

Entrepreneurship
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Lecture 20

Commercialization and Disruption as Success Drivers Part 5

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Start-ups: Established on Founders' Difficult Experiences



Start-up	Product	Problems Experienced by Founders
Urban Ladder 	Furniture	Difficulties in their home furnishing
Kent 	Water purifier	Poor quality drinking water at home
Notion Press 	Self-publishing	Difficulty in publishing their book
Practo 	Healthcare	Difficulty in organising medical reports for parents
Zomato 	Food reviews and delivery	Difficulty in searching for neighbourhood menus



So, looking at these things, some of the start-ups were also founded on the basic experiences of the founders. In the case of Urban ladder, the founders found it difficult to furnish their own home. They thought that if I found it difficult to furnish my own home, obviously there is a generic issue with the entire market, so I can disrupt the market by finding a way in which I can provide online furniture for any home which requires furnishing.

Kent founders, they had the issue of people at home being afflicted by diseases because of the poor quality of drinking water, so they experienced the problem and they used a design engineering capability to make a water purifier. Notion Press, the founders wanted to publish their book, they went from editor to editor, publishing house to publishing house and they said that no, this is not the way, we will self-publish our book.

So, it started the doing the self-publishing through their own personal experience of difficulty in publishing. Practo when the founder wanted to organize medical reports to his parents, they had difficulty in organizing medical reports, and then that became the seed idea. So, if you consider Practo, it started with the requirement for having medical records for the parents and that provided the platform to build a broader business model.

Zomato, it started with finding the appropriate menus in the neighbourhood for the founders, and they saw a business opportunity in what they did, and then rapidly expanded. Even Facebook, it was a dorm based application for people to connect and once that was proved, it went into a big social media phenomenon. So, many times the issues which we experience as common citizens help us develop certain solutions for setting up start-ups and then growing them.

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Start-ups: Competition Abounds, With Many More in Each Domain

Domain	Players
Travel and hospitality bookings	OYO Rooms, Fabhotels, Vista Rooms
Logistics	LEAP India, Delhivery, LetsTransport, Rivigo, Lynk
Marriage platforms	Matrimony.com, Shaadi.com, Jeevansathi.com
Housing aggregators	Housing.com, NestAway, Zolo, FlatMate.in
Fintech	Paytm, Razorpay, Instamojo, Zeta
Meditech	Practo, InnAccel, IcaGen, Inovio
Food delivery	Zomato, Swiggy, UberEats
Online fashion	BlueStone, CaratLane, Velvetcase, LimeRoad
Organic foods	Organic Shop, NaturalMantra.com, Sattviko
Electric vehicles	Emflux Motors, Ather Energy, Tork Motorcycles
VR/AR	Meraki Studio, Gazemagic, Grey Kernel
Diagnostics	LiveHealth, DocEngage, Attune Technologies
Smart Wearables	Conzumer, GOQi, Moov, Atlas Wearables
AI/ML/DL	SigTuple, HealthMyne, Enlitic
Genetics	MedGenome Inc., Strand Life Sciences, Mapmygenome



It is not that start-ups are all innovation and innovation only. There are no follow through innovators, there are no follow through differentiators, it is also not that being start-up means you have a monopoly, it does not occur that way. We are used to seeing monopolies in established industry structures so we may think that start-ups provide some natural monopoly. No, in fact, start-ups is an area where there is enormous level of competition.

Because once you crowd source ideas, when you open up the markets for innovation, every individual who has the ability to innovate comes up with his or her own model of innovation. So, if you see travel and hospitality booking, this is not merely Oyo rooms, we have Fab hotels, Vista rooms and several others, I have just stated 3 or 4 prominent examples in each case.

In logistics we have at least 20 logistics companies which can be stated out of this Ecom I already mentioned, Rivigo is their leading company, Lynk is a leading company in South India. Then you look at marriage platforms, we have Matrimony.com, Shaadi.com,

Jeevansaathi.com. Housing aggregators; Housing.com has been a pioneer then we have got Zolo, Flatmate, MagicBricks we have.

Fintech; Paytm I mentioned as the digital payment leader, but we also have Razorpay, Instamojo, Zeta. In Medtech we have Practo, but also have we have InnAccel, Icagen, Inovio. Food delivery; Zomato, Swiggy, Uber Eats. Online fashion; Bluestone, Carrotlane, Velvetcase, LimeRoad. So, you look at any domain you will find that there are players and having players means there is competition, and having competition means not everybody can be successful.

So, to become a successful start-up, you not only require market disrupting criteria, you not only require innovative capabilities, but also you require certain methods of management, you require certain business models which will be successful in the face of competition. So, the situation is no different from established companies.

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Observations from Indian Start-up Stories

- Many successful Indian start-ups are consumer internet companies which could usher in digitally mediated fundamental transformations in how businesses are conducted
- Almost all of them focus on converting established marketplaces into digital marketplaces, bringing the benefits of e-commerce to vendors and customers alike
- Effective execution on their early business models in each case has led to increasing levels of investor confidence, leading to quick scale-up, and additional funding rounds
- As an extension, successful start-ups focussed on getting associated with quality investor-houses, committed to the start-up space; and, in some cases, welcomed investor-mentors into their system
- In most cases, the founders came with prior experiences of working in similar companies globally or setting up other start-up ventures
- Most importantly, a majority of successful start-ups have been co-founded, and in many cases by entrepreneurs with early bonds from school or college days



So, when you look at the Indian start-up stories, you will find that most successful Indian start-ups are consumer internet companies, not really electronic hardware companies or they are not really artificial intelligence and those kinds of companies. And all of them focus on converting established marketplaces into digital marketplaces. They bring the benefits of e-commerce to vendors and customers.

Now, how much more conversion we can have in terms of digitization of the informal economy, be it food delivery, be it commerce, how much more space is there, and how much of future development will be in B2C of a more innovative variety, or it will be B2B or more

of manufacturing activity that is a matter of debate. And effective execution has been the success ingredient for many of the successful start-ups.

Quick scale up has been very helpful, additional funding rounds therefore have been helpful. And companies got associated with the good quality investor houses, which are committed to the start-up space that has provided appropriate funding strength as well as mentorship support. And as I said in the previous slide, in most cases, the founders came to the business with their own experiences, first hand experiences of the constraints in the existing informal system and therefore, the advantages of setting up formal digital solution.



And most importantly again, a majority of successful start-ups have been co-founded and in many ways, by entrepreneurs with early bonds from school or college days. So, looking at the start-up stories which we see in India, you will find that it is not only market led and market converting activity, it is also the discovery of problems by themselves or also the old school ties or old college ties or old employment ties, which have helped the founders come together and start a start-up business.

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Co-founding: Shared Background Successes




Company	Co-founders	Background
Flipkart	Sachin Bansal and Binny Bansal	Schoolmates and alumni of IIT Delhi; former employees of Amazon
Common Floor	Sumit Jain, Lalit Mangal, Vikas Malpani	Alumni of IIT Roorkee; former employees of Oracle
FreshDesk	Girish Mathrubootham, Shanmugam Krishnasamy	Former employees of Zoho
BigBasket	Abhinav Choudhary, Hari Menon, and Vipul Parekh	Hari and Vipul were co-founders of Fabmail, an early e-commerce start-up in 1999
ShopClues	Sanjay Sethi and Sandeep Aggarwal	Silicon Valley and Wall Street friends in California
Practo	Shashank N D and Abhinav Lal	NIT classmates
Urban Ladder	Ashish Goel and Rajiv Srivatsa	Schoolmates

Flipkart



Sachin Bansal Binny Bansal

Common Floor



Lalit Mangal Sumit Jain Vikas Malpani

FreshDesk




Girish Mathrubootham Shanmugam Krishnasamy

ShopClues



Sanjay Sethi Sandeep Aggarwal

Big Basket



Abhinav Choudhary Hari Menon Vipul Parekh

Practo





Abhinav Lal Shashank N D

Urban Ladder

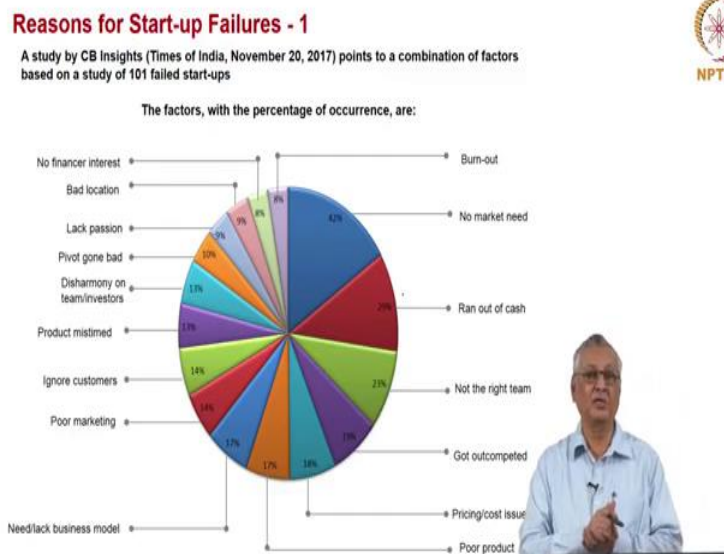
Rajiv Srivatsa Ashish Goel



So, here we have got some nice tapestry of co-founding. Flipkart, we have Sachin Bansal and Binny Bansal, both of them probably are no longer in the company after Walmart took over, but they were schoolmates and alumni of IIT Delhi, they are former employees of Amazon. Common Floor is a real estate company, had three co-founders who are alumni of IIT Roorkee and formal employees of Oracle.

FreshDesk were former employees of Zoho, BigBasket co-founders of Fabmall which was an early internet company. ShopClues there were Silicon Valley and Wall Street friends. Practo, they were NIT classmates, Urban Ladder, founders were schoolmates. So, when we look at this co-founding, there is also this advantage of shared background successes, which has helped them.

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So, we have seen the good part of start-ups it's very exciting because people look at innovation, people look at market, people look at changing the market dynamics. And market itself provides many triggers for new products to come in and start-ups have a during time as they meet the expectations, as they meet the demand. But given that kind of development, we also see there are a huge number of start-ups that fail.

In fact, one statistic says that if there are 100 start-ups in a particular domain, it is likely that only 10 percent will be successful or reasonably successful, but another 90 will kind of morph into another type of company or move out of the market or just kind of stay on with some kind of support. Therefore, it is important for us to look at the reasons why start-ups fail.

So, we have an interesting study by CB insights, which points to a combination of factors based on a study of 101 failed start-ups. So, if you look at it, 42 percent of the failures are linked to having no market need. So obviously, it is a counterintuitive thing, because the hypothesis of this entire course is that the whole that there is probably no market need for these start-ups.

This is counterintuitive, given the fact that most start-ups aim at creating a niche based on the study of customer requirements, start-ups try to solve a problem of the customer with an innovative solution. So, does an entrepreneurial firm looking at the way the product market behaviour is evolving, they trying to meet the emerging demand or they establish business is segmented further.

So, given that, to understand that 42 percent of the companies are facing failure because of lack of market need, can only point out to the core foundation of this particular course that ideation, empathetic ideation with reference to the customer needs is the most important factor for the success of a start-up. Then next factor is ran out of cash, this is understandable given the nature of start-up but the point here is that how you are able to develop a prototype in time and demonstrate your success is critical to get cash.

So, not only you should have a clear need from the customer side, you should also have a clear solution from you as the product developer. Once these two happen, the cash comes in, but if you are developing a product for which there is no customer need or you have the market need but you are taking enormous amount of time to develop a product, it is likely that you will run out of cash.

Then certain types of start-up product lines require more cash than other types of start-up lines. Therefore, you got to judge your cash requirements in a way that it is related to the development expenditure, again, we discussed that in some of our previous sessions. Then not having the right team is another important factor.

So, if you really look at the issues, more than 50 percent is by 5-6 very important factors, which is lack of market need, running out of cash, not having the right team, getting out competed, that is somebody else is thinking faster and better than you have been thinking and then inability to price properly and poor product itself. It is not that these all must add 100 because there could be more than one reason why a start-up has failed.

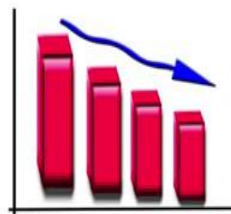
So, it requires the number of responses in different domains. But if you really look at issues, even mistiming of a product could be causing start-up failure. You did a good product, but you timed it wrong or if you had a bad location that is you are instead of setting yourself up where there is a start-up culture environment, you look at yourself in a let us say, core industry environment, it is unlikely that you will be able to attract the right kind of talent and the ecosystem there.

So, these are all the reasons why a particular start-up could fail and a response mechanism from 101 start-ups is a good thing. But the theory of start-ups requires that each and every aspect which we are discussing here as possible reason for start-up failure must be addressed; must be really responded to in the way the business is structured.

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Reasons for Start-up Failures - 2

- Interestingly, lack of passion is pretty low on contribution to start-up failure
- Market, product, team and finance related factors are the dominant contributors for start-up failure
- This validates the thesis of the Course that having an integrated product, manufacturing, and marketing strategy backed by organisational and business models is critical for start-up success
- Some causes of start-up failure with certain specific Indian examples based on reported literature follow



So, if you look at those things, lack of passion is pretty low on contribution to start-up failure. This is again counterintuitive, but it is true in the sense that nobody will be a start-up entrepreneur unless he has got unmitigated passion. So even those start-ups which fail, they do not lack in passion.

So, lack of passion is never an example or never a big reason for failure of start-ups, the failures of start-ups is because of various other reason, rather than lack of passion, only 9 percent are attributed to lack of passion, but the rest are all due to various other reasons which are related to management, leadership, technology, market, and things like that.

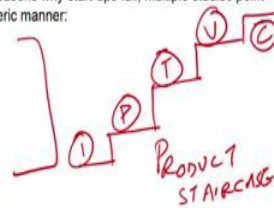
So, the thesis of the course is that we should have an integrated product manufacturing and marketing strategy backed by organizational and business models for achieving start-up success. The criticality of start-up success is directly proportional to having a holistic business strategy, having a appropriate business model and having the execution capability, these are extremely important.

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Reasons for Start-up Failures in India - 3

While there could be several case-specific reasons why start-ups fail, multiple studies point to the following as the top reasons, in a generic manner:

- wrong product,
- mismatched team,
- lack of USP,
- declining passion,
- neglecting to course-correct,
- ignoring guides and mentors, and
- lack of timeliness.



All these also lead to an inability to execute well and secure performance-linked funding.

Each of these tends to be caused by a number of factors. For example:

- wrong product could be caused by misreading of market, incorrect product specifications, poor product prototyping, inadequate testing and validation, and even incorrect product positioning
- lack of timeliness could be caused by unanticipated product complexity, non-deployment of MVP, resource constraints, poor execution, and so on

Start-up founders and teams should be watchful of potential failures, which initially manifest themselves as weaknesses while being symptomatic of more endemic causes



So, looking at some specific examples from the Indian context, having a wrong product, having a mismatch team, lack of unique selling proposition, declining passion to some extent, which is more visible in the Indian context, then the developed country context, neglecting to course correct, ignoring the need for guides and mentors and lack of timeliness, these all leads to inability to execute well and they also constraint the ability of the company to get performance linked funding.

Funding comes in when the concept is well articulated in the beginning and a prototype is well validated in the next stage. So, it is when you say wrong product, wrong product itself is caused by a misreading of market, incorrect product specifications, poor product prototyping, inadequate testing and validation and even incorrect product positioning. So, this gets us back to the main issue of having the right product staircase.

Ideation followed by prototyping followed by testing followed by validation followed by commercialization. So, the product staircase is extremely important. We should have the right product specification which does good ideation, does good prototyping, does testing thoroughly, validates and successfully commercialises. So, when this happens in a very time calibrated manner, you will find that start-up failures could be less.

Similarly, proper deployment of minimum viable product is also an extremely important thing. If you do a minimum viable product which is far thinner, far narrower than what is required, probably you will not be testing all the necessary features. And if you do it too robust, you could be jettisoning the advantage of MVP itself. So, the start-up founders need

to be watchful of potential failures, which come up as weaknesses and probably they are more symptomatic of endemic causes within the organization.

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Reasons for Start-up Failures in India - 4



More specifically:

- lack of appreciation of industry characteristics,
- the deeply embedded nature of unorganised sector,
- local cultural characteristics,
- underestimation of costs of customer switch, and
- challenges of customer acquisition

have contributed to serial failures in certain industry structures

Overspending of resources and under-recovery of costs constitute twin reasons for failure of many start-ups, irrespective of the domain, and in addition to case-specific reasons:

- Peppertap, LocalBanya, and GrocShop in the groceries space
- iProf and Purple Squirrel in the online education space
- Educomp, Career Point, Career Tree, CL Educate, Tree House Education, and MT Educare in the listed educational entrepreneurial space
- Truckmandi and Parcelled in the logistics space,
- Tiny Owl, Zupermeal, iTiffin, BiteClub, and Zeppery in the food delivery space
- Fashionara and Ladyblush in the cosmetics and fashions space,
- Autocab (which tried 3-wheeler auto hail application), and
- Doormint (laundry service)

It appears that aspirations of rapid growth have, in many cases, led to uncalibrated expansion of operations, skyrocketing operational costs, and negative profitability. More calibrated growth could have helped at least some start-ups succeed rather than fail.

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NPTEL

You will see some of the logos which reflect some of the failures or declines that have happened. In the grocery space, Peppertap, Localbanya, they have been pioneers but not successful. In the online education space, Iprof, Purple Squirrel, they have not been successful. In fact, in India, education should have been a roaring market for online education. But both in terms of private unlisted start-ups, as well as public listed start-ups, the education field has not thrown up many successes except BYJUs.

So, in the public listed space companies like Educomp, Carrier point, Carrier Tree, CL Educate, Tree House education and MT Educare, they all have come up with good public issues but actual performance has not been supported, resulting in low rating in stock market. In the logistics space, we had Truckmandi and Parcelled, which came up with the innovative logistics models, but were not very successful.

In the food delivery, while we have successful Zomato and Swiggy, we also had Tiny Owl, Zupermeal, iTiffin, Bite club and Zeppery which had to kind of prune down their operations substantially. So, some companies have certain additional advantages which they have developed over a course, like having a central cloud kitchen has been successful for Swiggy. So just substitution of a physical delivery model by digital delivery model has provided initial foothold, has not insured success.

Similarly, in the cash and the cosmetics and fashion space, fashion era and Lady blush, they failed. Autoncab which tried the 3-wheeler auto hail application that also did not succeed. In the laundry service area, Doormint did not succeed. Therefore, it is not that being first to market is the complete success, first to market is necessary, right product choice is necessary but again there is more to it than what can be explaining on the top of the mind in terms of thing. So, in some cases, uncalibrated expansion of operations, skyrocketing operational costs and negative profitability, they also have caused the decline of start-ups.

So one of the takeaways from this is that we should disrupt the markets for success, but that should not be at such levels that we should disrupt ourselves because when you do deep discounting, and get into a situation where every click is translated into a business opportunity, you may be doing it with the huge level of discount, lots of bundled offers and imprudent expansion of your delivery space.

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Disruption for Success: Not Self-disruption to Failure

One of the important factors for start-up success is their ability to disrupt existing products and services as well as industry structures.

In this quest, start-ups tend to be maverick and adventurous. The urge to be different and disruptive should not, however, be allowed to result in self-disruption.

There are unfortunately many examples of brilliant ideas and emerging models of start-up and entrepreneurial firms getting derailed by disruption (rather, self-disruption).

Start-ups also must be cognizant of the fact that disruption could be a competitive tool in the hands of competitors as well, start-up or established.

Although not comparable, the manner in which laptops disrupted the personal computer market but are now finding disruption from tablets, convertibles and large smartphones illustrates that:

- disruption is a good entry strategy for a start-up but such a start-up also needs to guard against complacency, and
- A start-up must develop competitive shields to protect itself through the proof-of-concept and growth phases.

For disruption to be successful and provide sustainable competitive advantage, start-ups must adopt a set of holistic success factors.

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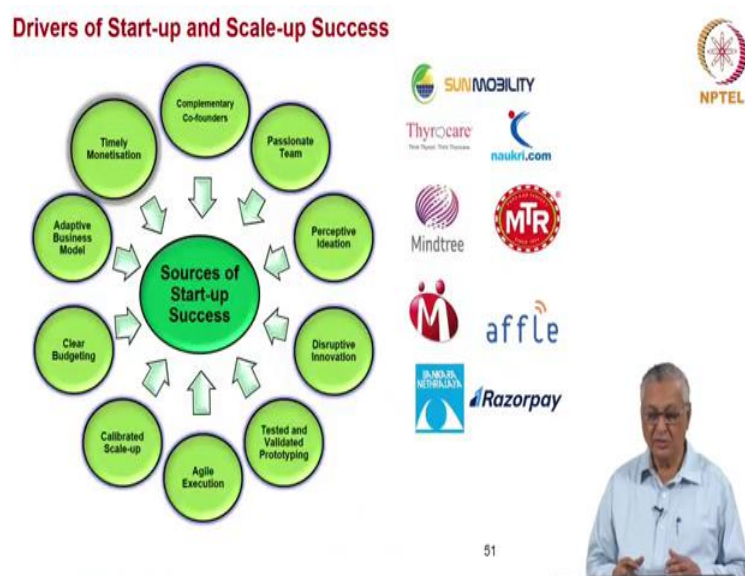


So, you should develop the existing products and services and industry structures. But in our attempt to be different, in our attempt to be disruptive, we should not lead to disrupting our own businesses, our own business models. So, there are many brilliant ideas, emerging models of start-ups and entrepreneurial firms getting derailed by disruption or rather self-disruption. Start-ups also should be cognizant of the fact that just as disruption is a factor for this company to enter the market, there could be competitors who must be using disruption to disrupt the other start-ups.

Therefore, disruption is a potent weapon not only in the hands of the start-up but also in the hands of other competitors. Example, laptops have disrupted the personal computer market just as personal computers have disrupted the mainframe market, but laptops themselves are disrupted by tablets, convertibles and large smartphones. So, it illustrates that it is a good entry strategy, disruption is a good entry strategy in the marketplace. But it is not a sustainable strategy unless you are guarding yourself against complacency. Therefore, every start-up must have competitive shields to protect itself through proof of concept and growth phases.

So, I will again circle back to the same product staircase example that there is no substitute for doing those five steps of start-up journey in a perfect manner, in agile manner, in prudent manner that is ideation, prototyping, testing, validation and commercialization. Therefore, start-ups must look at a set of holistic success factors. It is the whole paradigm of business management that the start-ups must look at, obviously, with innovation and disruption as the twin engines of development, but they should look at the total business model as well.

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So, while we have looked at several reasons, why start-ups fail, we must also look at the mirror images of those failures as being the success factors and also try to kind of codify that. So, the first start-up success factor is complementarity of co-founders. When two co-founders or more than two co-founders join, they bring complementary skills, one person is good in technology, other person is good in marketing, one person is good in long range thing, one person is good in short term tactical execution.

So, this kind of complementarity skills of co-founders helps a start-up very much. Second, passionate team which shares the dream of the founders and works with an equal passion, and the third factor, perceptive ideation. You should be empathetic to the customer need and come up with solutions that exactly match or improve upon the customer need. Fourth one, which we will discuss further in, from a technological perspective disruptive innovation.

In this session, we looked at disruption as a market phenomenon. How markets get disrupted? How various phenomenon other than new products and new innovations give us triggers to disrupt the market. But in a forthcoming session, we will talk about the disruptive technological innovation as the main theme for start-up success, then tested and validated prototyping, agile execution, calibrated scale up, this is also very important.

There are companies which can achieve working capital management successfully by relying on incubators or by relying on pre-working capital funding by beta stage customers, we can do many things. But if you do not do calibrated scale up and look at the national launch for a product, where the results are tight, you may be ending up with grounding your own venture, therefore, calibrated scale up and clear budgeting are important and the business model must be adaptive.

Just as you as a start-up a founder are thinking of certain product innovation. Others also could be thinking of different product innovations, or the public policy environment itself may be changing, in which case, how do we handle, like for example, you have a tax consultant, who has digitized all the operations based on let us say, a whole set of exemptions, whole set of concessions, a complicated tax regime.

So, just as our honourable finance minister has done, the entire taxation structure, let us say is simplified with one tax level and without any need for exemptions, incentives, etc. Then the need for the entire business model goes away, so unless that tax start-up has got an adaptive business model, which retunes itself, so what should I do? I should be able to have an algorithm or an model, which tells the company, is it good for me to stay in the previous method of tax regime or should I switch to the simpler composite, one slab kind of tax regime, so that analysis it should be able to provide.

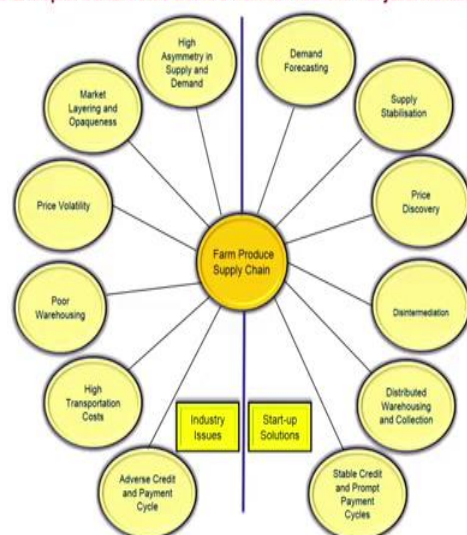
So, a tax consultant who is able to adapt his business model to a new environment that has arisen he is likely to be more successful. So, similar examples you can think of in many other areas where adaptive business model is extremely important, you may decide to do a smart

watch with certain health application. But if you find that Fossil and Apple are coming up with more innovative ideas in a faster manner, you should think of something different, should I have different kinds of applications in my smart analogue watch so adaptive business model is the core.

Then of course, timely monetization, you can obviously keep on working on your product till you achieve highest level of scale and therefore achieve the highest level of valuation and monetization, or keep monetizing in short percent, ensure that you keep yourself at least loss neutral. That is you fund your loss at least so that you are not constrained beyond a point at any point of time.

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How do Entrepreneurial Firms Solve a Market Problem? Ninjacart Example



So, before concluding, let us see how entrepreneurs solve a market problem. So, this question of solving market problem is a question of understanding the customer needs, but at times it extends into understanding the customer practices, the ecosystem practices. So, let us say, a company is set up to solve the farm produce supply chain issue, Ninjacart is one example of a start-up which has been established to solve the problem of farm produce.

Everybody knows that there are several problems in the agricultural sector, at least in India. The first problem is high asymmetry between supply and demand, what is demanded is not produced and what is produced is not immediately consumed, mainly because agriculture A is a seasonal product, B it is a perishable product, C it is a product which has to be produced hundreds of kilometres away, or even thousands of kilometres away and transported in a particular manner.

Therefore, there is high asymmetry in supply and demand by the sheer nature of agriculture and nature of urban demand. The second point is that the farm produce supply chain faces a lot of market layering and opaqueness. That is mainly because the way the asymmetry is built into the supply demand situation and the very nature of agriculture which is within quotes “a poor persons avocation” keeps the whole agriculture as an indigent sector, which is subject to several vicissitudes including natural vicissitudes, including lack of financial strength, lack of solvency, debt-trap various other issues.

So, this has provided a lot of scope for different levels of layers, which can so to say exploit the situation. So, there is opaqueness, so the farmer does not know what exactly is the selling price for his product. Similarly, the buyer does not know what exactly is the cost of production, there is so much of cost layering that happens because of the market layering and the channel layering that happens in the supply chain.

Then we have price volatility, if there is a seasonality of rain that does not happen, there is price volatility. You find for example, that suddenly the price of onions double themselves very quickly within a matter of weeks or if there is a logistics breakdown or if there is floods in one region, then the price of products go up. So, there is a huge price volatility because there is no inventory cushioning mechanism which exists in agriculture to the extent it exists scientifically in a consumer goods.

Poor warehousing practices, I do not think we have got warehouses which really protect the agricultural produce and much less we do not have the kind of cold chain infrastructure that is required for perishable agricultural products. High transportation cost, we discussed that mostly loads in Indian go full or part full in one way and come empty the other way. So, there is no return mechanism that is equivalent amount of goods do not come back from the urban system into the rural system for justifying one way of transportation loading.

This is apart from all the other entry check then octroi the previous system, those kinds of transportation bottlenecks. Then the credit and payment cycle itself is adverse, so which means that the industry has got several issues. So, if you want to set up a start-up which will solve this problems, so you must do certain things which will solve the customer problems.

First, the asymmetry in supply demand has to be fixed by having a good demand forecasting methodology. You should have a good supply stabilization platform to ensure that you are not subject to the vicissitudes of nature as well as the intermediaries, then you should have a

proper methodology for price discovery, you should disintermediate as much as possible, so that the farmer discovers his right price without too much leaking into the intermediate system.

Then we should have distributed warehousing and collection system infrastructures, so that the costs of distribution and transportation are minimized, not only that the agricultural produce is well preserved. It should also entail a good stable credit and prompt payment cycle so that the start-ups should have arrangements with other co-financing institutions, or have its own ability to tell farmers that you give me the produce I will give you cash on delivery.

So that the farmer is able to join your ecosystem and become a virtuous farmer who is able to supply produce in a good manner. So, when a start-up starts solving the problems which are inherent in the informal system with a clear and clever digital solutions with good analytics and good financial support and good disintermediation, it is solving a national problem and society's problem.

Therefore, the start-up saga is not merely one of setting up a company and then taking forward creating wealth, valuation. It is also related to solving some of the society's vexatious problems through ingenuity, product ingenuity, as well as service ingenuity, based on digital platform as well as other technological innovations. So, we will look at those aspects as we go forward in the next few sessions. Thank you.