FROM ACCESS TO USAGE: BEHAVIOURAL ECONOMICS INTERVENTIONS FOR BETTER FINANCIAL CAPABILITY

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The purpose of this study is to examine why traditional methods of financial education and literacy have failed in augmenting financial inclusion. The paper tries to establish that there are numerous behavioural and psychological barriers to financial inclusion. These can be overcome only by building financial capability which in turn leads to financial prosperity.

The paper proposes a conceptual framework of behavioural interventions to build requisite financial capability for better financial decision making. The study concludes that formal financial education and literacy is not suitable in the long run to build financial capability. A financial capability framework has also been developed within which the intervention is to be delivered. It provides an intervention model, thereby listing important components of delivery mechanism and messages for better uptake and usage of financial products and services. This helps in building innovative technological solutions for traditional problems of financial education.

The author has followed an exploratory approach by documenting relevant case studies, across geographies to arrive at logical conceptual framework. The study can prove useful in development of hypothesis concerning variables like "Technological Innovations" and its interrelation with other aspects like "Behavioural Outcomes", "Financial Capability", "Financial Education", "Financial Decision Making" and so on.

Key Words: ***Financial Inclusion, Behavioural intervention, Behavioural Economics, Financial Capability, Financial literacy, Delivery mechanism, Behavioural Innovations***

1.Introduction to Financial Inclusion

"Saving our planet, lifting people out of poverty, advancing economic growth…these are one and the same fight."

— Ban Ki-moon, Eighth Secretary-General of the United Nations

Ever since civilizations, nations and organizations were formed, poverty alleviation is the single most developmental issue which tops the list, if the world is to prosper. What is recent though, is its linkage with Financial Inclusion. It's a known fact today that Financial Inclusion is a key enabler for reducing poverty and fostering prosperity across countries and continents. Time and again the far-reaching benefits of Financial Inclusion have been established by practitioners and academicians from across the world. Access to financial services significantly improves the lives of the poor households by spurring a virtuous cycle of savings, investment and consumptions. It enables them to secure their futures through good health and better education. Access to credit enables businesses to expand, creating jobs and reducing inequality. Financial inclusion serves as a bridge between economic opportunities and growth.

1.1 Definitions

According to the World Bank "Financial inclusion means that individuals and businesses have access *to useful and affordable* financial products and services that meet *their needs* – transactions, payments, savings, credit and insurance – delivered in a *responsible and sustainable* way."

According to UN Capital Development Fund "Financial inclusion means that individuals and enterprises can *access and use a range of appropriate and responsibly provided* financial services offered in a *well-regulated environment*."

Several definitions of Financial Inclusion have been put forth by institutions and central banks around the world. However, the above two seamlessly capture the holistic essence of Financial Inclusion.

1.2 Context

The author wishes to draw the reader's attention to the italicized words. While access to financial services, form the core of Financial Inclusion, the definitions spell out newer dimensions such as:

- Product usefulness or appropriateness
- Affordability
- Usage
- Responsible & sustainable delivery mechanisms

All the above aspects are extremely important for achieving the goals of Financial Inclusion. While product usefulness, appropriateness and affordability are part of "PRODUCT DESIGN", usage and responsible, sustainable delivery is a part of "DELIVERY MECHANISM / MODEL"

2. Objectives of the Study

- To understand the linkages of Behavioural Economics with Financial Inclusion
- To discover reasons for low usage of bank accounts or uptake of services
- To suggest technological innovations and model based on behavioural interventions and insights

3. Methods used for the study

The author has used "Literature Review Method" and "Case Study Method" for understanding of problems/research gaps and suggesting solutions/model. The design is largely exploratory in nature.

3.1 Design/Methodology/Approach

The paper follows a literature review and case study approach to draw insights, evidences and examples from the real world in the context of financial capability. This has led to the identification of key components of an intervention model. To this extent, it is exploratory in nature, trying to establish links between Behavioural Economics and Financial Inclusion.

3.2 Findings

The study concludes that formal financial education and literacy methods are not suitable in the long run to build financial capability.

A financial capability framework has also been developed within which the intervention is to be delivered.

It provides an intervention model, thereby listing important components of delivery mechanism and messages for better uptake and usage of financial products and services.

3.3 Originality/value

The study is first of its kind to establish linkages between financial prosperity and financial capability. It looks beyond conventional limits of financial inclusion which is about having and using financial products and services. Rather it adopts a holistic approach to financial prosperity by resorting to every possible type of intervention under one umbrella.

The author tries to establish a linkage between Financial Inclusion and Behavioural Economics. It further tries to explore how behavioural interventions can enhance the Financial Inclusion efforts to elicit desired response from the targeted groups. The study has been entailed considering the most important aspects of Financial inclusion, which are, "PRODUCT DESIGN" and "DELIEVRY MECHANISM". While product design, is largely a function of basic financial needs, delivery mechanisms are more about reach, client communication and trust.

4. Review of Literature

4.1 Global FINDEX 2017

At this stage, it shall be meaningful to look at the success and challenges of Financial Inclusion efforts and programs worldwide. The recent release of Financial Inclusion Index "Global FINDEX 2017" by world bank, brings forth the current state of Financial Inclusion from more than 140 developing and high-income economies. This is the third edition of the Global FINDEX report (released triennially) and the single most publication providing extensive details on the level of inclusion attained so far, measured across more than 100 indicators.

Table I: Key progress Indicators (Global FINDEX 2017)

Indicator Measured	2017	2014
Global share of adults owning a bank account	69 % (515 million adults)	62 %
Mobile Money Account in Sub Saharan Africa	21 % of adults	11% of adults (approx.)
Sent / received Digital Payments	52 % of adults	42 % of adults
Mobile phone & Internet usage for payments & Purchases in China	57 % of adults	28 % of adults
Gender Gap with respect to Account ownership (India)	6 % points	21 % points

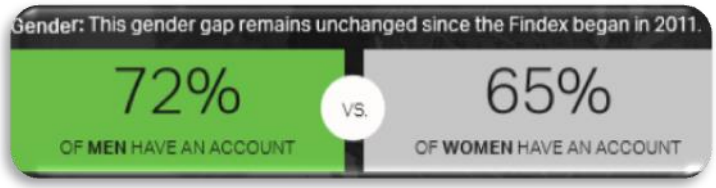
The recent progress has been driven by digital payments, government policies, and a new generation of financial services accessed through mobile phones and the internet. Today dozens of nations have adopted a well-defined approach and crafted strategies to attain goals of sustainable development and inclusion. Emerging economies have demonstrated the power of financial technology to expand access to and use of accounts.

This is reflected through rising number of adult mobile money accounts in Sub-Saharan Africa, which is the highest in the world. 57 % of adult population in China embraces technology in some form or the other for transactions related to bill payments and purchases. In India three years ago, men were 20 percentage points more likely than women to have an account. Today, India's gender gap has shrunk to 6 percentage points thanks to a strong government push to increase account ownership through biometric identification cards.

The findings of the FINDEX are indeed encouraging for policymakers and Financial Service Providers (FSPs) to the extent that rising number of adults are now having access to formal financial services with a bank, a microfinance institution, or another type of regulated financial institution. Considering the pace of development in many countries, it seems that the goal of UFA by 2020 appears to be achievable. Most of this success will depend on technological integration, appropriate product design and economic viability of FI delivery models.

4.1.1 Persistent Gaps & Challenges in Key Population

So, what's not so good about Financial Inclusion across the world. Where are the challenges? Despite the level of progress made, there are areas amongst key population that are lagging behind. Some gaps are highlighted below.



In China around 200 million rural adults remain outside the formal financial system

4.2 Opportunities and Linkages with Behavioural Economics

What are the opportunities and the possible solutions? The author tries to address most of these questions through a series of examples and literature review.

4.2.1 Opportunities

Ever since Findex came into being, mobile money accounts have gained momentum particularly in regions like Africa. The penetration of such accounts in Sub Saharan Africa is as high as 30 %. Outside sub-Saharan Africa, the share of adults with a mobile money account is at least 20% in Bangladesh, Iran, Mongolia and Paraguay. According to the survey, maximum respondents, cited costs and distances as leading causes for not owning an account.

More than 1 billion unbanked adults, about two-thirds of all unbanked adults, already have a mobile phone. It is interesting to note that, 230 million of unbanked adults work in the private sector and get paid in cash only, though 78% of them own a mobile phone. Accelerating the use of digital technologies, particularly mobile-integration ones, could drastically improve the aspects of affordability by reducing the administrative costs and eliminate the need to travel long distances to avail financial services. Governments could leverage the digital technology so as to migrate from cash payments to digital ones for wages and entitlement. This has the potential of reducing the number of unbanked adults by up to 100 million globally.

Currently, India's gender gap has shrunk to six percentage points after the government pushed to increase account ownership through biometric identification cards. India has already embraced digital technologies to make payments and money transfers more viable and less vulnerable to corruption. This move has significantly reduced leakages by 47 % by making use of biometric identification cards. Currently, over half of unbanked Indian adults own a mobile phone and this certainly is an opportunity for policy makers and service providers.

Here, it is pertinent to understand that, increased access is of little benefit without increased usage. At this point, it becomes important to understand what behavioural aspects of targeted groups should be studied to devise meaningful ways of increasing usage. When usage is low, there are behavioural patterns at work. Therefore, interventions are required to elicit desired usage, actions and decisions from people. In fact, Financial Inclusion stands at cross roads where a transition from access to usage is going to fuel the next phase of revolution. The financial landscape is changing and the tilt from access to usage is inevitable.

4.2.2 Linkages with Behavioural Economics

Since 2008, when "Nudges" was highly popularized by Thaler and Sunstein, they have been used as a behavioural intervention to solve a wide range of problems. It has addressed issues ranging from retirement fund planning, organ donation, health, consumer education and the like. In fact, in several policy areas where mandates and bans have not worked, "Nudges" have brought about a steady but meaningful change.

Jung & Mellers, 2016, suggest how many policy issues can be addressed through correct choice of "Nudges". They concluded that system 2 Nudges are more consumer friendly and do not interfere with choice autonomy. Perceptions might be easier to change than principles, depending on the circumstances. Psychological insights about people, their beliefs, and their perceptions may ultimately help policymakers avoid nudges that are met with indifference, rejection.

Reisch & Sunstein, 2016, found similar acceptance for "Nudges" amongst Europeans with respect to 6 nations: Denmark, France, Germany, Hungary, Italy, and the United Kingdom.

While the developed world seems to be accepting nudge-based systems, the emerging markets are also not laggards when it comes to innovations in financial capabilities. The author puts forth extensive literature, to discuss examples and cases of such innovations by making good use of behavioural insights. Further, an effort has been made to summarize the insights after every example.

Fernandes, 2014, questions that formal financial education system is of little good when it comes to financial decision making. His study reveals *that "that content knowledge may be better conveyed via "just-*

in-time" financial education tied to a particular decision, enhancing perceived relevance and minimizing forgetting.". The research is a rich bibliographical account of what has been said so far in the area of financial literacy and education. The author makes several references to the fact that "nudges", and "choice architecture" are less expensive alternatives and more effective as compare to formal financial education.
It is important to note here, that this "just in time" education is all the more needed when one deals with the target audience of financial inclusion. Here the literacy rates are low and ability to make financial decisions is poor.

Insights Drawn: Financial literacy, though an important ingredient of Financial Inclusion should be timely, relevant and contextual. Every message has a perceived relevance so there is a behavioural aspect at work.

Arifu, a digital learning tool drives digital savings and borrowings in Tanzania through an interactive SMS drive. The learning management system delivers the learning content at a time when it is most needed and monitors not only how the content was accessed but also the consequential changes in financial behaviour. The project was designed for users of M-Pawa which is a mobile money savings and credit product of Commercial Bank of Africa. The learning content was customized based on consumer's preferences and responses. In this instance, a series of interactive messages were developed to guide farmers based on a feedback mechanism. This innovation, equipped them with phones on which they could learn on their own about what they wanted to and when they wanted so. The result was better disclosure mechanisms of credit products, larger borrowings, enhanced savings and better repayment rates. *The Arifu example is a typical success of how positive behavioural ingredients are packaged into a meaningful message for a financial product that is already existing.*

Insights Drawn: People learn through interaction and the same is effective when a feedback and monitoring system is implemented. Users like autonomy and hence enjoy customization and convenience.

A similar experiment with respect to digital credit was done in Kenya by *CGAP* in partnership with *Jumo*. The experiments were designed to understand two major aspects of financial behaviour of consumers. *It tried to find out if there was an association between communication channels (say SMS) and borrower behaviour*. Furthermore, it sought insights from behavioural economics, to craft communications in a manner that steered borrower behaviour for a particular action, say one-time repayment. Indeed, there appeared to be linkages between behavioural insights and the development of communication messages to elicit a desired response.

Insights Drawn: There is a strong association between communication channels and financial behaviour of users. Positive reinforcements can lead to desired behavioural outcomes

Timely and appropriate messages can engage the customers for a long term viable financial relationship. It instills consumer's faith and confidence in the service provider. *Juntos Finanzas, a startup in Silicon Valley, has conducted a series of experiments to prove how customer engagements through automated dialogues have augmented the savings rate by increasing average balances by as much as 74 %*. The firm has been using data analytics to develop customized financial capability communications and messages for clients of financial institutions.

Insights Drawn: Customer engagement is a powerful intervention tool and data analytics can go a long way in designing innovative engagement programs. When analytics are used, benefits can be reaped through customization.

ideas42 partnered with Grameen Bank for a behavioural intervention project for clients of CARD Bank in Philippines. The project was designed to decipher the psychological factors leading to particular kind of saving behaviours. The studies tried to unearth the causes of low savings rate and limited account transactions. The project followed a sequential methodology which started from identification of behavioural barriers followed by redesigning of account opening process, designing simple interventions, appropriate weekly deliveries and monitoring through control groups. The whole process worked around certain behavioural levers including goal setting, feeling of commitment, implementation intention and personalized experience. The white paper states "Clients *who received our treatment when opening a savings account made initial deposits 15% higher than the control group and were 73% more likely to initiate a transaction in the new account. They also made smaller and more frequent ongoing deposits as well as smaller withdrawals. Our treatment appears to have had the effect of increasing balances 37% compared to the control group over the course of the eight-week pilot*."

Insights Drawn: There might be behavioural causes for poor uptake of services and low levels of transactional activity. More than one interventions can be delivered to the user on a single platform to address a single issue. The choice of interventions / levers requires a deeper study, though.

Another ongoing project from ideas42 in Asian countries makes meaningful use of heuristics to impart financial training through mobile technology. Here, the study group is not individual savers bot micro, small and medium entrepreneurs. The experiment draws a comparison between *"rule of thumb training" vis a vis "formal account training*". Application of such training has been observed in three areas namely microentrepreneurs, agricultural extension services and use of checklist in medicines. The white paper sates that "*People who were offered rules of thumb-based training showed significant improvements in the way they managed their finances and, in the accuracy, and internal consistency of the numbers they reported."*

Such trainings were helpful in solving day to day small problems such as: Which pesticide to use, input prices and weather conditions, how to increase sales during bad weeks etc. This comes handy especially at a time when prompt decisions are required.

A study by Dexler, Fischer, and Schoar entitled "Keeping It Simple: Financial Literacy and Rules of Thumb", has similar findings in this regard. The authors conclude that "rule of thumb training" significantly improves the financial practices of micro entrepreneurs. They advocate the need of simplified training methods for a targeted client base stating that there is a greater need for devising training programs that are easy to implement and assimilate. While there might be need of a sophisticated program, to meet unforeseen business situations, it largely depends on the target group. Poor literacy levels amongst users, leaves less room for application of formal financial literacy programs. Marta 2015, concludes through a study that Financial literacy leads to financial consciousness which in turn reduces the risk of financial exclusion. She proposes that using of financial instruments should be a part of early education so that people are less vulnerable to financial exclusion in future.

Insights Drawn: Formal Financial training (to the least educated groups) has little measurable effect as compared to simple training using "rule of thumbs or heuristics". The idea is to break down a complex structure into simple heuristics, which encapsulates relevant information required for a decision. This comes handy especially at a time when prompt decisions are required. It helps to remove the clutter that comes alongside key information so as to address the issue at hand.

Centre for Financial Inclusion, published a report on developing financial capability for the lower income groups. The study funded by JP Morgan Chase & Co has been detailed in the report "A Change in Behaviour: Innovations in Financial Capability". A thorough study of the same reveals how crafting everyday solutions around financial capability is the need of the hour, for financial inclusion. The word "financial capability" is relatively new in the domain of financial inclusion. Concepts of financial education and financial literacy have been talked about to a great deal

In the light of the above, the bottom of the pyramid is in dire need of innovative solutions. Many such initiatives and solutions from Mexico and India have been well documented in the report "A Change in Behaviour: Innovations in Financial Capability". Arnold and Rhyne have woven their writing with threads from various stakeholders to present an idealistic picture of developing financial capabilities. The stakeholders are in the form of customers, banks, financial service providers, online services, social and nonprofit organizations, microfinance institutions and obviously the government. The report also discusses the opportunities for Fintech Startups and the role they can play in enhancing such capabilities.

Three banks namely BBVA Bancomer, Banamex, and Banco Azteca studied from Mexico, have started working immensely on financial capability innovations. They provide full range of services, expanding into underserved segments of customers. BBVA Bancomer has partnered with Juntos,(a mobile intervention platform) to motivate customers to increase their savings. The program covered initially, 28000 customers in the first phase. Banco Azteca's has created an online interactive infotainment and resource hub "Learn and Grow". Banamex's Saldazo account is savings account product based on Visa card and an optional mobile service. The card has special benefits for usage at OXXO, the largest convenience store chain in Mexico. Saldazo, uses SMS and call center to address customer queries, encourage product use, disseminate information and collect information. Messages and calls, both are tailormade to the lifecycle of accounts: new, frequent-use, and inactive. The whole idea works upon creating customer engagement experiences, through targeted messaging.

Insights Drawn: An existing product, service or technical infrastructure can be used to engage and interact with the customers. It could lead to active product usage and attain customized level of relationship management. This serves a dual purpose. While customers receive information and assistance as per their needs, the providers benefit from a large amount of customer information that can be leveraged to understand their behavioural patterns, preferences and new product offerings.

When it comes to empowerment and financial well being of the poor, the role of Microfinance Institutions cannot be undermined. The operations of most of such organizations are highly customer centric. Since they work primarily through social networks and groups, there is a large scope for personalized relationship building. There is some component of educating and understanding the user needs in built into their product/service delivery process.

Jan Lakshmi Financial Services is an upcoming example of how lower segments of the society can be served by establishing simple yet exhaustive mode of communication with users to create better understandings of their requirements and problems. Though, it started with formal financial training in a class room setting, it has now started experimenting more innovative methods of customer education. The branches have screens hosting financial education videos related to management of finances, bookkeeping, budgeting etc. It keeps the customer engaged during his wait time at the branch. Another innovation, has simplified the education content into "rules of thumb or heuristics". The same is delivered to the customers through eight sessions of pre-recorded calls. In case the customer has a question, he can record the same and a personalized call from the expert is returned to solve the query. A typical example of heuristic training could be as simple as separating business cash from households'. The bank, along with CGAP is working on a tool called "*Kaliedo"*. This helps them in gathering exhaustive information about their customers by conducting in depth interviews spanning across two hours. The tool, which goes beyond the basic KYC norms, looks as the overall financial decision making within a household from various angles such as assets, dependents, earning members, income, family composition and structure, business vulnerability, spending attitude etc. All this information so collected are used to map the household profile of every client. These fine nuances aid in greater understanding of changing dynamics of a family. In another pilot, customers attend one on one counselling sessions with experts. They are helped to make better financial decisions by educating them on aspects like goal setting savings etc. This operates through a prepaid debit card and doorstep collection of savings. This can be expensive and time consuming. But innovations like Kaliedo, on screen videos, pre-recorded calls can go a long way, helping both the stakeholders.

KGFS and SEWA Bank are other such organizations that offer an array of financial products and services to rural villages in India. In both these cases, development of financial capability is encouraged through counselling, interview, leveraging social networks, planning sessions etc. KGFS is also an active user of data analytics to draw insights on customers needs and preferences. The aim is to achieve greater levels of customer centricity and work on models that are economically viable.

Insights Drawn: There has been a drastic shift from knowing customers to understanding customers and most of these actually culminates into psychological profiling of customers and establishing communication that fosters trust. For development of such understanding, innovations are required. A behaviourally informed service provider can enhance product usage through better customer communication which has instant feedback/query system inbuilt.

Roshan, a telecommunications provider in Afghanistan actively engages low income groups through some of its core functionalities. One, by providing full range of banking value added services like mobile payments, remittances, agri-commodity prices etc through mobile telephony. It further promotes livelihood and has created a huge network of 33,000 agents who serve as points of contact and service providers. The agents are typically small and micro entrepreneurs, most of them owners of small stores that sell basic necessities. This strong distribution network enables the last mile reach of the company.

The country's first mobile financial service was launched in 2014 through M-paisa. The platform has several prepaid tariffs that a customer can choose from as per the need and budget. Most features of M-paisa are on IVR so it is scalable to a large population, given the fact that more than 60 % is illiterate. The agent network comprises of elderly village people, small scale women entrepreneurs, restaurants, salon shops, other licensed retailers, kiosks and the like. Roshan is a great example of how every touch point of a villager is leveraged for providing services and education. Today, Roshan itself, directly transfers up to 10% of its employees' monthly salaries into their savings accounts. This is done using as a default option, via the M-Paisa mobile money platform. 45% of such employees opted for such default transfers even after the test period.

In India, Pradhan Mantri Jan Dhan Yojana (PMJDY), a national scheme on financial inclusion seeks to make automatic payments of government benefits though direct deposits in bank accounts. The same is aligned to a biometric identification system based on 'Aadhar'. This feature has given a huge scale to this policy initiative, thereby opening 249 million bank accounts (as of August 2017) for the poor and the rural. While there was a huge concern on the dormancy of such large number of accounts, the automatic payments feature has addressed this to a great extent, paving way for more active usage of account related services.

Thaler and Suntein (2008), argue that creating default options and routes for automatic payments improves the choice of customers for a desired pre-set course of action. People tend to accept status quo, so deviating from defaults is difficult as they are perceived as authoritative recommendations or social norms.

Insights Drawn: The supply side stakeholders play a major role. Their solutions should have scalability, be it designing of payment options or touch basing with the last mile user. The sheer expanse of the mobile telephony and electronic payments, presents a great opportunity for financial inclusion. To reach out to difficult terrains, not only customization but localization plays a pivotal role. This calls for engaging and activating many sections of the society simultaneously.

RevolutionCredit is a data analytics company which partners with financial institutions and employers in the U.S, for better credit decisioning process. It studies behavioural patterns for customers with mi-range credit scores (540-740) and no score at all. It aids them in understanding financial concepts and also establishing their financial identity to demonstrate creditworthiness and knowledge to financial institutions. The same is achieved through a unique platform that allows users to watch short and entertaining videos to enhance financial capability. The analytical study of behaviours so demonstrated by users, helps in identifying intent as well as aptitude. In other words, this platform tries to communicate more than what is revealed merely through a credit score. For banks, it deepens the reach to a larger customer base. For customers, it helps them establish a better financial identity to access a range of financial services.

Some standalone online platforms like HelloWallet in U.S , MoneyMenttor in Mexico, AgentPiggy from Chile etc are more sophisticated tools of personal financial management. HelloWallet develops a Wellness Score for each user and is linked to the bank accounts. The score is based on factors like level of financial activity, debt, and savings etc. The tool helps customers create savings and spending plans, monthly budgets, goal setting and retirement planning. MoneyMenttor is an innovative platform which provides infographics and visualization customer's finances. It further offers customized advice to help customers manage their spending and suggests financial products. It uses customers' financial data, to optimize knowledge on behavioural information. AgentPiggy bank from Chile, is yet another example of an innovation in the form of a virtual piggy bank for children. It allows parents to set minimum balances and allowances for the piggy bank and discuss finance topics with their children. Children earn money by completing tasks set up by parents. Indeed, it's an infotainment tool for children to learn about finance management and goal setting.

It is only recent that banks, financial services and even governments have accepted 'financial inclusion' as a larger goal of the nation for poverty alleviation. Even today, there are debates on economic viability and business sense for bringing in more value to the overall impact that financial inclusion effort intends to make. The entire concept was categorized under the head of 'social banking' or 'developmental banking'. It was deemed that coercing banks was the only possible way to reach out to the poor and unbankable. in other words, unless compelled by policy, banks would be reluctant to serve these sections of the population due to lack of business viability (Burgess & Pande, 2003; Leeladhar, 2006; Basu, 2005). Owing to the above, governments across the world launched various policy reforms to increase the access of financial services to the poor.

Insights Drawn: Data analytics is useful to generate behavioural insights. On the customer side, it helps them understand their own financial behaviours and leads them to make appropriate changes for financial well-being. On the supply side it enables the service provider to make better offerings to a large customer base. However, most of these tools are highly personalized and therefore expensive. Partnerships between various stakeholders can bring down the cost as well as enable data sharing to the benefit of a larger group

For example, RBI, the central bank of India has issued directives for priority sector lending to the tune of 40 % of the total advances made by the banks. Categorization of priority sector includes small and medium enterprises, agricultural laborer, marginal farmers, export credit etc. "As per the RBI's report on 'Trend and Progress of Banking in India, 2016-17', while private banks on aggregate basis were able to meet their priority sector lending target under the MSME, public sector banks have fallen short of the 7.5 per cent target."

Brazil, has been a poor performer as far as the financial literacy is concerned. It has incorporated financial education formally in school curriculums and runs specialized literacy programs for youths. However, the World Bank FINDEX report 2017 documents that the performance on the front of financial inclusion is yet to be satisfactory as compared to its peers. CBS News writes in an article entitled "How U.S. teens compare with their global peers in financial literacy" that Brazil is the lowest scorer according to the new assessment standards of Financial Literacy by OECD, China being the highest one.

A large amount of literature confirms that a major portion of the population worldwide is poor at financial decision making. Lusardi and Tufano (2009), document that low levels of financial literacy leads to poor judgement of borrowing and bad experiences of indebtedness. Arora (2016), points out that lower levels of financial literacy amongst women is a rising concern in India. Similar observations on poor financial literacy has been documented by Cole, Sampson, and Zia (2011) with regards to households in India and Indonesia. There is still more ample literature to suggest that the formal training mechanisms hardly improve the financial decisions of the poor and the disadvantaged.

Ian Hathaway and Sameer Khatiwada (2008), argue that there is no conclusive relationship between financial literacy programs and better financial behaviour. They further recommend that the training should be targeted to a well-defined group and should occur close to the decision-making event. A working paper of Federal Reserve Bank of Richmond entitled "A Literature Review on the Effectiveness of Financial Education" by Matthew (2007) establishes a positive correlation between financial knowledge and financial behaviour. Here, it is important to note that the financial literacy programs that are discussed address a variety of consumer finance areas like mortgage and credit counselling, asset diversification, participation in financial markets, retirement planning and the like. Hardly an of these are immediate issues in the lives of poor. For such sections of the society, it's not the financial knowledge or literacy but the financial capability that actually helps.

To have a proper understanding of these larger concepts, a mechanism is required which is simple, understandable and capable of solving a range of problems from - small to big, every day to occasional. Above all, the solutions should be so customized and problem specific that it fosters a long-term trust in the user. This involves working around the "financial capability needs". Once this basic infrastructure is in place, more sophisticated programs can be designed.

A meta-analysis by Lynch and the marketing experts Daniel Fernandes and Richard Netemeyer, proves that financial literacy programs have "negligible" impact on subsequent financial decisions. Their study comprises of the results of 200 and more of such literacy programs, which concludes that "forgetfulness" of participants is a leading cause of ineffective decisions post training. Economist Lewis Mandell, the founder of the modern financial literacy movement, finds evidences that financial education is of little help when provided in advance of when the person needs it. No wonder, scholars are now pushing for "just-in-time" education or "point-of-sale" education.

Miller, Reichelstein, Salas and Zia 2013, in their paper entitled "Can You Help Someone Become Financially Capable?", comprehensively analyze the existing literature on financial education by using Meta-Analysis. The work comprises of 188 papers, which have findings on several interventions. The analysis presents more evidence in favor of the null hypothesis that is financial education has no impact on financial outcome. While there is some positive impact, on savings and record keeping, there is no impact on retirement planning and credit default. This is largely attributed to faulty delivery channels and methods that the educating content, per say. Most of the papers that were studied, had taken up the classroom mode of training. This is not only the most expensive, but difficult to scale up as more training needs continue to arise going forward.

The world bank report further, documents that "Not all people who have an account actively use it. Globally, about a fifth of account owners reported making no deposit and no withdrawal — in digital form or otherwise — in the past 12 months and therefore have what can be considered an inactive account.11 The share with an inactive account varies across economies but is especially high for many economies in South Asia." Here, India has the largest share of inactive accounts in the world. The share of digital payments is on the rise, but still lower than the average of top ten emerging markets from G20. The gender gaps are still persistent.

So, what's not working and what are the possible solutions to increase uptake and access of financial services. Till date, the financial system in many countries continues to be dominated by the banks, despite the evolution of several alternative sources of finance like NBFCs, SHGs, MFIs etc. Fintech start ups are on the rise due to large scale penetration of mobile phones. But integration with mainstream financial efforts and involvement of key stakeholders is missing. It seems that the entire concept of Financial Inclusion has been working on a push model. The paradigms have started shifting to customer centricity and need based delivery. There is still a long way to go and behavioural economics can pave the way. Though uptake has shown progress, low usage and poor levels of account activity is staring policy makers right in the face. There is a strong lack of motivation or incentives for people to use the formal financial system. There are behavioural, psychological and social factors that act as inhibitors. Insights need to be studied and interventions are required.

There is a great deal, that still requires to be unfolded and researched. It involves intricate issues related to program architecture, delivery mechanism, resonance with user, rigorous measurement and evaluation, and all of these aligned to the basic developmental goal of financial inclusion. It is not just about having innovative products. The need of the hour is building innovative ways of delivering these products to the last mile customer who needs it the most through an economically viable model.

5. Suggestive Model for Interventions

The delivery mechanisms of financial inclusion should have some basic ingredients in place. The author would like to briefly define them.

- **Simplicity** – The mechanism should be simple to understand and easy to use. While technological advancements have paved way for innovative solutions, there is a strong need for basic solutions instead of sophisticated ones. For instance, receiving or making a call, sending a message or an email was a challenging task once upon a time, today its an order of the day. We should be able to reach a state of technological acceptance where making payments via mobile phones becomes a basic financial habit. Till the time, this happens, mobile phones will remain a phone and not a financial tool, for the poor.

- **Resonance** – For building financial capabilities, information so delivered should resonate with the needs of the user. Note, that it is not the product but only the piece of information or intervention that is talked about here. What exactly is meant by resonance? The intervention should be able to address or support user issues such as preferences, product needs, day to day financial decisions, monthly income-expenditure and savings planning, long term goals, ability to come out of financial emergencies. This ingredient is extremely important in model designing as it inculcates individual trust in the system and scope for establishing repeated points of contact with the potential receiver.

- **Use of existing infrastructure / paraphernalia** - Every model should make use of the existing infrastructure to touch base with end users. While the author is not against, the use of new systems and designs, it is believed that using existing paraphernalia will address the 'economic viability' issue and significantly lower the time for 'last mile reach'. The existing social and political networks in villages in the form of institutions and panchayats, self help groups, NGOs, telecom providers, post offices, farmer and entrepreneurship communities, existing bank accounts, schools, labor organizations, necessity stores and many more. Existing paraphernalia includes application forms of FSP (financial service providers/banks), what's app group or other online platforms with homogeneity of users, letters and notifications sent by FSPs, text messages on account balances, mobile recharge platforms or outlets. The idea is to connect to the target groups in their day to day lives, in a manner which is fastest and least expensive. For every financial inclusion initiative (for example opening up a basic bank account, micro lending to women entrepreneurs, financial education etc.) a 'viable and scalable' connection is important.

The financial capability can be built by using any one or a combination of the following behavioural interventions/levers.

- **Heuristics** – Heuristics are a set of accepted unchanged norms, rules of thumbs or mental short cuts that aid an individual in daily decision making. The same can be well applied in this context. For example, making use of mental accounting concepts to separate business finance from household finance for small entrepreneurs. Using status quo for default payment options, using anchoring concept to repeatedly communicate and reinforce success stories or measure well being with respect to important milestone figures (loan repayment amount, minimum balance, goal achieved etc)

- **Nudges** – Nudges have been widely acceptable as a very potent tool of behavioural intervention. Not only in this context, its benefits have far reaching social impact for long term prosperity and sustainability issues. These can be in the form of crisp tailor-made messages, reminders, sharing success stories, hypothetical figures or budgets, videos etc. If the target group is homogeneous, default options, automatic enrollment or payments and generic reminders can work in case of recurring decisions.

- **Prospect Theory** – The world of finance has changed, ever since Kahneman & Tversky propounded the prospect theory. Individuals are primarily risk averse, but when faced with losses or negative options, they are willing to undertake risks. An option with positive framing is more acceptable that a negative framing, despite the unchanged fundamentals of both. Positive reinforcement helps. For example, it shall be meaningful to communicate to a customer how timely payments of bills and loans can cut down on penalties, thus adding more to the child's education corpus. Hypothetical budgets could be used for the same. Gains lost on household funds on account of forgone interest on a savings product, could be another area making use of framing effects. Yet another example of this could be the time and costs involved in setting up of a new account and thus encouraging people to use existing ones to avoid dormancy.

- **Appropriate Interaction** – Man is a social animal. The mechanism of behavioural intervention should have adequate scope of communication. There is a need to establish interaction with target groups to shift from 'know your customer' approach to 'understand your customer' approach. Counselling and in-depth interviews are the best methods. Existing infrastructure could be leveraged. But this is time consuming and expensive. This can be complemented by interactive mobile tools, use of IVRs, customer feedback at points of contact. For instance, a women entrepreneur making bamboo baskets or stitching clothes could be educated or informed about avenues to make sale, possible websites for listing products, NGOs that could help. This can be done after collecting data on her socio-economic profile and understanding her business challenges. Interventions which occur close to the time of decision making are more meaningful. The same can be achieved only through a two-way communication and feedback system.

5.1 Financial Capability Framework

Before moving on to the design of Behavioural Interventions, it is desirable to build a financial capability framework that can lead to financial prosperity/well being. The are three major elements of financial prosperity or well being

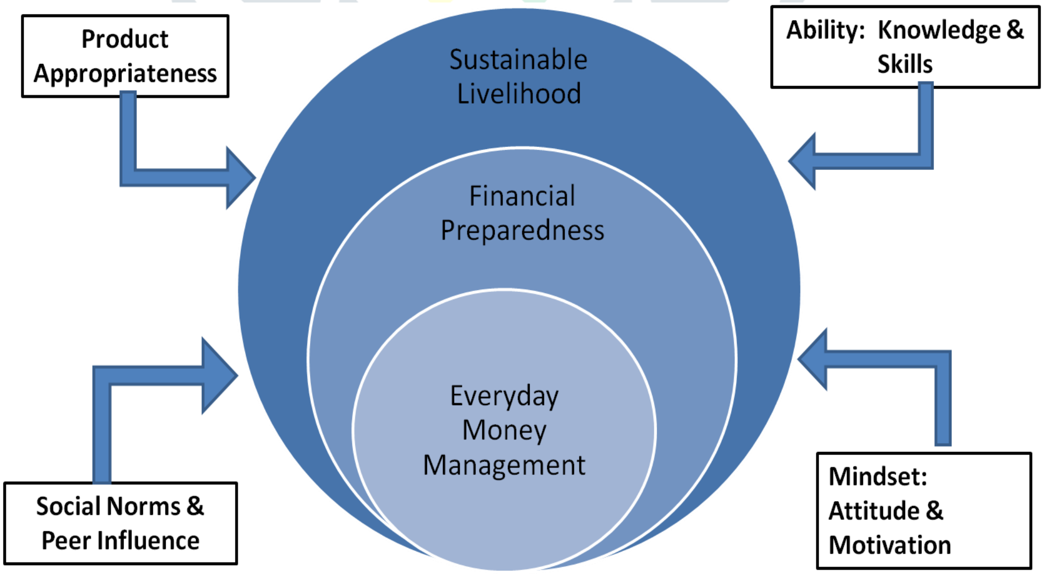
I. Sustainable Livelihood
II. Financial Preparedness or Planning ahead
III. Everyday money management

The financial prosperity is not a simplistic, function of these elements alone. There are a set of enablers or inhibitors that interact with these elements. These enablers or inhibitors are classified as under

I. Ability (Combination of Knowledge & Skills)
II. Mindset (Combination of Attitude & Motivation)
III. Social Norms (Age old practices, accepted behaviour, peer influence, social pressure)
IV. Product Appropriateness (Utility & Convenience for a target group)

A diagrammatic representation of the above will enable us to visualize the complex framework within which financial capability is to be developed.

Figure 1: Conceptual Model using Financial Capability Framework



5.2 Interventions

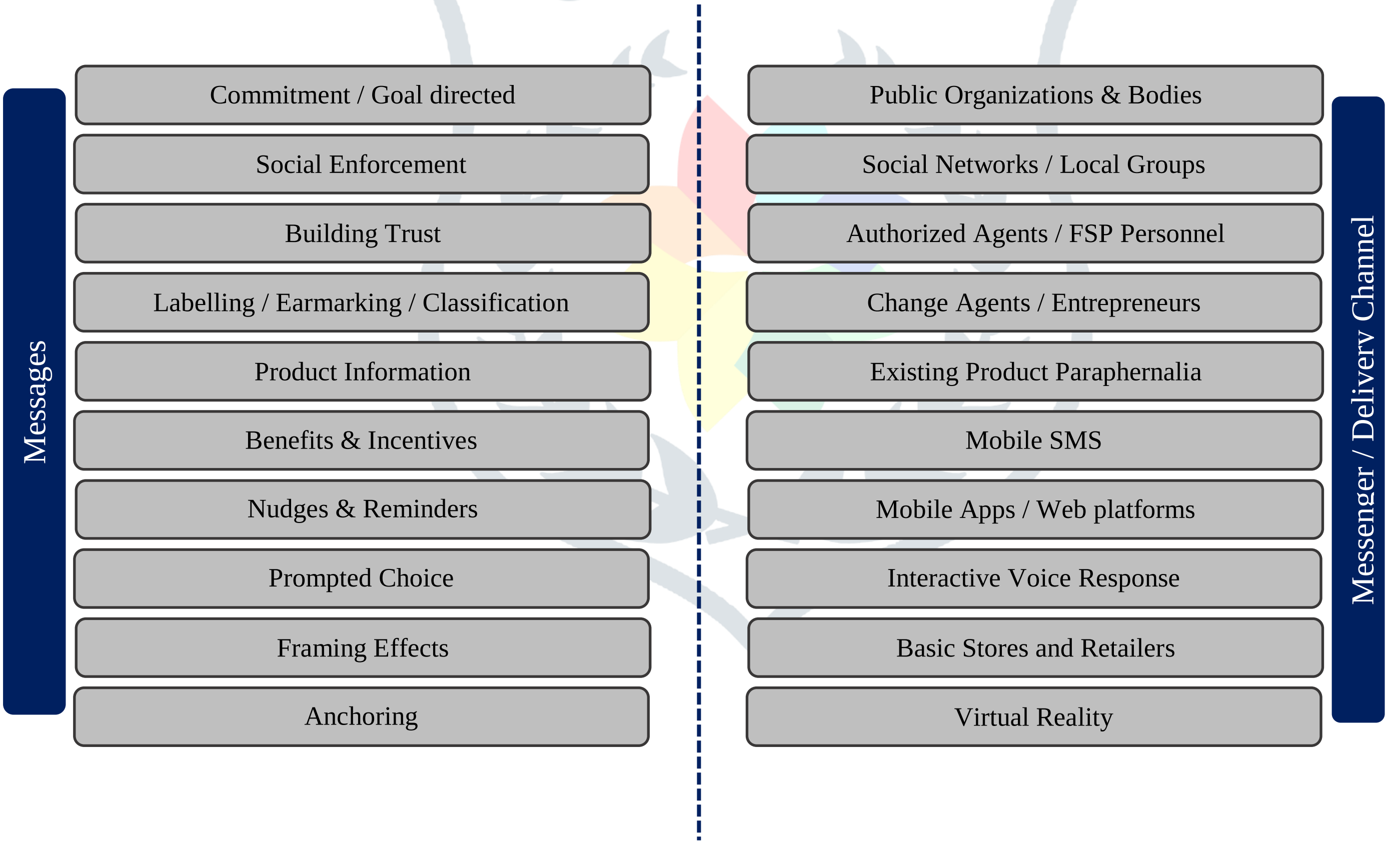
The essence of behavioural intervention is aptly captured by Smit, H. (2017): “A behavioural intervention is any customer interaction that has been explicitly designed to influence the financial decision (or behaviour) of an existing or potential customer”

According to the Financial Capability Framework discussed above, every intervention tries to address one or more of the above inhibitors/ enablers to achieve Financial Prosperity in the long run. However, in the short term an intervention is to be designed to target a specific dimension of financial prosperity.

Every intervention has two components: the message and the messenger. The choice of the messenger will largely depend on the type of the message and the end result that is sought to be achieved.

The various types of messages and messengers can be classified into ten different categories each. A diagrammatic representation of this, will enable us to visualize how a suitable combination of the message and messenger can be used as an intervention to build financial capability

Figure 2: Components of Intervention



6. Conclusion

It has been amply illustrated through cases and literature that building financial capability is the ley to uptake and usage of financial services. **The principles of Behavioural Economics can be integrated into design, delivery and marketing of financial services and products to address the present-day gaps of financial inclusion. It is high time that policy makers and service providers look into their delivery models which are innovative in design as well as purpose**
Why fundamentally good government schemes have failed to perform? Why serving the lower sections of the society is still not considered economically viable? Why formal financial literacy and education programs have remained ineffective? Why bank accounts remain inactive? Why gender gaps are still

persistent? Most of these answers lie in drawing correct behavioural insights. When it comes to financial decision making, the socio-psychological factors have far reaching impacts than the economic ones.
Designing correct behavioural intervention will build in the much-needed financial capability for taking better financial decisions. This is possible only when technological innovations serve a purpose. Further on, it is desirable to have more studies and experiments to see if these interventions are scalable in terms of consistent results and applicability to larger set of audiences across geographies and economies.

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