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APPLYING HUMAN-CENTERED TECHNOLOGICAL APPROACH FOR SUSTAINABLE BUSINESSES IN INDIAN INFORMAL ECONOMIES

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ABSTRACT

Informal sector in India is growing rapidly with the urbanization of the cities and increasing needs from its citizens. According International Labour Organization (ILO) report 2012, most of them are immigrants or laid-off workers, work for an average 10–12 hours a day, and remain impoverished. In India, street vending makes up 14% of total (non-agricultural) urban informal employment (ILO 2012). Although informal sector in India is majorly being represented by street vendors. They are exposed to harassments, advocacy issues, financial instability, livelihood related issues and many more. This has a direct impact on the sustainability of their businesses. Also, diversity in the methods of business adds to more complexity in the ecosystem. However, there have not been many attempts to bring about positive changes in the businesses of street vendors. This study was undertaken at the Digital Impact Square (DISQ), a TCS foundation initiative. The Author of this paper is presenting it by having worked on the project in the capacity of a Design Lead and mentor. The aim of the study is to bring certainty in the fruit vendors' business by applying human centered technological approach and analyse the outcome. The study uses primary and secondary data collected and analysed using human centered design approach to represent the mindset of street vendors in Nashik. The sample size for the research includes 80 fruit & vegetable vendors. The paper also includes the findings of an experiment conducted with 3 selected fruit vendors in Nashik. The insights from this study can be generalised for other geographies, as the study addresses both the human side of core issues in their business operations and potential technological interventions.

Keywords: street vendors, sustainable business, technology

1. INTRODUCTION

“Street vendor” term represents, an individual who is self-employed in informal sector, earning their daily wages by conducting any type of business on the street on a day to day basis. These businesses can be stationary or mobile without permanent structure or place. These individuals provide goods and other services to the people of the city at convenience, low price and a range of quality options. There are various different types of businesses in the ecosystem including, vegetable, fruits, cloths, utensils, barber shops to food stalls.

The tightly knit ecosystem of street vending in India, includes government administration, political parties, Town Vending Committee (TVC), unions, citizens, hotels, vendors, policy makers, municipal corporation, encroachment department, local *goondas*¹ and many more stakeholders at a time. During the research, it was observed that the value exchange happening at any point of time between these stakeholders is significantly dynamic. It has a direct impact on the livelihood of these street vendors and more so on their businesses.

Out of different types of street vendors; the subset of vegetable and fruit vendors was selected. Considering, the overall population, number of daily interactions with the customers, proximity of the vendors, number of transactions on daily basis, and dynamic nature of their business. During the research, it was observed that the street vendors spend majority of their time conducting business the street, in order to earn merely 100-200 rupees. This excludes preparations for business, buying raw goods, their time at home, managing their day to day household, etc. During the research, it was found that around 20-30% of their income goes in managing the risks at the business place like; encroachment, local nuisance, bribe, waste, etc. Different weather conditions also impact the businesses. For instance, street vendors who are selling food items get more business around winters more than summers, any type of street vendor faces losses during monsoon season due to uncertain and unfavourable weather conditions.

A day in their life consists of activities like; procurement, setting up, selling, transporting, attracting customers, negotiating prices, etc. Out of these activities, most important is building trust with customers, in order to have a steady and certain flow of business from them. Trust building includes, giving better deals, having personal connects with customers, increased number of interactions, convenience and quality assurance.

The sustainability of business for fruits & vegetable vendor, is very important as it helps them come out of their daily struggles and earn decent living. It also helps them achieve their aspirations toward respectful livelihood and to have an identity in the society. For continuous profitable business, surety in daily earnings, having set number of customers coming & buying produce, having credit line set with the traders; becomes very important. This leads to the significance of “certainty” in the business, as everything depends on it. The certainty in business for fruit & vegetable vendors, has various dimensions to it. That includes, customer base, credibility in the ecosystem, sustained sales, lower waste, better procurement strategy, financial strategy, and selection of business. Uncertainty in business is the most concerned area that needs to be addressed for any street vendor to be sustainable at any stage of business. The study tries to address the challenge by analysing and implementing interventions with fruit vendors in Nashik.

2. METHODOLOGY

For this study, the data was collected from around 80 fruits/vegetable vendors majorly in and around Nashik and Pune-Mumbai. Total of 6 unions were part of the study across all the three cities. The sample included stationary and mobile hawkers, sitting in the market and on the streets. The data collection was done on business sites, workshops, and other hawkers’ union gatherings. For the research, human centered research techniques like; brainstorming, unstructured interviews, personas, a day in a life, card sorting, and shadowing, were used. The data was synthesized in the form of ecosystem map, value exchange map and giga map. The pain points, aspirations and insights, were extracted using transcription of the interviews and grouping method. Although, the collected data was qualitative. It was quantified with actionable insights for the experiment. In order to enrich the finding co-creation workshops were conducted. The findings of the research were validated with experts, vendors and unions. The implementation of the technological intervention was carried out with 3 fruit vendors in Nashik. The selected candidates were chosen on the basis of their business type, day to day customer base, smartphone user, middle aged and have at least 3 years of experience.

3. LITERATURE REVIEW

Literature review was done to understand the nuances of street vending business and customers behaviours in the context of buying experience and of street shopping experience. In order to bring certainty in the business, it was very important to understand, how do they sell? What do customers expect? What are street vendors’ technique? What are customers’ buying psyche?

(David Mchardy Reid, Eugene H. Fram, Chi Guotai 2010) studied the operations of 80 street vendors in Da-

¹ Goonda: a hired thug or bully. Hindi street-language for a criminal.

lian, China. It shows their operations (e.g., buying, selling, and merchandising) are very similar to those of permanently anchored small retailers, and consequently they should be able to make similar societal contributions.

(Meshram, Kanika, O Cass, Aron 2010) suggest that street food vendors gain competitive advantage through their price based value offering while, whereas restaurant owners compete against street vendors by offering superior performance value. However, both firms seek advantages by maintaining close relationship with their customers.

The vendors in the street market understand how to sell products to target customers and how to emphasize commonality with the mainstream markets and where the difference lie (Emslie et al, 2007)

Walsh, J. (2010). In terms of the marketing mix, while there is some flexibility for smart street vendors to vary the product and the place where operations are conducted, it is clear that price is the variable which is the easiest to manipulate, and the one which is most commonly changed. Interestingly, research indicates that Thai consumers are keen to demonstrate that they are good at negotiating price and understand the value of a product: they are, generally, willing to pay more for a higher quality item and also expect to pay less for a lower quality item (Emslie et al, 2007) (Walsh, J. 2010).

According to Dholakia (1999), the rationale for shopping is making physical visits to a shopping site. It is considered as a household task as well as a form of recreation, relaxation and entertainment. Shopping is also considered to have the most positive attribute of being a leisure activity along with work (Dholakia, 1999). Study suggests that consumers of Indian unorganized retail market do not require the service paraphernalia offered by many retailers. Store environment plays a vital role for store patronage and repeat purchases which includes convenience, value for money products, etc. Sinha & Banerjee (2004) Terblanche & Boshoff (2006) suggested that retailers will have to accept that it is not only what they are marketing but also how it is done. The personal (face-to-face) interaction between retail staff and shoppers is of critical importance.

Das & Kumar (2009) studied the impact of sales promotion on consumers shopping experiences. A major finding reveals that keeping product satisfaction constant, sales can be improved by enhancing shopping experience which includes convenience of shopping, ease of locating products, easy check in and checkouts, customer friendly salespeople and customer friendly policies. Secondly finding reveals that purchase decision for the same product under same promotion at different stores may vary because difference in shopping experiences provided by different stores. Further this study shows that promotion plays a limited role on consumers buying behaviour where only small percentage of people are attracted to such sales promotion and wait for it. Study lastly emphasizes on the importance of shopping experience (ease of shopping, parking space, convenience etc.) for positively impacting consumer buying behaviour.

It was observed in literature review that customers expect, proximity, place of business, convenience, better deals, better quality and assistance in shopping. Customers also consider street shopping a leisurely activity. Interpersonal relations positively impact the buying behaviour. On the other hand, for street vendors, arrangement of the goods, better pricing, place to hawk, personalised deal for customers and personal connects with customers ensure certainty in business eventually bringing the sustainability.

4. STAGES OF BUSINESS

At any point of time, street vendor takes around 4-5 years to build credibility, trust and sustainable business in one ecosystem (area/society/city). In this cycle, they go through the cycle of Start, Sustain and Scale phase. Each stage here in the life cycle of street vending, is significant because it adds to their experiences and expertise in terms of conducting business. These experiences and expertise can broadly be defined in terms of procurement, communication, relationship building, negotiation skills, business acumen, finance, logistics, operations and more.

4.1 Start

This stage usually lasts for initial 4-5 years for any vendor entering the street vending ecosystem. It consists of activities like; figuring out right business, place to hawk, union support, bribe to the local authority, goods procurement-storage, etc. Initial days are of struggle to the hawkers, as he tries to find a place in the ecosystem and getting the know-how of the vending business. In this stage, he is most vulnerable due to his lack of experience. Majority of the vendors found to leave this profession in this phase. Hawkers are more experimental in this phase with the type of businesses that they conduct. E.g., changing the goods they are selling, changing the place of hawking, associating with different unions and labour organisation for support and security. This is the phase where financial security is needed the most.

4.2 Sustain

By this time, hawkers become comfortable with the surrounding and know how to work around it. Few things that are seen to settle down for them in this phase are; finalised business type. Proper customer base, a dedicated place to hawk, credit system in place with traders for procurement of the goods, relation with encroachment department, better communication skills to attract customers, financial literacy, etc. Majority of the vending population can be seen in this phase for the lifetime. This has various aspect to it; saturation at a time with business, comfort level of the vendor with the surroundings, not being able to manage existing business due to high volume of customer base, lack of financial options, etc.

4.3 Scale

This phase is something that very few vendors are able to achieve. These vendors usually have monopoly over other similar businesses due to their unique experience offering, popularity, product quality, competitive advantage, unique product offering, etc. Vendors in this phase, have their own shop, regularly increasing customer base and staff who is working for them. Majority the vendors envision this stage to come in their business when they start initially.

5. THE EXPERIMENT

The experiment was conducted in order to achieve the higher and sustained customer base. As it was found that vendors face loss in their business due to; no clear foresight to the day, week or month, wastage of produce, unclear understanding of market trends, competitive rates and unique positioning of the offerings. For the experiment, fruit vendors were given, specific insights in terms of arrangement of fruits for the day to come, customised bag with unique number printed on it (for more regular customers, tags printed with the unique number (for less regular or new customers), better lighting equipment (White LED), and training to adapt to new platform. Also, co-creation workshop was conducted to come up with promotional deals for regular customers from vendors' side.

In order to see the on-field validation of the findings and the effect of technological intervention on sustainability. The daily transactions of 3 different vendors were recorded on a digital platform and analysed for a month. Various analysis was done and given to vendors and customers like; daily sales report for vendors, weekly receipt & insights into the buying pattern for customers with suggestions, discounts to specific customers according to their purchase history, insight into trending fruits in the area to the vendors and today's market price of the produce to vendors.

6. FINDINGS

During the research and the month of the experiment, lot many insights were uncovered. It covers specifically the vendors doing the business of perishable goods (Vegetable and Fruits)

6.1. Findings of the research

For vegetable vendors, moving to fruit business is a promotion and looked at as more respectable and superior amongst the both. Vegetable vendors have as much as 60% margin whereas fruit vendors have 40% margin in the business but comparatively high valued transactions. Non-immigrant vendors are more value driven in the ecosystem and likely to conduct the business in the neighbourhood. Due to the only means of business, confiscation of goods and cart lead to vendors dwelling in anti-social activities. Due to lack of money on hand at any point of time, goods bought by vendors are on credit system. On the other hand, customers look for convenience and cheaper prices above all the other aspect due to informality of the business. Because of daily struggle of finding the new vendor, Customers usually have set of vendors from whom they buy regularly but there are chances for rapid dynamic changes. For vendors, lack of identity in the ecosystem and uncertainty in the business lead instability in their livelihood

6.2. Findings of the experiment

Customers felt that they were given special attention with the unique identification number. Vendors were ready to give definitive discounts because now they knew the value of customer coming to them. Customers came more often to the same vendor for buying goods even though they were not regular customers. The arrangement of fruits and overall outlook of the cart, led to higher sales and credibility. Customers looked beyond just the one time transactional conversation and got involved in the conversations about upcoming fruits and specific fruit demands. Vendors with the analysed data, were able to take better decision in terms of procurement, waste management, strategy for the day, and foresight to maximum footfall.

7. SUGGESTIONS

Technology can be a driver for bringing formalization in the ecosystem. The analysis of collected data on larger scale, can give formalized way of defining informal sector. The analysis can be in terms of, area wise earnings, demand, supply, population benefitting from the platform, total revenue estimation for municipal corporations, local GDP and local consumption rate. The data collected via platform can also be utilised by authorities in order to bring even distribution and management of street vendors across the city. The data can bring transparency in the ecosystem, enabling the vendors with evidences for advocacy and better policy formation. Evidences generated by the platform can be utilised by financial institutes to bring about financial inclusion for this population. The platform can be extended to other businesses in street vending with few modifications to attain larger impact and scale.

8.CONCLUSION

Street vendors across India, are progressive in terms of adopting the new business and strategy in order to maximize the profits. They still lack the use of technological approach to reach to the maximum potential of their own business and their ability to thrive. In the ecosystem, it is seen more learned and literate vendors are entering. The technological approach can change the way street vendors conduct their businesses and bring sustainable way of doing the business. Technology can help attract more customers, keep track of their finances, keep the waste lower and meet their personal goals as well. Informed decision making can lead to risk mitigation for the vendors, when they are exposed to numerous uncertainties. The Sustainability in the business can really be achieved via technological medium. The findings here give very definitive steps that can be taken in order to maximize the profits and bring certainty in the business.

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