

Role of Institutions : A Case of Plastic Industry Entrepreneur

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Abstract

Entrepreneurial effort depends on self-efficacy. Own skillset is a part of self-efficacy. The present case study brings out the role of ambition, self-efficacy, and attitude towards entrepreneurship in venture formation. The persistency is evidenced when an entrepreneur tried, failed, learnt from mistakes, went back to industry to learn, and attempted again.

Beyond the traditional aspects of entrepreneurship, this narrative research points to the role of educational institutes in promoting nascent technology entrepreneurship, the role of financial institutions, and natural calamity among others. The entrepreneur in this case asserted that the early childhood stories of his father's admiration of entrepreneurs, and the news of entrepreneurial achievements were motivating factors for career choice. Initial failure, subsequent re-learning, institutional support, and continual education are pivots of this research. However, the entrepreneur's reflection brought out how customers and suppliers try to take advantage of a new firm due to information asymmetry and bargaining power. Though the information asymmetry issue in institutional finance to entrepreneurship is well documented, an adversarial initial relationship among new firm, customers, and suppliers are less researched upon and is an opportunity for future research. Firm survival depends on responding to such challenges of market entry, network-dynamics, and information asymmetry.

Keywords : Intention, firm, Odisha, performance, survival

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Plastic is ubiquitous in daily life. Plastic industry in India started registering growth in the early 1990s (SAATRA Capital, n.d.; Saurabh & Saurabh, 2009). It is estimated that about 75% belongs to the small scale sector. The industry growth is punctuated with rapid growth during initial period along with the policies of liberalisation, privatisation, and globalisation. The growth of the plastic industry is estimated around 13% during the period 2015–20 (Gupta, 2020). India is one of the largest consumers of plastic though the per-capita consumption is less. Plastic industry also faces challenges related to recycling, toxicity, environmental issues, and sustainability. By the year 2021, seven public and 140 private limited companies were operational whereas 79 companies were inactive in the state of Odisha (Fliar BI, n.d.).

The Central Institute of Plastics Engineering & Technology (CIPET), subsequently known as Central Institute of Petrochemicals Engineering & Technology (CIPET) was established in 1968 by Government of India at Chennai. Its role included academic and entrepreneurial skill development for polymer and allied industries.

However, during the early 1990s, the industry was being established and the technology was nascent. Entrepreneurial career choice during such a context would require conviction. Three roles of an entrepreneur as creative-destruction, market-maker, and alertness to opportunity could be anticipated in this scenario. Innovation in the field of products and technology would destroy existing market equilibrium, alertness of entrepreneur to new

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opportunities would create new markets (Hebert & Link, 1989; Kar, Mishra, & Mohanty, 2014). Venturing into a new technology and upcoming industry sector presents significant risk.

Technology entrepreneurship initiatives are influenced by entrepreneurial orientation, regulative environments, normative conditions, culture, and economic cycles (Urbano, Guerrero, Ferreira, & Fernandes, 2019). Such findings are equivocal, indicating further study on the dependence of technology on the spatial-temporal pattern (Qian & Zhao, 2018). Similar set of conditions may not result in similar outcomes. Firm failures are also caused by political risk, macroeconomic conditions, technology policies, industry dynamics, and firm-related factors (ownership, intent, approach, the current stage technology, and capability development) (Karabag, 2019).

In the presence of such contradictory and complex research findings, it is important to understand how a technology entrepreneur has lived through the experiences. The present narrative research needs to be viewed in the historical background of plastic industry in India and Odisha. Specifically, the technology and the industry were emerging; the economy of Odisha was not a conducive market for a technology venture; the entrepreneur did not have a substantial socio-economic capital or family background in business. The entrepreneur of this narrative research only possessed human capital of education and entrepreneurial orientation. How an entrepreneur navigates such a complex context needs explanation through an example. A purposive literature review presents the framework of this narrative research.

Literature Review

Role of institutions at various stages such as intention, formation, and performance of entrepreneurship have been studied (Urbano, Aparicio, & Audretsch, 2018). Governments bring regulations and change institutional framework to support entrepreneurship. The role of educational institutes has evolved over a period to provide various kinds of support to entrepreneurs. Universities now are involved in entrepreneurship education, incubation, early support, and knowledge transfer among other services. However, in this present study, there was no such support. The context only provided news of entrepreneurial achievements. At the same time, the relationship of institutions and entrepreneurship is complex and unequivocal.

The influence of entrepreneurship education on entrepreneurial education is not conclusive. Nascent entrepreneurs anticipated more networking and coaching rather than lectures (Küttim, Kallaste, Venesaar, & Kiis, 2014). Networking was identified as a critical success factor for entrepreneurship (Hoyos-Ruperto, Romaguera, Carlsson, & Lyytinen, 2013). Network influenced survival of new firm (Littunen, 2000; Watson, 2007). Beyond networking, venture success was attributed to entrepreneurial alertness (Adomako, Danso, Boso, & Narteh, 2018). Regional growth depended on entrepreneurship and innovation through network dynamics (Huggins & Thompson, 2015). Formal network helped in resource acquisition and survival to a greater extent compared to firm growth (Watson, 2007). Network helped in gathering additional information, weakly tied network was used for recruitment (Chell & Baines, 2010). A network with a high proportion of kin and homogeneity is identified as a critical disadvantage (Renzulli, Aldrich, & Moody, 2000). It was also proposed that the firm size determined networking behaviour and outcomes, at least in small and medium industry context (Wincent, 2005). The scale of entrepreneurship and performance were also influenced by networking activity (Chell & Baines, 2010).

Information asymmetry influences various aspects of entrepreneurship. Entrepreneurs have more information about themselves and their organisations as compared to others. Asymmetry had been studied in case of small and medium industry finance (Bruns & Fletcher, 2007; Dehlen, Zellweger, Kammerlander, & Halter, 2014), venture capital funding (Glücksman, 2020), and crowd funding (Courtney, Dutta, & Li, 2016). Trust became essential to avoid such issues (Kautonen, Fredriksson, Minniti, & Moro, 2020), and relationship based lending was used (Behr & Güttler, 2007). Many times, less formalisation and documentation availability in case of a new firm does not generate equal level of confidence (Trönnberg & Hemlin, 2014). The role of information asymmetry has been extensively researched in case of institutional credit decisions. The role of other information sources, soft-information, and decision biases by bankers were some of the manifestations of such information asymmetry (Cassar, Ittner, & Cavalluzzo, 2015). The inability of the entrepreneur to assess the potential of external entrant influenced the exit choice as well (Dehlen et al., 2014).

Institutions transacting with a new firm are likely to have inadequate information about the firm. Conversely, a new firm also may not have adequate information about the organisations with whom it is transacting. Information asymmetry can be bidirectional. A new firm has to acquire sufficient market information which is time consuming and can have associated cost. Less information can be costly to the new firm. Literature is scant on this aspect highlighted by the entrepreneur in this study. We argue based on the entrepreneurs' statement that the network is not often sanguine about a new firm formed. Gathering of information about price level, quality, delivery capability, and other significant operational parameters from various suppliers, customers, and competitors take considerable time. This was also the primary reason why entrepreneurs were not able to differentiate their product or services (Kar, Subudhi, & Kar, 2016). The assumption that the entrepreneur starts a new firm with perfect information about the market is also debatable. More likely, the entrepreneur starts with partial information and spends time in acquiring market information and then creates a competitive position. However, during this process, information asymmetry can act against the success of the entrepreneur.

Methodology

A narrative approach was taken through interview. The entrepreneur (Amiya Kumar Mahalik) was interviewed on March 10, 2018; the interview duration was 69 minutes starting from 2.20 p.m. The location of the interview was Technoplast's office, Bhubaneswar. The interview was recorded (MP3 file type, 22 MB), the transcript was prepared and edited by an independent researcher. The statements of the entrepreneur are presented in quotation marks.

Family Background, Education, and Experience

Amiya's father was an Executive Engineer with the Civil Engineering Department, Government of Odisha. His younger brother is working in Delhi and his sister is a teacher of Information Technology. He completed matriculation from Sambalpur, Odisha, and Diploma in Plastic Technology in the year 1991. He got married in the year 1999. His spouse was a housewife during marriage and upto 2010, after which Mr. Mahalik inducted her into business very professionally. Now she manages three group firms and they have a daughter.

Entrepreneurship

The intention to become an entrepreneur started during his studies in Central Institute of Plastics Engineering & Technology (CIPET, Chennai). During 1990s, plastic technology was new, and as a student he used to frequently get information that plastic entrepreneurs have made good money and became millionaires.

At the same time, Amiya's father was closely associated with different contractors. Those days contractors were real entrepreneurs; other entrepreneurship ventures were in establishing saw mills or cinema halls. His father had respect for entrepreneurs and used to tell him about them. One such story was about a contractor who was very ethical and paternalistic towards labours and used to clear payments of labourers in time. Amiya developed a sense of respect towards entrepreneurs and wanted to emulate them.

The Initial Failure

Immediately after completing his education, Amiya came back to Bhubaneswar and tried to establish a plastic manufacturing unit. At first, he went to various customers in and around the nearby industrial estate (Mancheswar, Bhubaneswar) area, and took orders. He tried to get those orders completed with the help of CIPET, Bhubaneswar. He thought government institutions would help, but unfortunately, he did not get any help. Then, he tried getting help from private organizations to create the mould and the product. He used to take very small orders but even these he could not fulfill. Then he realised, "I have to set up the industry first and then take orders. Otherwise, nobody will trust and I can't even fulfill the orders."

Employment and Learning

With this realization, he went back to the industry for employment. He worked with three different companies such as Lahoti, Caprihence India, and Shalimar Plastics. He observed that the companies were producing at a medium scale which he could not attempt. During those times, the thermoforming technology and products were new and he could visit a plant nearby, which used German technology. Amiya used to visit that plant often during lunch time. The workers there influenced him to set up a plant in Odisha. He made up his mind to take it up and came back to Bhubaneswar.

The Second Attempt

He did not have enough capital to invest. In the 1990s, Odisha State Financial Corporation (OSFC) was the only agency giving loan, but it had banned giving loans to plastic units because there were 35 units in polymer complex and all of them had become sick. In the year 1994 he started a unit with manual machines, with an investment of roughly ₹ 50,000. The money was from his father and a few known persons. The first unit was set up in the year 1994 (1994–2000) and produced plastic homeopathy bottles.

Mr. Mahalik admitted that during initial 2–3 years he depended entirely on his father's support, guidance, and finance. He incurred losses for the first two years as market acceptability was not there for his products. The dies prepared became useless, the machines were manual machines and were not cost effective.

The turning point came when a company manufacturing and exporting dental burs placed some order to pack their items for export. The export packaging had a quality problem. Amiya got their requirements, took some advance money and delivered the product. This attempt was a success. The dental burs manufacturing company could increase exports to different countries. Simultaneously, it increased profitability of Amiya's company and the unit became financially stable.

The Third Phase

From the year 1996, Mr. Mahalik started efforts to get an industrial land and could be successful in the year 1998 from OSFC. The land was earlier allotted to another industrial unit which became sick and could not pay back the loan. He could manage ₹ 10 lakhs loan for it. Technoplast in its current form was started in the year 2000.

A crucial period was during the year 1999. He had ordered and received the machines for a plant, but there was a super cyclone on October 29, 1999. No work could be done for 6 months; he could not service the loan repayments. The loan became non-performing-asset (NPA) in bank. The bank refused to advance subsequent working capital loan. He arranged funds and could bring the unit out of NPA, and the bank subsequently advanced working capital loan.

The year 2000 was a turbulent phase for Technoplast. Technoplast based its business on 3 major customers; Odisha Milk Federation (OMFED), Galaxy Medicare, and Odisha Synthetics. The contract was negotiated with the customers and the product was designed according to their requirements. Odisha synthetics became a sick unit. Galaxy Medicare product appeared easy to produce, but when Technoplast produced it, the stringent quality standards could not be met. However, the OMFED Ghee bottle design was the only success.

In 2004 Technoplast could get further refinance. It subsequently paid back the loans. The lender OSFC, was becoming sick, it searched for good entrepreneurs. Technoplast continued to be in their good books, OSFC continued to finance. Gradually, the product line and revenue improved.

Technoplast is now financially stable and loans have been paid. The capacity has grown multiple times. The fixed assets were about ₹ 1.5 crore in the year 2018; working capital was around ₹ 45 to 50 lakhs. The turnover was around ₹ 2.5 crores for 2018. There were about 30 employees.

Entrepreneurial Musings

Mr. Mahalik talked about his entrepreneurial experience and admitted that initially he had lot of confidence in technology, but he came to know of the actual process when he got into business. He realized that only technology was not enough, it was equally important to know how to manage. He did not know about costing, marketing, people, quality, and other issues. He said, “That time I thought that I could produce and somebody would happily take whatever is produced.” He came to know from customers that there were other suppliers who could produce cheaper and better quality products but he did not know if the customer's claim was true. The most important realization was, “Sometimes customers may help or bias the entrepreneur; suppliers may help or may take a huge profit from the entrepreneur and put her in trouble.” In essence, he realized that customers, suppliers, staffs, relatives, and bankers may help or hinder the entrepreneur. Mr. Mahalik continued to learn; he studied from Institute of Entrepreneurship Development, Xavier Institute of Management, Bhubaneswar, and the Human Life Centre, Bhubaneswar. He affirmed that these courses did help him to become a better entrepreneur.

Social Contributions

Techoplast's success has prompted others to enter into plastic manufacturing in Odisha. It has created entrepreneurs; three to four employees from this organization became entrepreneurs. They have contributed to Odisha's economy, more than 250 individuals have worked for this company over a period. The company contributed by paying tax, and electricity charges to the tune of ₹ 1.2 lakhs per month, professional taxes, and income tax from its employees. It all adds to the growth of Odisha.

Challenges of Plastic Industry

Technoplast also manufactures on the basis of volume for the retail market. Typically, a small trader cannot pay for the mould. So, Technoplast manufactures off the shelf products for general customers. Technoplast has its own set of challenges as well; it finds it difficult to scale up in terms of manpower, infrastructure, and technology. Plastic is a localized industry and the entrepreneur has to do everything. Customers are mostly from Odisha, and it is now trying to have some products for neighbouring states. Most of the customers (95%) are in the business to business (B2B) segment. Since plastic is a localized industry, it has volume constraints. Cheaper imports from China is not an issue. Technoplast is trying to strengthen technology to improve design, tooling, and quality, and trying to get into retail segment.

The Future Outlook

Mr. Mahalik clarified that there are four major segments PVC, plastic containers caps closures, films (polythene films), and moulded goods. Present scenario is good in Odisha. PVC segment is saturated, mould segment is growing rapidly, and per capita consumption is increasing. So, it is good for the local industry. Product transportation cost is very high. The plastic industry clusters in Balasore and Paradeep are having few loss making units but these are rare cases. Sometimes losses will be there. Mr. Mahalik advises, “The entrepreneurs without experience should get some experience in technology, marketing or in finance. Second most important aspect is that entrepreneurs should be mentored by a competent person.

Implications

A new firm with new technology and product in a new market faces challenges of information asymmetry. Customers of such a new firm are likely to negotiate on various aspects of firm deliverables including the price to reduce information asymmetry. It is difficult for a new firm to independently and immediately ascertain the veracity of

information provided by vendors or customers. Acting on wrong information may be costlier for a new firm. Entrepreneurs should invest their time and resources to evaluate purported market information such as price, delivery terms, quality, and other aspects before committing. On the other hand, the incumbent firms in a market should support the new entrant by fairly accepting the product and services, rather than creating an adversarial initial relationship jeopardising its survival. Secondly, entrepreneurs need to self-assess their own skillsets and continually plan to improve upon to influence firm performance. The overall learning curve of the entrepreneur and the new firm helps survival prospects.

Discussion and Conclusion

This case indicates that the entrepreneur had the right education, gained required skillset, started at the right time, and with a newer technology at that time. Few aspects such as entrepreneurial motivation from listening to admiration of entrepreneurs and stories of achievement, initial failure due to lack of anticipated institutional support, continual effort to learn from experience and institutions, and a possibility of getting misled by market actors stand out in this narrative research.

Both success and failure stories influence entrepreneurial intention but success stories have higher impact on it (Liu, Ma, & Li, 2019). Even television programs showcasing successful entrepreneurs have been found to influence intention and the perception of opportunity (Chinyamurindi, 2016).

The entrepreneur indicated a lack of support from institutions for his initial failure. Entrepreneurial failure is related to individual, local, and institutional context (Eklund, Levratto, & Ramello, 2020). Interestingly, the failure in this case was when the entrepreneur did not have a firm. He thought of his own firm after failing to produce individually. Failure has several related implications. Failure has stigma attached, it can reduce confidence, increase the fear of failure, and can lower the chances of re-entry. Conversely, failure can act as a learning opportunity and increase the chances of success in subsequent attempt. Detachment, acknowledgement and deflection are some proposed mechanisms for entrepreneurs to handle stigma (Walsh, 2017). The fear of failure is indicated as a temporary emotional experience (Cacciotti, Hayton, Mitchell, & Giazitzoglu, 2016).

Though the role of institution in entrepreneurship is acknowledged, quality of institutions, financial stability, small government, and start-up skills are more important (Bosma, Content, Sanders, & Stam, 2018). Compared to formal institutions, informal institutions have greater influence on entrepreneurship (Urbano, Aparicio, & Audretsch, 2018).

In this case, the entrepreneur indicated a felt need to start his own organisation after first failure. He also reflected on his simple belief that once produced, the products will be sold. His experiential learning helped him to overcome this belief. He supplemented his technology expertise with other aspects of managing the organisation. However, he realised that customers and suppliers can give inaccurate information to get advantage of a new firm. This aspect is alluded to in literature review under information asymmetry. The information asymmetry can create error in decision making and bias, causing an unfavourable situation leading to firm failure. A new venture can influence the existing market dynamics, not necessarily positive to incumbents; secondly, existing customers and suppliers can try to extract higher value from a new firm to its disadvantage. A closure investigation is required about the behaviour of existing firms to the entry of a new firm in different economic competitive environment. How do the existing competitors, customers, and suppliers react to the change of market dynamic as a result of new firm entry? Which kind of market accepts and which does not accept a new firm? These issues are worth future investigation.

There is a dearth of entrepreneurship cases in the Indian context. The non-academic publications unduly adulate or denigrate, without presenting a learning opportunity. In this context few case studies on continual search for business ideas (Kar, 2015), persistency, and experiential learning (Kar, Pathak, & Panda, 2018), efficacy (Subudhi, Kar, & Nayak, 2018), failure (Kar & Patra, 2017), business family issues (Kar & Tripathy, 2020b), emerging context (Kar & Tripathy, 2020a) are illustrative among others. However, such case studies have their own limitations as they depend primarily on the expressed opinion of the entrepreneur; the implicit, and unspoken aspects are difficult to extract.

Limitations

The limitations of a narrative research based on interview remains that the statements are to be taken as true, there is no defence against incorrect representation. The context can only be used as the criteria to judge. Secondly, though such interviews are investigative around the theme or context, they cannot be interrogative. The time and frequency of interaction with the entrepreneur is limited and constrains the study.

Scope for Further Research

The role of network is less examined in the new firm context (Huggins & Thompson, 2015). The case highlights the adverse impact on performance or survival due to information asymmetry on the new firm. Quantitative research and qualitative research on information exchanges between the firm and customer or supplier are going to bring deeper insight into the process.

Authors' Contribution

Prof. Brajaballav Kar conceptualised the case study focus, interviewed, wrote the first draft, and supervised the article. Satyaballav Kar worked on the literature review, analysed and reviewed the subsequent versions.

Conflict of Interest

The authors declare that there is no conflict of interest, financial or otherwise in this study.

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