset the new wants. On the contrary, Cohen argues that the stagnant growth since the 1970s has destroyed the social contract established between the workers and capitalists during the Enlightenment; thus, the only answer is to reconstruct the 'real social contract' and create an economic system that grows and defends standards of living, worker satisfaction and happiness, rather than GDP and wealth.

8. In nutshell, the author argues that an acceptable level of happiness is achievable only if societies hit by weak economic growth are transformed. This transformation would have to be profound as it requires new attitudes toward material progress, work, and hierarchy. This book attempts to address the urgent issues of economics and the present-day world due to an emerging digital economy, driven by the 'second scientific revolution'. Unfortunately, the author's over-ambitious goals cause him to overlook the temporal, spatial and historical contexts in which the idea of growth emerged. Despite few shortfall, the author offers a series of essays that are thought-provoking and will generate rigours debates on these issues.

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Gist of Important Circulars

Gist of Important Circulars

Relief for MSME Borrowers registered under GST

(RBI/2017-18/129 - DBR.No.BP.BC.100/21.04.048/2017-18 dated February 07, 2018)

The Reserve Bank, *vide* the circular on the captioned subject, decided that the exposure of banks and NBFCs to a borrower classified as micro, small and medium enterprise under the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, shall continue to be classified as a standard asset in the books of banks and Non-Banking Financial Companies (NBFCs) subject to the following conditions:

- The borrower is registered under the Goods and Services Tax (GST) regime as on January 31, 2018.
- The aggregate exposure, including non-fund based facilities, of banks and NBFCs, to the borrower does not exceed ₹ 250 million as on January 31, 2018.
- The borrower's account was standard as on August 31, 2017.
- The overdue amount from the borrower as on September 1, 2017 and payments from the borrower due between September 1, 2017 and January 31, 2018 are paid not later than 180 days from their respective original due dates.
- A provision of 5 per cent shall be made by the banks/NBFCs against the exposures not classified as NPA in terms of this circular. The provision in respect of the account may be reversed as and when no amount is overdue beyond the 90/120 day norm, as the case may be.
- The additional time is being provided for the purpose of asset classification only and not for income recognition, i.e., if the interest from the borrower is overdue for more than 90/120 days, the same shall not be recognised on accrual basis.

(link :https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11216&Mode=0)

Levy of Penal Interest – Delayed Reporting

(RBI/2017-18/130 - DCM (CC) No. 2885/03.35.01/2017-18 dated February 9, 2018)

The Reserve Bank, *vide* the circular on the captioned subject, decided that penal interest at the prevailing rate for delayed reporting of the instances where the currency chest had reported “net deposit” may not be charged. However, in order to ensure proper discipline in reporting currency chest transactions, a flat penalty of ₹50,000 may be levied on the currency chests for delayed reporting as in the case of wrong reporting of soiled note remittances to the Reserve Bank / diversions shown as 'Withdrawal'.

(link: https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11217&Mode=0)

Priority Sector Lending – Targets and Classification

(RBI/2017-18/135 - FIDD.CO.Plan.BC.18/04.09.01/2017-18 dated March 01, 2018)

The Reserve Bank, *vide* the circular on the captioned subject, decided that the sub-target of eight per cent of Adjusted Net Bank Credit (ANBC) or Credit Equivalent Amount of Off-Balance Sheet Exposure (CEOBE), whichever is higher, shall become applicable for the foreign banks with 20 branches and above, for lending to the small and marginal farmers from financial year (FY) 2018-19. Further, the sub-target of 7.50 per cent of ANBC or CEOBE, whichever is higher, for bank lending to the micro enterprises shall also become applicable for the foreign banks with 20 branches and above from FY 2018-19.

Additionally, in the light of feedback received from various stakeholders and in line with the increasing importance of services sector in the economy, the Reserve Bank decided to remove the currently applicable loan limits of ₹ 5 crore and ₹ 10 crore per borrower to micro/ small and medium enterprises (services), respectively, for classification under priority sector. Accordingly, all bank loans to MSMEs, engaged in providing or rendering of services as defined in terms of investment in equipment under Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, shall qualify under the priority sector without any credit cap.

Background

It was stipulated earlier that the sub-targets for lending to small and marginal farmers and micro enterprises shall be made applicable for foreign banks with 20 branches and above, post 2018 after a review in 2017.

(link: https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11223&Mode=0)

Revamp of Lead Bank Scheme

(RBI/2017-2018/155 - FIDD.CO.LBS.BC.No.19/02.01.001/2017-18 dated April 6, 2018)

In view of changes that have taken place in the financial sector over the years, Reserve Bank of India had constituted a "Committee of Executive Directors" of the Bank to study the efficacy of the Scheme and suggest measures for improvement. The Committee's recommendations were discussed with various stakeholders and based on their feedback, the Reserve Bank, *vide* the circular on the captioned subject, decided that the following 'action points' will be implemented by the State Level Bankers' Committee (SLBC) Convener Banks/Lead Banks-

- SLBC meetings should primarily focus on policy issues with participation of only the senior functionaries of the banks/ Government Departments. All routine issues may be delegated to sub-committee(s) of the SLBC. A Steering Sub-committee may be constituted in the SLBC to deliberate on agenda proposals from different stakeholders and finalise a compact agenda for the SLBC meetings. Typically, the Sub-Committee could consist of SLBC Convenor, Reserve Bank of India (RBI) and National Bank for Agriculture and Rural Development (NABARD) representatives and senior State Government representative from the concerned department, such as, Finance/Institutional Finance and two to three banks having major presence. Other issue-specific sub-committees may be constituted as required.

- In cases where the Managing Director/Chief Executive Officer/Executive Director of the SLBC Convenor Bank is unable to attend SLBC Meetings, the Regional Director of the Reserve Bank shall co-chair the meetings along with the Additional Chief Secretary/Development Commissioner of the State concerned.
- The corporate business targets for branches, blocks, districts and states may be aligned with the Annual Credit Plans (ACP) under the Lead Bank Scheme to ensure better implementation. The Controlling Offices of the banks in each state should synchronise their internal business plans with the ACP under Lead Bank Scheme.
- At present, discussions at the Quarterly Meetings of the various LBS fora namely, State Level Bankers' Committee (SLBC), District level Consultative Committee (DCC) and Block Level Bankers' Committee (BLBC) primarily focuses on the performance of banks in the disbursement of loans with regard to the allocated target under the Annual Credit Plan. The integrity and timeliness of the data submitted by banks for the purpose has been an issue as a significant portion of this data is manually compiled and entered into the Data Management Systems of the SLBC Convener Banks. The extent to which this data corresponds with the data present in the Core Banking Solution (CBS) of the respective banks also varies significantly. Therefore, there is need for a standardised system to be developed on the website maintained by each SLBC to enable uploading and downloading of the data pertaining to the Block, District as well as the State. The relevant data must also be directly downloadable from the CBS and/ or Management Information System (MIS) of the banks with a view to keeping manual intervention to a minimal level in the process. Necessary modifications may be made on the SLBC websites and to the CBS and MIS systems of all banks to implement the envisaged data flow mechanism.
- To strengthen the BLBC forum which operates at the base level of the Lead Bank Scheme, it is necessary that all branch managers attend BLBC meetings and enrich the discussions with their valuable inputs. Controlling Heads of banks may also attend a few of the BLBC meetings selectively.
- Rural Self Employment Training Institutes (RSETIs) should be more actively involved and monitored at various fora of LBS particularly at the DCC level. Focus should be on development of skills to enhance the credit absorption capacity in the area and renewing the training programmes towards sustainable micro enterprises. RSETIs should design specific programmes for each district/ block, keeping in view the skill mapping and the potential of the region for necessary skill training and skill up gradation of the rural youth in the district.

(link: https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11246&Mode=0)

Action Points for Lead Banks on Enhancing the Effectiveness of Lead District Managers (LDMs)

(RBI/2017-2018/156 - FIDD.CO.LBS.BC.No.20/02.01.001/2017-18 dated April 6, 2018)

In view of the changes that have taken place in the financial sector over the years, Reserve Bank of India had constituted a "Committee of Executive Directors" of the Reserve Bank to study the efficacy of the Scheme and suggest measures for improvement. The Committee's recommendations were discussed with various stakeholders and based on their feedback, the Reserve Bank, *vide* the circular on the captioned subject, decided that the following 'action points' will be implemented by the Lead Banks.

- In view of the critical role played by Lead District Managers (LDMs), it may be ensured that officials posted as LDMs possess requisite leadership skills.
- Apart from the provision of a separate office space, technical infrastructure like computers, printer, data connectivity, etc., which are basic necessities for LDMs to discharge their core responsibilities may be provided to LDMs' Office without exception.
- It is suggested that a dedicated vehicle may be provided to LDMs to facilitate closer liaison with the bank officials, district administration officials as also to organise/attend various financial literacy initiatives and meetings.
- The absence of a specialist officer/assistant for data entry/ analysis is a common and major issue faced by LDMs. Liberty to hire the services of skilled computer operator may be given to the LDMs to overcome the shortage of staff/ in case appropriate staff is not posted at LDM office.

Banks are advised to take appropriate action as required. Further, for successful functioning of the Lead Bank Scheme, the Reserve Bank expects Lead Banks to go the extra mile to provide facilities over and above the bare minimum to these critical field functionaries.

(link: https://rbi.org.in/Scripts/NotificationUser.aspx?Id=11247&Mode=0)

Revised guidelines on lending to Priority Sector for Primary (Urban) Co-operative Banks (UCBs)

(RBI/2017-18/175 - DCBR.BPD (PCB).Cir.No.07/09.09.002/2017-18 dated May 10, 2018)

The Reserve Bank, *vide* the circular on the captioned subject, issued revised guidelines on lending to Priority Sector for Primary (Urban) Co-operative Banks (UCBs).

Salient features of the revised guidelines are as under:

- Target for lending to total priority sector and weaker section will continue as 40 per cent and 10 per cent, respectively, of Adjusted Net Bank Credit (ANBC) or credit equivalent of off-balance sheet exposure, whichever is higher, as hitherto.
- Agriculture: Distinction between direct and indirect agriculture is dispensed with.

- Bank loans to food and agro processing units will form part of Agriculture.
- Medium Enterprises, Social Infrastructure and Renewable Energy will form part of priority sector.
- A target of 7. 5 per cent of ANBC or credit equivalent of off-balance sheet exposure, whichever is higher, has been prescribed for Micro Enterprises.
- Education: Distinction between loans for education in India and abroad is dispensed with.
- Micro Credit ceases to be a separate category under priority sector.
- Loan limits for housing loans qualifying under priority sector have been revised.
- Priority Sector assessment will be monitored through quarterly and annual statements.

Priority sector loans sanctioned under the guidelines issued prior to the date of this circular will continue to be classified under priority sector till maturity/renewal.

Achievement of Priority Sector targets

Achievement of priority sector targets will be taken into account while granting regulatory clearances/approvals for various purposes. With effect from April 1, 2018, achievement of priority sector targets will be included as a criterion for classifying a UCB as Financially Sound and Well Managed (FSWM). For the financial year 2018-19, shortfall in achieving the priority sector target/sub-target will be assessed based on the position as on March 31, 2018. From the financial year 2019-20 onwards, the achievement at the end of the financial year will be arrived at based on the average of priority sector target/sub-target achievement as at the end of each quarter.

(link :https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11274&Mode=0)

Encouraging Formalisation of MSME Sector

(RBI/2017-18/186 - DBR.No.BP.BC.108/21.04.048/2017-18 dated June 6, 2018)

The Reserve Bank, *vide* the circular on the captioned subject, decided to temporarily allow banks and NBFCs to classify their aggregate exposure up to ₹250 million as on May 31, 2018, as per the 180 days past due criterion, to all Micro Small and Medium Enterprises (MSMEs), including those not registered under Goods and Services Tax (GST), as a 'standard' asset, subject to certain conditions.

Period during which any payment falls due	Time permitted
September 1, 2017 – December 31, 2018	180 days
January 1, 2019 – February 28, 2019	150 days
March 1, 2019 to April 30, 2019	120 days
May 1, 2019 onwards	90 days

(link :https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11289&Mode=0)

Banking Regulation Act, 1949 – Section 26A Depositor Education and Awareness Fund Scheme, 2014 – Operational Guidelines - Payment of Interest

(RBI/2017-2018/191 - DBR.DEA Fund Cell.BCNo.110/30.01.002/2017-18 dated June 07, 2018)

The Reserve Bank, *vide* the circular on the captioned subject, decided that the rate of interest payable by banks to the depositors/claimants on the unclaimed interest bearing deposit amount transferred to the Depositor Education and Awareness Fund shall be 3.5 per cent simple interest per annum with effect from July 1, 2018. The settlement of all claims received by the banks on or after July 1, 2018 will be at this rate, until further notice.

(link :https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11294&Mode=0)

Priority Sector Lending – Targets and Classification

(RBI/2017-18/203 - FIDD.CO.Plan.BC.22/04.09.01/2017-18 dated June 19, 2018)

With a view to bring in convergence of the 'Priority Sector Lending' guidelines for housing loans with the Affordable Housing Scheme, and to give a fillip to low-cost housing for the economically weaker sections (EWS) and low income groups, the Reserve Bank, *vide* the circular on the captioned subject, revised the housing loan limits for eligibility under priority sector lending to ₹35 lakh in metropolitan centres (with population of ten lakh and above), and ₹25 lakh in other centres, provided the overall cost of the dwelling unit in the metropolitan centre and at other centres does not exceed ₹45 lakh and ₹30 lakh, respectively.

Furthermore, the existing family income limit of ₹2 lakh per annum, prescribed for loans to housing projects exclusively for the purpose of construction of houses for EWS and low income groups (LIG), is revised to ₹3 lakh per annum for EWS and ₹6 lakh per annum for LIG, in alignment with the income criteria specified under the Pradhan Mantri Awas Yojana.

(link :https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11308&Mode=0)

Control measures for ATMs – Timeline for compliance

(RBI/2017-18/206-DBS(CO).CSITE/BC.5/31.01.015/2017-18 dated June 21, 2018)

In order to address the issues regarding ATMs operating on unsupported version of operating system and non-implementation of other security measures in a time-bound manner, the Reserve Bank, *vide* the circular on the captioned subject, advised banks and white label ATM operators to initiate immediate action in this regard and implement certain control measures as per the prescribed timelines indicated.

A copy of above mentioned RBI circular may be placed before the Board of Directors of respective banks at their ensuing meeting, along with the proposed action plan for implementation of these measures. A copy of the Board-approved compliance/action plan in respect of aforesaid control measures may be sent to the Reserve Bank latest by July 31, 2018.

The progress made in implementation of these measures should be closely monitored to ensure meeting the prescribed timelines. As the implementation of the foregoing control measures would also require field visit(s) to ATMs, banks should plan and implement these measures in an optimal manner. It may be noted that any deficiency in timely and effective compliance may invite appropriate supervisory enforcement action under applicable provisions of the Banking Regulation Act, 1949 and/or Payment and Settlement Systems Act, 2007.

(link :https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11311&Mode=0)

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Campus Capsule

Campus Capsule

I. Conferences and Seminars

1. Conference of HR Heads of Banks and FIs (February 26 and 27, 2018)

With a view to ascertain the training needs of banks and financial institutions and deliberate on other aspects of talent management, a conference of HR Heads of banks and financial institutions was organised by the College during February 26-27, 2018. Before the programme, the College ran an on-line survey to assess the training needs of banks and Financial Institutions. The survey results were discussed during the Conference to understand the training needs and the preferred duration of the training programmes. The inputs provided by the delegates were used to finalise the training plan for the year 2018-19. The Conference also hosted expert speakers such as Prof. Premarajan, Professor of HR & OB, XLRI, Shri C S Ghosh, MD & CEO, Bandhan Bank and Shri K Ramkumar, Founder, Leadership Academy who spoke on key topics like role of leadership and assessment centres in talent management, talent management challenges in banks and managing talent for serving at the bottom of the pyramid.

2. Seminar on Technology Adoption and Digital Banking: Opportunities, Challenges, and Way Forward for Rural Cooperative Banks (June 04-05, 2018)

A two-day seminar on Technology Adoption and Digital Banking for the Chairman, Directors, CEO and senior I.T. officers of State Cooperative Banks and District Central Cooperative Banks was conducted between June 4-5, 2018. Shri Sudarshan Sen, Executive Director delivered the inaugural address through video conference. The other speakers were from NABARD, IFTAS, and NPCI who deliberated in detail about various nuances, challenges, and solutions relating to the technology adoption for rural cooperative banks.

3. Conference on Credit flow to Priority Sector – Policy and Implementation (June 11-12, 2018)

The College organized its 14th Annual two-day Conference on Credit Flow to Priority Sector – Policy and Implementation - during June 11-12, 2018 with a view to provide a platform for deliberating on issues related to credit flow to priority sector and coordination issues under the lead bank fora. The Conference discussed achievements of banks under revised priority sector lending targets, challenges in meeting the targets, agri-financing through FPOs, pricing of Priority Sector Lending Certificates, innovations in agri and MSME finance, finance to MSME units using TReDS and CGTMSE, and the revamped lead bank scheme. Heads of Priority Sector divisions of Scheduled Commercial Banks, conveners of SLBC, select chairmen of RRBs, and officials from RBI attended the programme.

Shri B P Kanungo, Deputy Governor, Reserve Bank of India inaugurated the conference and addressed the participants.

The other speakers included Shri Chandra Shekhar Ghosh, MD and CEO, Bandhan Bank and Shri H R Dave, Deputy Managing Director, NABARD. Smt Surekha Marandi, Executive Director delivered the valedictory address.

II. Important Training Programmes conducted during the half year

1. Executive Development Program on Inclusive Finance Leadership (January 3-5, 2018)

The College conducted the Executive Development Program (EDP) on Inclusive Finance Leadership for officers of SCBs, Co-operative banks, RRB. The programme, inter alia, covered business case for lending to MSMEs, personality traits that influence lending to small borrowers, leadership strategies for serving the inclusive finance segments and role of fintech in inclusive finance.

2. Programme on Role of Big Data and FinTech in Inclusive Finance (January 29-31, 2018)

The College conducted the first programme on Role of Big Data and FinTech in Inclusive Finance with a view to familiarize the participants with the emerging trends in Digital Financial Services, help participants understand the new developments in the MSME financing space, collaborate with various entities in the financial technology space and leverage big data to effectively serve the inclusive finance markets.

3. Programme on Agri Value Chain Financing (January 03-05, 2018)

The College conducted a three-day programme on Agri Value Chain Financing with the objective of creating awareness amongst bankers regarding the importance of agri value chain financing. The programme covered amongst other things various commodity specific agri value chain finance models and agri marketing chains involving farmers' collectives like FPOs. A field visit to an FPO was arranged to enable participants to interact with primary producers.

4. Customised Programme for Nominee Directors of SBI on the Boards of RRBs (May 21 -23, 2018)

The College has been conducting programmes for the nominee directors of RBI and NABARD in the boards of RRBs. Based on a request received from SBI, the College conducted the first customised programme for Nominee Directors of SBI during May 21-23, 2018. Eleven Nominee Directors in the rank of Scale IV and V attended the programme.

5. Customised training programme for officers of Jalgaon Peoples Cooperative Bank Ltd (June 18-20, 2018)

The College conducted a three-day customised training programme for the officers of Jalgaon Peoples Co-operative Bank Ltd during June 18 - 20, 2018 based on a request received from the bank. The programme covered aspects relating to personality development, banking operations, credit appraisal and credit risk management.

6. Programme on NEFT & RTGS for select UCBs (April 9, 2018)

The College conducted a one-day programme on operational issues relating to NEFT & RTGS for select UCBs. The programme covered operational aspects of NEFT & RTGS, access criteria for membership of NEFT & RTGS, settlement risk & technology risk associated with the payment and settlement system. Hands-on sessions were conducted on OAT (Own Account Transfer, i.e. transfer from Current Account to Settlement account of the banks) and reverse OAT (from Settlement account to Current account).

7. Programme on Governance, Credit and Investment Management for Directors and CEOs of UCBs (May 14-16, 2018)

The College organized a programme on governance, credit and investment management for Directors and CEOs of UCBs. Thirty one Directors and CEOs of various UCBs participated in the programme. The programme provided a platform to the participants to understand their responsibilities in terms of the extant RBI guidelines for Urban Cooperative Banks. It also provided an opportunity to them to discus and share good practices relating to cooperative governance.

8. Workshop for Lead District Managers (June 25-27, 2018)

The College conducted a workshop for Lead District Managers (LDM) during June 25-27, 2018. This was the first programme after the Lead Bank Scheme was revamped in April 2018. The LDMs were sensitized about their role under the revamped scheme. Thirty one LDMs representing various banks attended the programme.

III. Financial Literacy Centre

The College has been arranging visits for schools/colleges/institutes to interact with the students on areas of inclusive finance and financial literacy. During the period, 220 persons including students and participants from different institutes visited the College.

IV. Reserve Bank of India Archives (RBIA)

1. Training Programme on Records Management

RBIA conducted two programmes on Record Management during January 3 to 5, 2018 and April 4 to 6, 2018. Seventy four officers in Gr A to C attended the programme. The objectives of the programme were to sensitize the participants about the records management guidelines and the Archival and Records Management Policy (ARMP) of the Bank and discuss the procedures for its implementation.

2. Archives Museum

During the period from January to June 2018, 880 persons visited the Archives Museum which included Smt. Usha Thorat, former Deputy Governor, Shri Pritam Singh, IAS, Director General, National Archives of India (NAI), Brigadier C. Bharti, Director, Corps Archives and Museum, Shri Ashok Sahoo, Adviser, Department of Economic and Policy Research (DEPR) and seven officials of the Government of Andhra Pradesh including Secretaries of the Departments of Finance, Law and General Administration.

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‘सीएबी कॉलिंग: अंशदान फार्म’

अंशदाता सं. (केवल कार्यालय के उपयोग के लिए)

संपादक
‘सीएबी कॉलिंग’
कृषि बैंकिंग महाविद्यालय
भारतीय रिज़र्व बैंक
पुणे – 411016

यदि अंशदाता कार्यक्रम के सहभागी हैं तो कार्यक्रम का नाम		
अंशदान दर	एक वर्ष	दो वर्ष
व्यक्तिगत सदस्य (भारत में)	₹ 150	₹ 300
व्यक्तिगत सदस्य (विदेश में)	US$ 20	US$ 35
संस्थागत सदस्यत्व	₹ 250	₹ 400

महोदय,

मैं/हम एक/दो* वर्ष के लिए ‘सीएबी कॉलिंग’ की सदस्यता का नवीकरण करना/ग्राहक बनना चाहता हूँ / चाहते हैं।

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कृपया निम्नलिखित तिमाही से ‘सीएबी कॉलिंग’ के अंक मुझे / हमें भेजें

जनवरी-जून/ जुलाई-दिसंबर*

नाम (स्पष्ट अक्षरों में) श्री/श्रीमती/कुमारी ________

पता (स्पष्ट अक्षरों में) ________

केंद्र ________ पिन कोड ________

टेलीफोन नं. (कार्यालय) ________ (निवास) ________

फैक्स नं. ________ एसटीडी कोड ________

ई–मेल पता ________

अंशदाता सं. (यदि कोई हो तो) ________

दिनांक: ________ 201 ________

(हस्ताक्षर)

*जो लागू नहीं है उसे काट दें।

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विद्यापीठ मार्ग, पुणे – 411 016

नामांकन फॉर्म

1. कार्यक्रम का नाम ____________________

2. अवधि ____________ से ____________ तक

3. नामित अधिकारी का नाम श्री/श्रीमती/सुश्री ____________________

____

पदनाम ____________________

4. नामित करनेवाली संस्था का ____________________

(i) नाम और पता ____________________

शहर ____________ पिन कोड ____________ राज्य ____________

(ii) फोन नं. (एसटीडी कोड के साथ) ____________________

फैक्स नं. ____________________

(iii) ई–मेल पता ____________________

5. एनईएफटी / भारतीय रिज़र्व बैंक के नाम पर आहरित और मुंबई में देय मांग ड्राफ्ट का ब्यौरा ____________

एनईएफटी (यू.टी.आर. सं) / मांग ड्राफ्ट सं. ____________ दिनांक ____________ राशि ₹ ____________

मुहर सहित हस्ताक्षर

NEFT Details for Payment:

Name of the Account: Bank's Publications
Account Number: 8691632
Name of Bank: RBI;
IFSC Code: RBIS0PUPA01 (0 means Zero)
Type of Account: Current
Name of Branch: CAB, Pune

टिप्पणी: कृपया नामांकन, पाठ्यक्रम शुल्क के भुगतान के विस्तृत ब्यौरे सहित, फैक्स 020-25537088-89 द्वारा भेजें अथवा हमारी वेबसाइट www.cab.rbi.org.in से ऑनलाइन भेजें।

COLLEGE OF AGRICULTURAL BANKING
RESERVE BANK OF INDIA
UNIVERSITY ROAD, PUNE- 411 016

NOMINATION FORM

1. **NAME OF THE PROGRAMME :** ______________________
2. **DURATION From :** ______________ **To :** ______________
3. **NAME OF THE NOMINEE: Shri/Smt/Kum.** ______________________

   ____

   Designation ______________________
4. **NOMINATING INSTITUTION :** ______________________

   (i) Name & Address : ______________________

   City __________ **Pin** __________ **State** __________

   (ii) STD code : __________ **Phone No:** __________

   Fax No: ______________________

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Account Number: 8691632 **Type of Account:** Current
Name of Bank: RBI; **Name of Branch:** CAB, Pune
IFSC Code: RBIS0PUPA01 (0 means Zero)

NOTE: Nominations may be submitted online through our website www.cab.org.in; in exceptional circumstances by fax to 020-2553708-89 or by post (the nomination form is available on our website www.cab.rbi.org.in).

CAB Calling – Call for Papers

The College of Agricultural Banking has been publishing its Journal, CAB Calling, since 1977. It has been carrying articles on agriculture, banking, financial inclusion and literacy, inclusive finance, customer education and protection, agri-finance, agri-business, cooperative banking, payments banks, rural banking, MSME Financing, etc. The publication aims to be one of leading sources of new ideas and best practices for bankers, financial institution researchers, farmers, entrepreneurs, NGOs and other practitioners besides sharing current information on developments surrounding the above areas of interest.

For the forthcoming half-yearly issue, articles are invited in the above areas. The interested writers are requested to submit their manuscript in conformity with, (i) Guidance for Authors, and (ii) Guidelines for Formatting for faster processing and editorial review. A Letter of Submission needs to be accompanied with the manuscript. Needless to mention, contributors are remunerated for their writings.

About CAB Calling

The CAB Calling (first published in 1977) is a quarterly journal published by the College of Agricultural Banking (CAB) set up by the Reserve Bank of India. It aims to be the leading source of new ideas and best practices, which are useful to farmers, entrepreneurs, bankers, researchers, NGOs and other practitioners who help people in transforming their livelihoods.

2. CAB Calling's articles cover the broad areas of agriculture, entrepreneurship, banking, banking-technology and financial inclusion & literacy. Individual articles focus on such topics as rural credit, cooperative banking, agriculture & MSE financing, project financing, regulatory compliance, financial risk management, ICT based financial service delivery, managing change, personal effectiveness and leadership. Since 2016, CAB Calling is being issued on half-year basis

3. Issues of CAB Calling typically contain the following items:

Feature Articles:

Feature is an in-depth, rigorous presentation of an idea or thought on a topic of emerging importance, or one which is currently engaging the attention of governments, policy makers, bankers, professionals or practitioners.

Features-in-brief are articles involving lesser rigour.

The CAB Calling also carries book reviews, selective adaptation from CAB Watch, Gist of Important Circulars on Inclusive Finance and Campus Capsule

Case Studies

The Case Studies on agriculture, banking and anyother allied subjects are also published.

Feature Columns (by Invitation)**:**

The Effective Executive is a column discussing ideas for personal development of managers and leaders.

A Brisk Walk with Risk discusses risk management in the language of the layman.

Let's Make IT Happen is a column focussing on the IT initiatives that can significantly further the cause of inclusive banking and customer service.

The Rural Mural is a column (in the making) on the small banking innovations that largely go un-noticed but make useful contributions to inclusive growth.

4. Contributors are remunerated for their work by way of a small honorarium, as under:

		Remuneration	Word Limit
1	Research Papers	Rs.625/- per printed page (maximum of Rs.2500/-)	approximately 3000 – 5000 words maximum
2	Feature Articles	-do-	approximately 3000 – 5000 words maximum
3	Features-in-Brief	-do-	approximately 1500 – 2000 words maximum
4	Feature Columns	-do-	approximately 1000 – 1500 words maximum
5	Book Reviews	Rs.1000/- lump sum	approximately 1000 – 1500 words maximum

Guidance for Authors

1. Proposals are invited for unpublished and original feature articles, features-in-brief, research papers, and book reviews (either in English or in Hindi), from practitioners, domain experts, bankers, academics, researchers and scholars on relevant topics.
2. The articles/papers submitted should have a strong emphasis on realistic analysis, development of critical perspectives and use of empirical evidence (except for Book Reviews). It should demonstrate fresh thinking, whose practical application has been thought through in clear and jargon-free language. While the topics vary, it should be possible for the ideas presented to be translated into action. For a book review, the purpose should be to give readers an engaging, informative, and critical discussion of the author's work.
3. The article should be accompanied by a summary (100 to 200 words) and it should answer the following questions:
   a. What is the central message of the article? What are the important, useful, new or counter-intuitive aspects of the idea? Why do readers need to know about it?
   b. How can the idea be applied in banking policy making today?
   c. What research is available to support the argument?
   d. What are the academic, professional sources of work referred to?
   e. What personal experiences have been drawn upon?
4. Preference will be given to articles having an action-bias, whether by way of reporting a best-practice, innovative use of resources or by way of enhancing functional and/or managerial effectiveness. Authors are encouraged to include specific details, examples and actual photos to increase authenticity and credibility. Also encouraged is the use of illustrations which enhance readers' interest while making a point.
5. All CAB Calling articles are expected to give credit to all direct quotations, paraphrased statements, and borrowed ideas. To improve the flow of the prose, we prefer that attributions are incorporated into the text whenever possible. Please be sure to clearly bring out exactly which ideas, and what language, are yours and which ones are drawn from someone else.
6. It is the responsibility of the author to obtain written permission for a quotation from unpublished material, or for all quotations in excess of 250 words in one extract or 500 words in total, from any work still in copyright.
7. Authors must disclose if they have a financial relationship with the organization that sponsored the research. They should also state that they have full control of all primary data and that they agree to allow CAB Calling to review their data if requested.
8. The CAB reserves the right to edit the articles accepted for publication to determine which aspects need to be expanded and which need to be compressed or omitted, to make them interesting to read. Authors can however own copyright for the article, subject to acknowledgement of its first publication in CAB Calling.
9. The CAB reserves the right of use of the published articles for academic purposes, with due acknowledgement of authors' credit.
10. CAB Calling deeply appreciates the time and energy required to prepare an article for our publication, and we are grateful to you for that investment. We are always looking for new and useful ideas that can contribute to human development and the practice of development banking.
11. We wish to assure the authors/contributors that we look into each contribution closely, and, if the idea is compelling, we will do our best to see how best their articles can suit our readers. However, articles which are not published in three successive issues after their submission will normally be treated as not suitable for publication in CAB Calling. The decision regarding whether or not an article will be published rests with the editors.
12. Authors are requested to submit their manuscripts, duly formatted as per guidelines given in the **Annex**, to the office of the Editor. The manuscript must be accompanied by a "Letter of Submission", a sample of which can be found at our website (www.cab.rbi.org.in). Advance copies of the articles can be submitted by email to **cabcalling@rbi.org.in**.

We thank you again for your interest.

Annex: Guidelines for Formatting

Before submitting the manuscript of the articles, authors are requested to follow the guidelines given below:

1. Please attach a short abstract of 100 to 200 words. The abstract should not contain any undefined abbreviations or unspecified references.
2. Title of the article should be as precise as possible.
3. The first page of the manuscript should also contain at least two classification codes according to the Journal of Economic Literature Classification.
4. Particulars of the authors should be given in the footnote before the usual disclaimer on the first page. Symbol * should be used for providing this footnote.
5. Papers, referred to external referees, should acknowledge comments provided by anonymous referees.
6. All subsequent footnotes, if any, should be numbered consecutively. Footnotes should be precise to the extent possible.
7. Manuscripts should be 1.5 spaced, with 1" margins on paper of A4 or letter size.
8. All pages should be numbered consecutively. Roman numerals should be used while ordering the Sections (e.g., Section II). Sections numbers and its title should be centrally aligned.
9. Figures and tables should be numbered consecutively (e.g., Figure 1, Figure 2, Table 1, Table 2, etc.). Figures should be submitted in excel files along with the manuscript. In case of Tables, data source should be clearly mentioned, wherever required.
10. Appendix Tables/Figures, if any, should be given before the list of references.
11. Empirical results should be properly tabulated.
12. References within the text should be cited as illustrated at (a) below.
13. References should appear at the end and should be listed in alphabetical order by author's name.
14. References should be verified carefully. They must correspond to the citations in text. No reference should be missing from the list.
15. If an unpublished article is cited, please include the web site address in the reference list, giving the full "http//" link. The date of access should also be indicated.
16. In case of single author, the reference should appear as illustrated at (b) and © below.
17. In case of multiple authors (e.g., Jörg Rieskamp, Jerome R. Busemeyer and Barbara A. Mellers), the reference should appear as illustrated at (d) below.
18. In case of a book, the reference should appear as illustrated at (e) below.
19. In case of an edited book, the reference should appear as illustrated at (f) below.
20. The length of text for book review should be about 1000-1500 words. The header of your review should include:
    - Author(s) or editor(s) first and last name(s) (please indicate if it is an edited book)
    - Title of book
    - Year of publication
    - Place of publication
    - Publisher
    - Number of pages
    - Price (please indicate paperback or hard cover) if available
    - ISBN

Illustrations:

a. "Several recent papers have sought to directly analyse the impact of an increase in import openness or competitive pressures on inflation in an empirical framework, by employing reduced-form equations and/or industry-level data [Gamber and Hung (2001); Kamin et al (2004); Pain et al (2006); and Chen et al (2007)]."

b. Mishkin, Frederic S. 2006. "How Big a Problem is Too Big to Fail? A Review of Gary Stern and Ron Feldman's Too Big to Fail: The Hazards of Bank Bailouts." Journal of Economic Literature, 44(4): 988–1004.

c. Ausubel, Lawrence M. 1997. "An Efficient Ascending-Bid Auction for Multiple Objects." University of Maryland Faculty Working Paper 97–06.

d. Rieskamp, Jörg, Jerome R. Busemeyer, and Barbara A. Mellers 2006. "Extending the Bounds of Rationality: Evidence and Theories of Preferential Choice." Journal of Economic Literature, 44(3): 631–661.

e. Nordhaus, William D. 1994. Managing the Global Commons: The Economics of Climate Change. Cambridge, MA: MIT Press.

f. Arrow, K.J. et al. 1995. "Intertemporal equity, discounting, and economic efficiency." In Climate Change 1995: Economic and Social Dimensions of Climate Change, Contribution of Working Group III to the Second Assessment Report of the Intergovernmental Panel on Climate Change, eds., Bruce J., Lee H., Haites E. Cambridge, UK: Cambridge University Press,125–44.

(Please furnish the author/lead author's address and contact details and e-mail here)

The Editor, CAB Calling
College of Agricultural Banking (CAB)
Reserve Bank of India
University Road
Pune - 411016, India

Dear Sir,

Letter of Submission - Manuscript entitled __________________________
Disclosure of Potential Conflict of Interest and other Requirements

I am submitting the captioned article in manuscript form to be considered for publication in the CAB Calling. I am the sole author/lead-author of the said manuscript and I am aware of its contents. The name(s) of the co-authors are as under:

2. I certify that the article is unpublished and original and that the manuscript has been formatted in conformity with the guidelines of CAB Calling.
3. I certify that I have obtained written permission for quotation(s) from unpublished material, or for all quotations in excess of 250 words in one extract or 500 words in total, from any work having copyright.
4. I declare that I have a financial relationship with the organization, namely__________________, that sponsored the research on which this article is based.

   Or

   I declare that I have no financial relationship with any organization towards sponsoring of this research on which this article is based.
5. I confirm that I have full control of all primary data and that I agree to allow CAB Calling to review the data if requested.
6. I understand that the decision of the Editor regarding suitability of the article for publication will be final. I further understand that if the article is not published in three successive issues after its submission it will be deemed as not suitable for publication and that no separate communication may be issued in this regard.
7. I understand that the CAB Calling reserves the right to edit the articles accepted for publication and determine and modify aspects that need to be expanded/compressed/omitted, to make them interesting to read. I further understand that the College of Agricultural Banking (CAB) reserves the right of use of the published article for academic purposes, with due acknowledgement of authors' credit.

Yours faithfully,
Author Signature
(Author Name)
Date:
Encl: Article as above

Strike off portions that are not applicable.
Please sign and e-mail a scanned copy to: cabcalling@rbi.org.in

वित्तीय क्षेत्र में क्षमता निर्माण एवं विकास

कृषि बैंकिंग महाविद्यालय (सीएबी) की स्थापना भारतीय रिज़र्व बैंक द्वारा 1969 में ग्रामीण एवं सहकारिता बैंकिंग में प्रशिक्षण प्रदान करने के लिए की गयी थी। तत्पश्चात, भारतीय वित्तीय क्षेत्र की बदलती आवश्यकताओं को पहचानकर, महाविद्यालय ने सूचना प्रौद्योगिकी, मानव संसाधन प्रबंधन, साधारण बैंकिंग और गैर-बैंकिंग वित्तीय सेवाओं जैसे क्षेत्रों में प्रशिक्षण प्रदान करने के लिए अपना दायरा बढ़ाया। महाविद्यालय कई अंतर्राष्ट्रीय संस्थाओं जैसे एफएओ, अपराका, सिकटैब, यूएनडीपी एवं कॉमनवेल्थ सेक्रेटेरिएट के सहयोग से भी प्रशिक्षण कार्यक्रम आयोजित करता आ रहा है। महाविद्यालय ने विकास बैंकिंग में उत्कृष्टता के अंतर्राष्ट्रीय केंद्र के रूप में ख्याति प्राप्त की है। भारतीय वित्तीय क्षेत्र की वर्तमान चुनौतियों के मद्देनज़र महाविद्यालय ने ग्रामीण विकास एवं सहकारी बैंकिंग के अलावा महाविद्यालय, विभिन्न संस्थोओं (राष्ट्रीय व अंतर्राष्ट्रीय) के लिए उनकी विशिष्ट आवश्यकता के अनुसार भी प्रशिक्षण कार्यक्रम आयोजित करता है।

महाविद्यालय, समय की मांग के अनुसार वित्ती य क्षेत्र में क्षमता निर्माण एवं विकास के लिए प्रतिबद्ध है।

Building & Enhancing Capabilities in the Financial Sector

College of Agricultural Banking (CAB) was established by the Reserve Bank of India in 1969 to provide training inputs in Rural and Cooperative Banking. Subsequently, recognising the changing needs of the Indian financial sector, the College has expanded its scope to provide training in other areas like Information Technology, Human Resource Management, General Banking and Non-Banking Financial Services. The College also conducts programmes in collaboration with international agencies like FAO, APRACA, CICTAB, UNDP and the Commonwealth Secretariat. It has earned acknowledgment as an international centre of excellence for development banking. The College also conducts customized training programmes for institutions, both national and international, as per their specific requirements.

The College is committed to enhancing and building capabilities in the financial sector in tune with the changing times.

College of Agricultural Banking

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