

RESOURCEFULNESS OF FAMILY BUSINESS IN PENURIOUS ENVIRONMENTS

ABSTRACT

Bricolage and Effectuation are recognized as two separate, concurrent, and interchangeable methods for non-standard innovations in existing literature. The paper suggests that in a harsh environment, bricolage may be essential for entrepreneurs initiating family enterprises— i.e., small family businesses transition from bricolage to effectuation to develop and expand. The initial propositions in the paper were derived from an in-depth case study of a small firm in Delhi. The propositions were transformed into hypotheses and examined by surveying over 200 family business owners in India's Delhi and Kolkata regions. The survey's findings are consistent with the case study's conclusions. In a harsh resource-constrained environment, family businesses utilize bricolage to establish initial legitimacy before employing effectuation to achieve success. The paper elucidates the hypotheses using the Existence, Relatedness, and Growth Theory (ERG) and Socio-Materiality Theory (SMT).

KEYWORDS: Bricolage, Effectuation, ERG Theory, Socio-Materiality Theory (SMT), Resource Constrained Environment, Small Family Enterprises, Socio-Emotional Wealth (SEW)

INTRODUCTION

Recently, scholars have highlighted the need to compare the non-standard approaches (Scazziotta et al., 2023) to innovation and their relationship (Arend et al., 2015). Effectuation (Saravathy, 2024) and Bricolage (Baker & Nelson, 2005) are two non-standard methods deployed by the innovators (Fisher, 2012; Ghalwash & Ismail, 2022; Scazziotta et al., 2023). Effectuation is more of an inductive method of innovating, relying on control and flexibility based on available resources. Effectuation sharply contrasts causation, which is a deductive way of innovation relying on prediction and planning. Over the years, five core principles associated with effectuation are A. Bird in Hand, wherein the innovators decide based on available resources, knowledge, and network in contrast to the required means to achieve the goals. B. Affordable loss: wherein the innovators prioritize what they can afford to lose, leading to a focus on small steps and manageable risks. C. Crazy quilt: wherein the innovators work with those willing to bet on their idea. D. Lemonade: wherein the innovators turn challenges into opportunities through flexibility and adaptability; and E. Pilot in Plane, wherein innovators focus on “controlling the controllable” and worrying about predicting and managing megatrends. They focus on immediate actions rather than worrying about the distant future. Bricolage is a method of innovation that creates something from nothing through “making do,” usually with junk or discarded resources. A bricoleur works in an environment of extreme resource scarcity. Bricoleurs rely on three principles: A. Making Do: Bricoleurs improvise with available but junk or redundant resources at hand. B. Combine Resources: Bricoleurs combine these available resources to create innovative products or services. C. Bricoleurs do not get bowed down by scarcity and harsh environments and innovate their way out of constraints. In short, effectuation is about innovating from limited resources while bricolage is about innovating by repurposing redundant resources.

Effectuation (Saravathy, 2001)(Dew et al., 2009; Yang & Gabrielsson, 2017) is helpful in uncertain environments with limited resource availability, while innovators resort to bricolage (Baker & Nelson, 2005; Duymedjian & Rüling, 2010; Senyard et al., 2014) in an environment of extreme scarcity of resources, no access to markets, poor education and lack of processes (Busch & Barkema, 2021). Bricoleurs and Effectuators differ from engineers because the engineer will draw up the plan and acquire the resources required to execute the plan. An engineer-like approach, causation based approach, uses “standard resources” designed for intended use and acquired from the

market to help execute the plan. Bricoleur lacks access to “standard resources,” has no access to the market, and therefore repurposes “available,” “redundant,” or “wasteful” resources. For example, a standard way of building a table may be to first design a plan and gather necessary materials such as wood, paint, hammer, screws, and nails to construct a table. A Bricoleur can build a table from discarded wooden blocks, bricks, and leftover paint.

Effectuators use standard but limited resources to create the table. Effectuation, per Sarasvathy (2008), is "an entrepreneurial logic, a dynamic process of creating new things." There is not enough information about the market to the effectuator because of uncertainty, which makes it challenging to find the right customers and markets beforehand. Goals evolve, shaped by circumstances. Entrepreneurs prioritize controlling means—what they can influence (Sarasvathy, 2001), including personal skills/networks and firm resources (Barney, 1991).

Based on the discussions in the previous sections, there are certain commonalities between the two concepts. Both are based on- A. working from available resources and B. taking small steps with manageable risks based on what is workable. C. flexibility in changing paths when needed. Similarly, there are some differences between the two concepts: A. Effectuator operates from limited resources, but a Bricoleur repurposes resources. B. Effectuator operates through a social network, whereas the effectuator may be alone without any network c. Bricoleur is forced to take risks and manage adversity while the effectuator manages small risks.

The comparison between the two concepts suggests that Bricoleur is more concerned about creating and combining resources to create a product, but the effectuator is more concerned with serving markets using limited resources and a limited social network. This suggests that a plausible sequential relationship between the two concepts may exist, wherein bricolage is more about getting the product created and using that to get social acceptance and social network. The social network is then used to acquire limited resources, which are then used to effectuate the market success. In this way, there can be a sequential relationship between bricolage and effectuation. This contrasts with existing literature, where barring a few articles ([cite pathwala article](#)), Bricolage and Effectuation are considered distinct and parallel innovation methods with little overlap (Magobe et al, 2024; Welter, 2016).

The sequential relationship suggests *innovators initially use bricolage to escape harsh circumstances and then employ effectuation when they have standard but limited resources*. Businesses operating in challenging environments in emerging economies such as India typically get overwhelmed in resource-constrained environments with little access to resources, markets, skills, processes, and procedures. In some cases, even family members may forsake an individual. Many teenagers and children have to leave homes or fend for themselves. These harsh conditions can cripple cognitive and interpersonal abilities and making such individuals helpless with reduced self-efficacy and personal autonomy (Hiller et al., 2005; Witell, 2017).

However, some individuals and small businesses can innovate in harsh these conditions. Innovation may start small, using bricolage, and from there, a product may be created, which helps get social support. After overcoming harsh conditions, they get better support from family and social network and use effectuation to grow and survive through a family business route. In other words, these innovators begin with bricolage and then transition to effectuation after achieving a certain level of social legitimacy. Bricolage relies less on discovering the perfect mix of resources and more on leveraging underutilised, dispersed, or latent resources (Hirschman, 1958). The difficulty of operating in a harsh environment is overcome due to tacit and embodied knowledge gained due to lived experiences and environmental affordances (Molloy et al., 2020). Such knowledge and skills have non-cognitive character and are acquired “as part of habitus” and are developed through “empirical sensitivity” (Nayak et al., 2020). Such knowledge is often not “cognized” but helps in trials, error, and natural experimentation. Redundant resources in the habitat are repurposed using tinkering and experimentation, leading to bricolage (Baker & Nelson, 2005). Repurposing resources through bricolage helps build agency and confidence (Senyard J et al., 2014).

Bricolage provides agency by helping unravel “hidden skills” and social legitimacy. (An et al., 2018). Social legitimacy helps the bricoleur to acquire standard resources, including financial, human, and technological, which were previously hard to obtain (Cunha et al., 2014). The bricoleur no longer needs to rely on "repurposing resources" to innovate. The bricolage was initially a temporary solution out of necessity. As bricolage becomes successful, it becomes a device for exploring and creating new growth opportunities through collaborations. A better social network will give innovators more information about new opportunities and help exploit opportunities. Now bricolage transforms into effectuation.

Moreover, the experienced bricoleur is now learning to capitalize on growth opportunities due to standard yet limited resources through social networks (De Carolis et al., 2006). What was bricolage in the past has now transformed into effectuation. Effectuation is an effective way for smaller firms to perform better.

As mentioned earlier, there is some extant literature that has explored the sequential relationship between bricolage and effectuation (JPIM pathways study, XXXX). But these studies highlight that for successful firms the pathway may not go from Bricolage to effectuation to performance but from bricolage to causation to performance. However, we posit that in harsh conditions, for small firms born out of bricolage, effectuation could be the next step for them to improve performance.

We combine two theories - Existence, Relatedness, and Growth (ERG) theory (Alderfer, 1969) and SocioMateriality Theory (SMT) (Leonardi, 2013; Orlikowski et al., 2023) to explain how

bricolage leads to effectuation in harsh environments. According to the frustration-regression principle of ERG theory, when a person's growth and relatedness needs are not satisfied like for bricoleur, the person will regress to fulfil the basic needs, usually from the surrounding environment (Alderfer, 1969). In extreme resource-constrained contexts, the inability to satisfy relatedness and growth requirements may lead individuals to prioritize fulfilling bare "existence" needs from the local environment without much social support. In such context the person is likely to acquire non-cognitive knowledge (Nayak et al, 2022). The person may repurpose "available" and yet "redundant" resources to innovate and fulfil basic economic needs. The success in repurposing can help the individual fulfill the basic needs related to existence and then shift to relatedness needs according to ERG theory. Now, individuals seek legitimacy from those around them. The initial success also allows the person access to "standard resources"; as a result, the person may develop a greater desire to fulfil the relatedness and growth needs through the effectuation. To meet relatedness and growth needs, a person must tolerate uncertainty, as relatedness and growth mean going beyond the immediate. Given the limited resources, adopting a "means-centered" and a "flexible approach" to achieving goals is desired.

The article consists of three parts. In the first part, we do a qualitative case study of three innovators and their businesses. In the second study, we conduct a survey to test the hypotheses. In the third study, we repeat the survey with multisource data to overcome common method bias. This research begins with three detailed case studies of a family business that started in harsh conditions but became relatively successful through bricolage and effectuation. The three businesses are: a. "Dudhi Industry," b. "Indom" and c. Pahuja. All three companies are located in Haryana in India, around 70 kilometers from Delhi. These companies started with bricolage and then grew their businesses. Dudhi began from a tea stall and now manufactures gypsum plaster, plum plaster of

Paris, Plater Bond, FRP drain covers, FRP Gully Grating, FRP Innovative Planters, and FRP dustbins. The case study demonstrates that the entrepreneur initially used bricolage to create his company and then transitioned to effectuation to grow the business following the initial success. In the second study, we survey family business owners with limited resources. The survey was conducted in two regions of India- Delhi and

Kolkata. Approximately 207 small family business owners responded to the study. The third study was also a survey, where we repeated the survey but with multisource data. The performance was captured through customer satisfaction scores and objective sales growth numbers. The survey findings suggest that practicing bricolage led to effectuation, which enhanced firm performance. In other words, Effectuation acted as a mediator, linking bricolage with perceived firm and customer performance. In the harsh business environment of India, family is the first source of support, especially after successfully demonstrating the product. In addition, the family is the basic unit of Indian society. Therefore, most small businesses, mainly founded based on bricolage, in India are family based (Jayaram et al, 2013). Globally, it has been observed that family businesses can be differentiated from non-family businesses based on socio-emotional wealth. Since both surveys were related to family firms, we tested if socio-emotional wealth moderated the relationship between Bricolage and Effectuation. The moderating effect of Socio-Emotional Wealth (Gomez et al., 2007) on Bricolage to Effectuation. We found that Socio-Emotional Wealth (SEW) had a mild negative moderating influence on the relationship between bricolage and effectuation. The results suggest that effectuation mediates between bricolage and performance.

Our findings contribute to the current literature on bricolage and effectuation, stating that for small resource-constrained firms, bricolage to effectuation could be the way to sustain good performance. The extant literature suggests that effectuation and bricolage lead to better firm

performance for early-stage firms. But the sample for such studies was taken from resource endowed Angel and venture capital funded firms. There are no studies which capture innovation path of bricolage based firms funded from internal accruals. Extant literature is also silent on bricolage-effectuation path for better performance. The negative moderation effect of SEW is novel and counter-intuitive.

The article comprises five sections. Section 1 is the Introduction. Section 2 delves into prior research regarding the factors leading to effectuation and bricolage. Section 3 elucidates and outlines all the steps for conducting the study. Section 4 offers a synthesis and addresses our research inquiries. Finally, Section 5 deliberates on our findings and proposes avenues for future research.

THEORETICAL FRAMEWORK

Surprisingly, despite harsh resource constraints, many small and medium family businesses continue to innovate and grow in emerging economies (Wierenga, 2015; Hossain, 2017; Shepherd et al., 2020). The resource constraints and harsh environment could be attributed to intuition voids, which make it difficult for markets to function well (Khanna & Palepu, 2000). Innovators and businesses face severe constraints. First, many small businesses and innovators do not have the resources to participate in the markets, making it challenging to access inputs or sell the output (Back et al., 2014). Second, businesses and innovators cannot access “standard resources (Sydow, 2020).” Third, they do not have access to formal education to hone their skills, which can help them seek employment. Fourth, they lack the skills and know-how to convert input into outputs, like in a regular business. Fifth, most bricoleurs are socially excluded from the mainstream, before they produce the first product. However, many entrepreneurs have been able to innovate despite the harsh conditions. We combine two theoretical lenses of Existence, relatedness, and Growth (ERG) and “socio-materiality” to explain why some individuals can innovate in the harsh environments. . The ERG theory (Alderfer, 1966) recategorises Maslow’s theory of need hierarchy into three types of needs down from five kinds of strict hierarchical needs. The three needs relate to Existence, relatedness, and growth. Needs related to existence relate to basic survival and physiological needs that a person must address to exist. Relatedness refers to a person's social and

interpersonal needs. It could relate to connecting to family, friends, and society in general for belonging, recognition, relationships, and love. The third category of needs is related to a person's growth to realise human potential. These are related to the intrinsic desire for personal achievement, self-improvement, and developing better competence. The growth need equates to Maslow's esteem and self-actualisation needs. Alderfer states that there is flexibility in the hierarchy of needs, and a person can move back and forth from one need to another. Specifically, Alderfer (1969) highlights seven critical values related to flexibility. These are :

“P1. The less existence needs are satisfied, the more they will be desired. P2. The fewer relatedness needs are satisfied; the more existence will be desired. P3. The more existence needs are satisfied, the more relatedness needs will be desired. P4. The less relatedness needs are satisfied, the more they will be desired. P5. The less growth needs are satisfied, the more relatedness needs will be desired. P6. The more relatedness needs are satisfied, the more growth needs will be desired. P7. The more growth needs are satisfied, the more they will be desired.”

Applying P1 above- since innovators in harsh environment lack resources, initially their existence needs are not met and hence they are likely to focus on existence needs, which will force them innovate out of necessity by repurposing resources using bricolage. Applying P2 above-since most of such innovators are socially isolated their relatedness needs will be less satisfied and hence will have greater need to fulfill these needs. Apply P3 above- If the existence needs are satisfied the bricoleur will shift towards satisfying the relatedness needs through effectuation, because usage of social network is a critical difference between bricolage and effectuation. This is consistent with the critical element of ERG theory: Frustration-regression principle. This principle states that if a higher-order need is not fulfilled, the person may regress to fulfilling lower-order needs, which

may be easier to satisfy. We posit that the harsh environments in a country like India make it exceedingly difficult for innovators to fulfill their higher-order needs. Hence, they will shift towards satisfying their lower-level safety and security needs.

However, not all people with unmet needs may innovate. We complement ERG theory with non-cognitive notions of dynamic capabilities (Nayak et al., 2020). How do innovators and entrepreneurs acquire non-cognitive capabilities. According to Nayak et al., (2020), non-cognitive capabilities are derived out of “tacitly shared substrate of sensitivities and predispositions that precede cognitive representations”. These non-cognitive capabilities do not arise from formal education and direct cognition but through “affordances”, “habitus” and “empirical sensitivity”. In other words, the acquisition of capabilities is not a conscious process but such tacit capabilities are developed because of the environment. Hence capabilities acquisition is not purely an conscious choice of individual but environment plays equally important role in shaping these capabilities. Capability acquisition is a dynamic of affordance, habitus and empirical sensitivity, wherein affordance from environment provide opportunities for action. The acquisition of capabilities is a dynamic process that involves the interaction of environmental affordances, habitus, and empirical sensitivity. The principle of affordance suggests that objects might have uses beyond their physical and scientific properties. The appearance and invite of the object are more critical than fundamental scientific properties. Therefore, the local environments and available material include action possibilities influencing innovative behaviour. Affordance allows objects such as bricks, tables, and chairs to be utilised for various functions beyond their original design. Objects in the surroundings are not perceived as objects but as subjects. Affordance prompt human action. For instance, brick enables construction, a floor allows for walking, an apple encourages eating, and water encourages drinking. There may be several affordances associated with an object,

not just one. Bricks can be used for sitting, studying the mathematical characteristics of a cuboid, as a weapon, and for comparison with the colour red. These prompts or invitations are material ways of communicating with social or innovators and, therefore, possess human agency. An object can have multiple uses, but it is not infinite. Thus, in a situation, an object may be repurposed. Similarly, habitus is critical in forming predisposition of people through habits through life experiences of living in a habitat. Habitus decide how individuals perceive and reacts to the surrounding. For example, recent study (Gotz et al., 2020) demonstrates how topography of mountains influences personality trait, especially open-ness to experience. Habitus shape behaviors and decisions related to how material is shaped, and opportunities are created. While affordances are inherent in environment, empirical sensitivity helps individual to respond to the affordances. It is ability of individual to respond to subtle difference in the environment, many a times without becoming conscious. Just like son of a fisherman by having exposure to sea and practice of catching fish can develop a keen sense of space helping him to understand recognise tidal patterns and understanding time and danger according to position of sun, moon and waves. This in turn can help him navigate sea and finding good fishing spots (Shin et al, 2005).

Environment plays critical role in shaping capabilities as it not only offers affordances but also shapes development of habitus and empirical sensitivity. For example, one of the innovators studied as a part of case studies has been surrounded by machines and equipment since childhood, and he says, “The machines talk to me”. Citing a clear example of how the surroundings offer affordances. He comes from a working class-like habitus that values tools and instruments and hence values machines. While speaking to authors, the same person mentions an incidence where he could understand the value of scrapped machines and bought them at low price. He could apply his skills acquired over the years to refurbish the machines and use them productively, providing an example of empirical sensitivity.

Construction. Because “standard resources are not available, the higher motivation to do something leads innovators to try repurposing existing and redundant but readily available resources. Entanglement can enhance insights, flexibility, adaptability, and inventive solutions.

The entanglement of innovators with available material from the locality helps resource construction through affordance. The principle of affordance suggests that objects have uses beyond their physical and scientific properties. The appearance and invite of the object are more critical than fundamental scientific properties. Therefore, the local environments and available material include action possibilities influencing innovative behavior. Affordance allows objects such as bricks, tables, and chairs to be utilized for various functions beyond their original design. Objects in the surroundings are not perceived as objects but as subjects. Affordances prompt human action. For instance, a brick enables construction, a floor allows for walking, an apple encourages eating, and water encourages drinking. There may be several affordances associated with an object, not just one. Bricks can be used for sitting, studying the mathematical characteristics of a cuboid, as a weapon, and for comparison with the color red. These prompts or invitations are material ways of communicating with social or innovators and, therefore, possess human agency. An object can have multiple uses, but it is not infinite. Thus, in a situation, an object may be repurposed.

More interestingly, affordances are not obvious and emerge about the activities of those using the objects. Hence, a painter may use the brick to extract its color and use the color to paint a wall. Affordance evolves and emerges about the activities of those using the objects. Put differently, affordances are entangled when they are used, and they have relational properties. Affordances help us understand how humans interact with the material world. Innovators will likely reconstruct

resources in a resource-constrained environment because they desire (a) To overcome a harsh environment and move to a higher level of need. (b) Increased familiarity produces tacit and embodied knowledge because prolonged exposure allows them to repurpose the material and find newer processes and combinations through making do. Affordance can lead to more creative application of the material. However, it also lends to costly resources being replaced by cheaper resources. Put differently, bricks are used in painting, but if a brick were freely available, it would also help the painters save the cost of buying red paint. So, through family business resourcefulness, the usage of standard resources is substituted by alternative and cheaper resources. In other words, under harsh conditions, where resources are constrained and limited, businesses. Use bricolage to innovate, survive, and even grow. Bricolage is a way forward for companies that seek to overcome the challenges of resource constraints by creatively repurposing available redundant, undervalued, readily available resources (Baker & Nelson, 2005). The concept of Bricolage entails three components- (a) It involves “available resources at hand,” (b) The available resources are “somehow combined in a way” to overcome constraints and find novel solutions through “other and alternative ways” to achieve the objective, which otherwise has an established way of being achieved. Bricolage uses a non-traditional approach to overcome resource constraints. Instead of acquiring “standard resources” from markets and formal institutions, Bricolage uses existing and often redundant resources to innovate (Desa et al., 2013). The soul of Bricolage can be equated to the famous adage, “Necessity is the mother of invention.” Bricolage is the art of “making do” with resources available and repurposing them in unconventional ways to innovate (Baker & Nelson, 2005). Bricolage can be termed as a “frugal, flexible” approach to innovations in harsh conditions in a country like India (Prabhu & Jain, 2015). Scholars have defined Bricolage in a multitude of ways. For example, Bricolage is a “creative way to solve problems” by an individual in an environment full of resource constraints. They solve problems

with whatever resources are available (Prabhu & Jain, 2015). Bricolage enables many benefits, including low cost, fulfilling urgent needs, and being a platform to demonstrate creativity and skills. Bricolage is also defined as “doing more with less” in resource-constrained environments. It can potentially act as a source of disruptive innovation because of the use of “inferior technology (Markides,2006).” Many small and medium businesses in India have used Bricolage/bricolage to be successful.

However, literature on Bricolage is ambivalent on two fronts. First, Bricolage has been termed a non-standard and poor way of innovation. The solutions emerging out of Bricolage are considered “second best” solutions. Once a business starts using Bricolage, it gets “used to” “the second best” way of doing things and hence does not develop excellence. Put simply, Bricolage interferes with developing a culture of “excellence (Visser et al., 2018).” Bricolage can have negative consequences for a business by (a) “enacting series temporary solutions to a complex problem” and (b) instilling a culture of finding a quick fix rather than finding a permanent and lasting solution, (c) not developing relationships with suppliers and buyers, who can help firms in finding permanent solutions by building linkages. These linkages can help develop routines that enable the development of capabilities that help create an advantage through experience curves. Second, most examples of Bricolage are related to “everyday situations” or “solitary struggling entrepreneurs” who start businesses in a harsh environment. For instance, Bricolage “creative way to solve problems” by an individual in an environment full of resource constraints. Given the focus on individuals, limited studies highlight how formal and standard businesses use Bricolage to grow and succeed. Similarly, the literature has not explored whether Bricolage can be helpful to family

businesses, which have grown beyond inception to a specific size but have still not become significant.

Given the ambivalent nature of Bricolage in the literature, it is worth exploring conditions under which Bricolage can help these companies innovate and perform well. In a harsh environment, innovators engage in Bricolage because of the frustration-regression principle, which can go beyond immediacy and help innovators build successful small businesses. Existing literature (Cunha et al., 2013) writes about three types of bricolage- 1. Emerging out of resource-constrained, they term it as bricolage 2. Emerging out of the immediacy of time, they term it as improvisation, and 3. Emerging out of scarcity of affluent customers. We posit that the first type of bricolage can help small companies in harsh environments to innovate and perform when bricolage is used as the first step rather than the “last step” for innovation. Once the resource constraints are overcome, the innovators can shift to “effectuation,” which it has been shown in the literature to improve firm performance. Put, in a resource-constrained environment, bricolage is a stepping stone towards effectuation. The third proposition of Alderfer’s (1969) ERG theory states that relatedness needs will be desired when existence needs are satisfied. Engaging in bricolage can help satisfy existing needs. Bricolage helps overcome the “frustration-regression” and strengthens the “satisfaction-progression” principle of ERG theory, which states that once existence needs are satisfied, the relatedness needs will be strengthened. Bricolage can help overcome resource, skill, and process constraints. Using bricolage, the person gets an agency, which was missing without bricolage; it becomes a parallel school of training self in an alternative way. Initial success with bricolage in harsh environments triggers relatedness needs, wherein success allows the bricoleur acceptance and better social status. The relatedness needs once satisfied can lead to satisfaction of growth needs.. The initial success of Bricoleur also helps the Bricoleur gain “standard” resources. There is less and less dependence

on “repurposing redundant and available resources.” Three of the differences between Bricolage in the harsh environment cease to exist once Bricoleur attains initial success. These are: 1. Standard vs redundant resources and 2. Affordable loss and 3. Support from social network, family which did not believe in the bricoleur now starts having faith. Redundant resources are replaced with standard resources, affordable loss is replaced by loss aversion and some people start supporting the bricoleur. After cessation of differences, bricolage becomes equivalent to effectuation.

Hence, we hypothesize that:

H1. Bricolage will be positively related to effectuation for innovators in harsh environments.

Before bricolage, the first and second proposition of ERG theory was activated: "The less few existence needs are satisfied, the more they will be desired" and "The fewer relatedness needs are satisfied; the more existence will be desired (Alderfer, 1969)." But, after initial success with bricolage, the third proposition becomes active- "The more existence needs are satisfied, the more relatedness needs will be desired." and "The less relatedness needs are satisfied, the more they will be desired (Alderfer, 1969)." However, the relatedness needs are satisfied only from close social network only. The initial success does not yield unlimited resources. But the innovator can get access to standard and yet limited resources. The innovator starts to effectuate.

Initial success leads to the bricoleur wanting to gain further approval from the extended and additional social network. Most resources, knowledge, customers, and other stakeholders come from extended networks. However, the satisfaction of relatedness needs is uncertain because Bricoleur has less control over this network.

Furthermore, moving to the next proposition P6. the more relatedness needs are satisfied, the more growth needs will be desired. P7. The more growth needs are satisfied, the more they will be desired.”. Hence, the innovator will shift to fulfilling growth needs once relatedness need are satisfied. According to ERG theory, growth needs relate to having sense of success and fulfillment, desire to be competitive and effective in the role, to accomplish goals, to improve and acquire new knowledge (Alderfer, 1969). Extant literature this need is limited only by the access of resources hence the innovator can only achieve these needs through effectuation. Effectuation consists of five dimensions: Experimentation using available resources, affordable loss, flexibility, contingencies, and network. Because of limited resources and non-cognitive skills, innovators engage in doing small experiments, use contingencies and remain flexible in handling uncertainties. Most small family businesses in India are part of a community network that provides cues for new business opportunities. A community member may be a supplier as well as a customer. Community networks help build entry and exit barriers and help reduce uncertainty related to business. Further, small firms operating in harsh condition take a step at a time in effectuating new opportunities based on available resources, making effective use of these reosources. With limited resources and good knowledge, intended goals need continuous changes, and innovators must be alert to newer and unexpected opportunities- create, shape, and exploit them. Family business literature highlights how most firms are driven by “what they can afford to lose” and not by “what they can gain.” The family with limited resources is more likely to focus on efficiently utilizing resources instead of relying on markets to acquire resources, as markets are likely to be beset with institutional voids.

Hence, we hypothesize that:

H2a: Effectuation will be positively related to family firm performance for family businesses operating in a harsh environment but to grow.

H2b: Effectuation will mediate the relationship between bricolage and the performance of family businesses operating in a harsh environment but growing.

Moderating Role of Socio-Emotional Wealth (SEW): Most bricoleurs in India have family businesses. Without the first success, even the family shuns the bricoleurs. But, the first success brings family support. Now, the family has confidence in the bricoleur's skills. Bricoleur also needs family and network support for human capital and other resources. However, as family members contribute to the business, they expect the bricoleur to take care of the family in return. family firms are differentiated from non-family firms by socioemotional wealth. SEW relates how family firms prefer non-financial family goals over purely economic goals. Family members need to be "taken care of," which can lead to bricoleur not having a single-minded focus. However, ERG theory is not explicit about whether the two needs can be pursued simultaneously or one after the other. We believe that the two competing needs cannot be pursued simultaneously. Motivation is directional, so pursuing two motivations simultaneously without compromise is challenging. It is like walking on two roads simultaneously or pursuing two paths. Pursuing two paths simultaneously divides our attentional resources. SEW and building an organization can become competing goals. SEW relates to firms pursuing "non-financial" family goals when making business affective goals." Nonfinancial goals can include maintaining family control, deriving identity from family members, and wanting to perpetuate family dynasty and family influence. In India, the family is a basic social unit; hence, members' self-esteem is firmly related

to the family business. Family members prefer to identify with the family enterprises and want this association to endure for generations. We propose that focusing on family goals will come at the cost of focusing on changing materialities and, hence, likely to shift focus away from bricolage. Two dimensions of effectuation are likely to be constrained by SEW. First, SEW is expected to restrict experimentation because having SEW as a goal will limit other explorations and experiments. Similarly, SEW is expected to reduce flexibility and possibilities. SEW is also likely to restrict the ability of family firms to have alliances with other members than family members. Therefore, we hypothesize that:

H3: SEW will negatively moderate the relationship between bricolage and effectuation for family firms operating in harsh conditions in India.

All the hypotheses can be combined in a conceptual model in the figure below.

CONCEPTUAL MODEL

FIGURE 1 CONCEPTUAL MODEL DIAGRAM

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First Study:

As stated, we studied three small businesses that started in severely resource-contained environments: 1. “Dudhi Industry”- a company manufacturing gypsum-based products. 2. Indom industries- companies refurbishing old machines, manufacturing buttons, and entering electric vehicles; and 3. VIEW Global: a company set up to manufacture bottling caps. In the beginning, Dudhi was faced with severe resource constraints, which were overcome by Mr. JK overcoming the resource shortage by resorting to gypsum-based products because of familiarity of innovator

with gypsum. Subsequently, the company grew subsequently around different types of gypsum-based boards. VIEW global also did not have access to resources and used alternative material to develop metal cans, labelling machines. Similarly, INDOM founder used while setting up “button” business used material used in crockery to manufacture buttons (see Table for details). Grounded theory (Corbin & Strauss, 2008) was used to analyse data from the case study on the “Dudhi Industry.” The data was collected through non-participant observation, on-site interviews, and off-site interviews over zoom. Non-participant observation as authors visited the company and stayed there for the duration of one to three days. The visit helped the author to understand the context of innovation and how the organization came into being. During the visit, interviews were conducted with owners and

senior employees who have been there with the company since the start. Interviews with different employees and managers helped to triangulate the data received from the business owner. Three to four online interviews, with each owner, lasting more than one hour each were conducted after the field visit. Grounded theory was mixed with time and process data. The purpose of the interview was also to uncover the organisation's evolution. We divided the case into four time periods for better understanding. The first period pertained to conditions before the enterprise was formed, and the second period pertained to when the organisation was being formed in the initial six months to one year. The third period was when the organisation became sure about its processes and materials and started expanding. The fourth period was the current period, wherein the organisation performed well and had a strong presence in the regional market. To be more effective in conclusion. Since it was not a longitudinal analysis and past was reconstructed, which could lead to hind sight bias. We triangulated accounts from different sources.

In the first step of the analysis, we used open coding to identify early concepts in-vivo, first-order

codes related to each of the four rounds. Through interviews, we wanted to understand the business owner's primary activities at each stage. After an initial round of in-vivo coding, we undertook axial coding to unearth possible relationships among different first-order categories to arrive at themes. The second-order themes were aggregated to derive dimensions in the third order. This was a recursive process. The table captures the evolution of the three businesses over some time.

Period	First Order Concept	Second Order Theme	Third Order Dimension
First Period	Lack of products. The products are available in the market, but the owner does not know how to access them because he does not have the resources to access markets. Institutional voids, in a way.	Extreme resource Constraints and no access to the market	Poverty reduces access to resources
	Wanted to work in a formal setting but could not secure a decent job		
Second Period	Thought of repurposing existing resources to create the prproduct	Resource Repurposing through recombination using available and wasteful resources and developing new processes.	Resource construction and Bricolage
	Developing an alternative process to create the Bricolage product		
	Creating value out of resources that were wasteful and redundant		
Third Period	Trying to sell the product, reaching out to customers at whatever costs	Seeking standard resources through standard methods to reach customers	Managing innovation legitimacy from areas of strength and Effectuation
	Accessed standard resources from the market		
	Setting up alliances with others to better serve customers		
	Using institutional set-up to get resources		

Fourth Period	Growth has been good and has grown at 50% CAGR for the last ten years	Accessing mainstream resources even from the areas of weakness to build a more extensive customer base	Becoming a mainstream organisation and seeking legitimacy for further growth
	Expanding to other locations, close to customers		
	Trying to hire educated employees but cannot hire in abundance.		
	All activities are being mainstreamed.		

SECOND AND THIRD STUDIES

The second study aimed to verify the conceptual model using a survey of small family businesses that have used bricolage in some ways. The third study replicated the third study but with one difference. The performance variable in the third study was replaced with customer satisfaction with the business in the third study. All hypotheses developed in the preceding sections were tested both in the first and second study.

METHODOLOGY OF THE SECOND STUDY

Sample and Procedure:

To validate our hypotheses, we gathered data for the second via surveys conducted in India's northern and eastern regions, areas experiencing rapid economic growth. . The third survey was conducted in the state of Haryana around the Industrial belt of Bahadurgarh, close to Delhi. Our survey respondents comprised owners of small family businesses spanning both first and second generations. Additionally, we distributed the survey instrument through various industry associations.

The questionnaire design was informed by established measurements from prior studies, demonstrating high reliability and validity (e.g., Berrone et al., 2012; Alsos et al., 2014; Davidsson P et al., 2017; Siepel et al., 2020).

Initially, we developed the survey English, which thboth n independently translated into Hindi and Bengali, followed by back-translation to ensure conceptual equivalence. Our target respondents were founders, primarily owners of family businesses, or, in cases where they were unavailable, senior executives (e.g., Bhagavatula et al., 2010; Ma et al., 2011). We contacted the companies, detailing our research aims, and guaranteed respondent confidentiality. Ultimately, we received significant responses(study1: 256 out of which 26 were incomplete and were rejected, study 2: 240 out of which 20 were incomplete) .Effective sample size for study 1 was 210 and for study 2 was 220). Table 1 outlines the key characteristics of the both the samples.

Table 1 DEMOGRAPHICS OF THE RESPONDERS

<INSERT HERE>

In our surveys, we endeavoured to ensure a diverse representation across various industries, enriching our findings' breadth and depth. The study's scope extended beyond to multiple industries. By casting a broad net across various industries, the aim was to have better generalization. .

Measures

Bricolage was measured using the three-item scale from Entrepreneurial Bricolage behaviour (Davidsson P et al.,2017), which used a five-point Likert scale (1=strongly disagree,5=strongly agree). A sample item is “*To deal with new challenges, you access organisation resources at low or no cost and combine them with what you already have.*” The Cronbach alpha was 0.79.

To measure *Socio-Emotional Wealth (SEW)*, we used the five items from the multidimensional measurement (Berrone et al., 2012), which used a five-point Likert scale (1=strongly disagree,5=strongly agree). A sample item is “*My family business maintains family traditions.*” Cronbach alpha was .80

Effectuation was measured using the five-item scale from Means Orientation, Affordable Loss, Contingencies, Pre Commitment, and Control (Alsos,2014). A typical item in the scale was “*In*

my organisation, we respond to defects pointed out by employees,” with Cronbach Alpha being .89.

Firm Performance was measured using four items developed by (Siepel et al., 2020). A typical item in the scale was *“Rate sales growth compared to your competitors in the last five years.”* Cronbach Alpha was .89.

All scale items were in the form of a statement followed by a 5-point Likert scale.

Family Size: This was captured with a question about *“the number of family members staying with you, including children.”*

Control variables.

Since the businesses came from across the industry, it was essential to control the industry. There were also variations in size, for which we controlled for revenue size and the number of employees in the firm. Family businesses can be influenced by generation, which was controlled using several years in business (Morris et al., 1996). In a country like India, women’s participation in business is limited, and hence, we also control the gender of the owner.

RESULTS

Descriptive Statistics

Table 2 presents the scale reliabilities, means, and standard deviations for each scale and inter-scale correlations for all variables. We controlled for variables such as age, gender, age of enterprise, gender, sales, and number of employees. Correlations between all variables were within the expected range. The reliability of most constructs was satisfactory, as evidenced by Cronbach's alpha reported in Table 2.

Table 2 MEANS, STANDARD DEVIATION AND CORRELATION TABLE

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We standardized the variables as a precaution against multicollinearity, following the guidelines of Aiken (1991). The highest variance inflation factor (VIF) observed in the regression analysis was 1.89, well below the commonly accepted threshold of 5, as Neter et al. (1996) suggested. Thus, multicollinearity was not identified as a concern. Furthermore, we scrutinised the data for issues such as departures from normality assumptions and outliers. We found no significant violations, suggesting that the data were appropriate for regression analysis. We utilised hierarchical regression analysis to assess our hypotheses. Since our survey came from multiple industries, we also controlled for all time invariant variable by developing

Confirmatory Factor Analysis

Before testing the hypothesised model, we conducted factor analysis using Geomin rotation using Mplus 8.8 to check if the data generated the expected four factors as predicted by the model. We tried five models, starting from the one-factor model to the five-factor model. The results of EFA are presented in Table 3. The results indicate that the model with four factors ($\chi^2 = 42.76$, $DF = 24$, $CFI = 0.99$, $TLI = .97$, $RMSEA = .042$ and $SRMR = .025$) was the best as it was found to be better than the three-factor model ($\chi^2 = 71.42$, $DF = 33$, $CFI = 0.95$, $TLI = 0.89$, $RMSEA = 0.080$ and $SRMR = .055$). Similarly, the five-factor model was not better than the four-factor model, suggesting that the four-factor model fitted best. The four factors model resulted in the expected factors of SEW, Bricolage, Effectuation, and Performance. The fit indices of the four-factor model were significantly better than the three-factor model (χ^2 difference = 29, DF difference = 9, P value = 0.0002).

TABLE 3: MODEL FIT FOR FACTORS

<INSERT HERE>

TABLE 4: MODEL COMPARISON FOR FACTORS

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Since, except for performance, other data was self-reported, a potential standard method bias problem might exist in the data. Additionally, we performed Herman's single-factor test (Posakoff & Organ, 1986) on the four variables to examine potential standard method bias. The findings revealed that a single factor accounted for less than 15 per cent of the variance, indicating a minimal likelihood of common method bias. Employing the Common Latent Factor (CLF) approach, we introduced a shared latent factor and hypothesised factors within the analytical model to capture the shared variance among the observed variables. This method gauges the extent of variance that can be explained by a common factor after considering all factors, offering insights into standard method variance presence (Podsakoff et al., 2003). In line with Eichhorn (2014), we assessed common method bias through three models. Initially, we tested the unconstrained model (refer to Table 4), followed by a constrained model setting the common latent factor's variance to zero, and subsequently, a model assuming equal variance across all items of the common latent factor. Both the unconstrained and constrained models exhibited invariance. The common latent factor captured 10% of the variance in the unconstrained model. However, the captured variance dropped to less than 6% under the equal variance test, indicating minimal standard method bias.

Test of Hypotheses

Table 5 shows the regression results. The dependent variable in Models 1 and 4 is Performance, whereas in Models 2 and 3, it is Effectuation. In Model 1 and 2, control variables were used. In Model 3, we added bricolage and interaction effect of Bricolage and SEW to Model 2. In Model 4,

we used Performance as dependent while effectuation was used as mediator.

Before testing the 1st hypothesis, we tested for Bricolage's total and direct effect on Performance. Bricolage was predicted to be positively related to the performance of the enterprise. We found the total effect (Study 2: $\beta=0.23$, $p\text{-value}<0.001$; Study3: $\beta=0.59$, $p\text{-value}<0.001$) significant. However, when only direct effects were taken, the results changed (study2: $\beta=0.06$, $p\text{-value}>0.1$; $\beta=0.39$, $p\text{-value}>0.1$). The first hypothesis is related to testing the association between bricolage and effectuation. The hypothesis was significant (Study2: $\beta=0.46$, $p\text{-value}<0.01$; Study3: $\beta=0.47$, $p\text{-value}<0.001$), Therefore, hypothesis 1 was supported. We tested H2 by checking the relationship between Effectuation and Performance. The hypothesis was significant ($\beta=0.56$, $p\text{-value}<0.01$; Study3: $\beta=0.31$, $p\text{-value}<0.001$) Therefore, hypothesis 2a was supported. We tested the mediating hypothesis (H3) using indirect effects. The mediating effect of Effectuation on Bricolage and Performance turned out to be significant . (Study2: $\beta=0.28$, 0.24 and 0.21 at high medium and low value of SEW, $p\text{-value}<0.01$; Study3: $\beta=0.21$, 0.16, 0.12 at high medium and low value of SEW, $p\text{-value}<0.001$). .

For Study2: For the low value of SEW, the Bricolage→Effectuation→Performance was significant ($\beta=0.28$, $p\text{-value}<0.01$). For the medium value of SEW, the Bricolage→Effectuation→Performance was significant ($\beta=0.24$, $p\text{-value}<0.01$). For the high value of SEW, the Bricolage→Effectuation→Performance was significant ($\beta=0.21$, $p\text{-value}<0.01$). For Study2: For the low value of SEW, the Bricolage→Effectuation→Performance was significant ($\beta=0.21$, $p\text{-value}<0.01$). For the medium value of SEW, the Bricolage→Effectuation→Performance was significant ($\beta=0.12$, $p\text{-value}<0.01$). For the high value of SEW, the Bricolage→Effectuation→Performance was significant ($\beta=0.12$, $p\text{-value}<0.01$). Therefore, hypothesis 2b was supported The interaction term of Bricolage and SEW

was found to be harmful ((Study1: $\beta=-0.1$, p- value<0.1; Study3: $\beta=-0.22$, p-value<0.01). The weak support of the interaction effects of Bricolage and SEW on Effectuation suggests that the relationship between Bricolage and Effectuation becomes weaker at the higher value of SEW. Therefore, Hypothesis 3 was supported (See Fig 2). Additionally, moderated mediation model was found to be significant for both the studies.

TABLE 5 REGRESSION

<INSERT HERE>

TABLE 6: INDIRECT EFFECT

<INSERT HERE>

TABLE 7: DIRECT EFFECT

<INSERT HERE>

FIGURE 2: SEW MODERATING THE RELATIONSHIP BETWEEN EFFECTUATION AND PERFORMANCE

<INSERT HERE>

TABLE 8: CONDITIONAL EFFECTS OF BRICOLAGE AT VALUES OF SEW.

<INSERT HERE>

TABLE 9: INDEX OF MODERATED MEDIATION

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ROBUSTNESS CHECK

We conducted a multi-level analysis with two aims using data gathered from several industries. First, the goal is to differentiate the effects within the industry from those across different sectors (between). The second objective was to verify if the findings from the single-level analysis were consistent with the "within" component of the multi-level model. We clustered the variables based

on industry ID to test the multilevel model and created two levels - within and between – the analysis was done using Mplus 8.8. This enabled us to examine variance within the industry while excluding cross-inter-industry variations. Table 10. displays the ICC values of various variables, indicating that most variables exhibited considerable between-industries variation. Effectuation and performance significantly varied across industries, with ICC values surpassing 0.2. The findings of the "within part of model" are displayed in Table 11. All hypotheses were deemed significant. The interaction impact of Bricolage and SEW was significant but negative at a 10% confidence level.

TABLE 10: INTER CLASS CORRELATIONS

<INSERT HERE>

TABLE 11: REPRESENTING "WITHIN" PART OF THE MULTILEVEL MODEL

<INSERT HERE>

DISCUSSION AND THEORETICAL IMPLICATIONS

After analyzing the key elements of emerging theories and applying each theory to interpret case study data, we have identified four significant similarities. Both emerging theories encompass the following dimensions: (1) existing resources are foundational for entrepreneurial opportunities; (2) action serves as a means to surmount resource limitations; (3) community plays a pivotal role in fostering venture emergence and expansion; and (4) resource constraints drive creative innovation. These standard dimensions establish a link between the theories of effectuation and bricolage. Future researchers can utilise these dimensions to explore the processes involved in emerging new firms and developing novel markets.

Extreme resource scarcity and unfavorable business environment crate economic marginalization, which can

become a natural boon for those forced to deal with the material and develop non-cognitive capabilities. Such non-cognitive and embodied capabilities, however, develop through long years of immersive experiences with materialities in the local environment. The three cases selected had a long gestation period with materialities. Not everyone facing constraints will not develop these non-cognitive skills equally. Affordance, habitus and empirical sensitivity take time to convert into skills and dispositions. In addition, there has to be requisite variety of experiences for development of non-cognitive capabilities that are useful for working with alternative materialities and come out with improvised products. The non-cognitive capabilities develop over a long period of time but once they develop they are easy to forget because of their embodied characteristics. It is like riding a bicycle and learning to drive. They stick with innovators. Innovators can make use of these skills even after the first bricolage. For example, Mr. JK continued to make use of the skills even after he has grown. He has developed a new construction material using these skills. The first new product through bricolage help innovator to develop the confidence to execute and accomplish newer things using the alternative ways. It like learning things an “alternative school”- the natural school. These non-cognitive capabilities are not only natural but organic as well in a sense that they are not rigid and straitjacketed “like a formula”. These are more experiential, experimental and fluid. They are limited and yet not compartmentalized into notion of belong to “physics, “chemistry”, “management” or to “philosophy”. They are non-siloed. They are limited by space and time and are more problem and environment centric. Though, not observed in our sample, these alternatives ways could explain the economic change in the industry structure, wherein the disruptor with poorer technology upstages the incumbent. In other words, non-cognitive capabilities also can be be a reason for creative destruction in industries.

Of course, resource scarcity also helps these innovators to make best usage of resources.

Our results prove that even when innovators move to effectuation, they get access standard resources. Though, even in the effectuation stage, the innovator continues to make use of these non-cognitive capabilities though they may

have access to standard material. At effectuation, stage the capabilities remain but the material may change. Now the capabilities are transported to the newer materials. Because capabilities remain constant and the material change, the bricoleur can come out with newer products. Change of material can lead to new products. We found these evidences with three cases.

Effectuation acts as a tool to mainstream the innovation because the innovators switches to the mainstream by acquiring standard resources.

The finding also lends support to age old motivation theories, which suggest that man's needs evolve from basic to higher needs. How persistent resource constraints can lead to individuals forced to work closer with materialities, which leads to development of these non-cognitive capabilities. Social exclusion makes individuals go closer to materiality and develop non-cognitive capabilities, in the process discover something new, a newer version of themselves, it can unleash their potential and make them effective to live in the society. It gives them power to comeback to mainstream and to be included in the mainstream. It gives social legitimacy to the innovator as the product is now successful. Success leads to people better social legitimacy and inclusion. The non-cognitive capabilities become fulcrum around which potential is achieved. When the person goes beyond relatedness needs, the person can achieve growth needs through these capabilities. These capabilities help the person to seek create new solution and being self-referential with internal locus of control rather than seeking external validation.

One interesting finding for our research, though not intended is, negative relationship of effectuation with sales growth. The innovators who start as bricoleurs grow at slower pace. It means, that the harsh environment does not offer enough resources for the entrepreneurs despite their success. Maybe the entrepreneurs become so steeped in "alternative way of doing things" that they find it difficult to accepted in a normal way. Or, it is quite possible that market is not big enough for "other resources and capabilities". Or, it is quite possible, and it is most likely reason, that the larger social network, the normal social network" does not accept them as part of mainstream. This will be

an interesting and counter to the theory of disruptive innovation, wherein innovators with poorer technology are capable of disrupting existing players.

The literature on innovation has analysed the effects of bricolage innovation on performance, but most studies have yet to explore how SEW interacts with bricolage or effectuation. Similarly, barring, one study, the existing literature on firm performance has looked at bricolage or effectuation as two separate ways to achieve firm performance. Our work suggests that for small and medium enterprises in harsh environments, bricolage acts as a stepping stone to effectuation, influencing performance. Similarly, The literature on family businesses suggests that family businesses have perform better because of socio-emotional wealth. Since we found adverse moderating effects of SEW between bricolage and effectuation, our results indicate that SEW may weaken the Bricolage-Effectuation linkage. Since SEW negatively moderated the Bricolage and Effectuation relationship, family firms that are not small and do not operate in harsh environments in India may use alternative routes to enhance performance other than Bricolage. Family firms may grow through network and political influence by keeping costs low. Further, there may be different and substitutable development methods for family firms. Theoretically, our paper has implications to deepen the resource-based theory along the lines of Baker and Nelson (2005). Our work suggest that resource creation, resource usage, and resource acquisition are different and have to given independent consideration. The three entail very different capabilities and differences among them should be recognized for better development of resource based theory. In the initial stages, these businesses are forced to use bricolage and resources were repurposed or reconstructed during bricolage, while during effectuation, the the resources were more efficiently utilized before they are acquired. Resource acquisition is more of social and competitive process requiring legitimacy. Resource creation may take place through deeper non-cognitive abilities while resource utilization is more about understanding the limits of resource acquisition preservation. This contrasts causation, where resources are acquired to execute a particular design. Combining ERG with resource acquisition, utilisation, and repurposing approaches suggests that an innovator's relationship to resources cannot be dissociated from the need for motivation and knowledge of the innovators. This has exciting implications for resource-based and resource-dependence theory. Both theories can be integrated with the

help of motivation and embodied knowledge. Our results highlight how the role of resources changes during bricolage and effectuation. Resources are repurposed or reconstructed during bricolage, while during effectuation, the limited resources are effectively used for innovation and growth. This contrasts causation, where resources are acquired to execute a particular design. Combining ERG with resource acquisition, utilisation, and repurposing approaches suggests that an innovator's relationship to resources cannot be dissociated from the need for motivation and knowledge of the innovators. This has exciting implications for resource-based and resource-dependence theory. Both theories can be integrated with the help of motivation and embodied knowledge. Higher motivation leads to deeper engagements with resources, but higher resources reduce motivation. Future research can also examine this relationship and how resources and motivation feed into innovation.

MANAGERIAL IMPLICATIONS

The paper has interesting managerial implications for managing innovation and the growth of enterprises, both small and significant. Since constructing bricolage is highly dependent on context and lived experience, innovators and managers cannot ignore the importance of context. However educated and learned a manager may be, innovations cannot occur in isolation, and the manager needs to immerse in the context. Innovators and managers need to be entangled in a context. Due to its context-specific nature, understanding and replicating the specific circumstances in which tacit information arises is essential for its successful transfer. Managers should acknowledge the significance of context and strive to maintain or recreate similar conditions to facilitate the effective exchange of tacit knowledge. Innovations should be designed naturally with resources

and interconnected activities among cross-functional teams. Engaging in action promotes practical application above theoretical understanding, as it is through action that knowledge is demonstrated and realised. This could have significant implications for designing incubation centres and innovation laboratories. Our findings indicate that providing entrepreneurs with easy access to "money and resources" may diminish their motivation to develop.

An even more exciting implication, especially from the affordances' perspective, is that innovators should not try to force things and get innovation "done." If affordances and empirical sensitivity are to be believed, then "absorbing" becomes more important than "projecting." "Forcing innovation" can lead to stress, the killing of creativity, and over-reliance on analysis. Affordance thrives through intuitive, holistic, and serendipitous processes. Most importantly, "trying to force innovation" can lead to flexibility as managers set early expectations and will find it difficult to change them. "Forcing innovation" also reduced trust and collaboration."

LIMITATIONS

Our study may have several constraints. The case study, while thorough, would have been more ideally conducted longitudinally. Past reconstruction based on interview-based data is subjective and prone to consistency bias. There could be errors in reconstructing the past. Our survey data relies on perceptions and may complicate the outcomes. Due to the small size of the family enterprises in our sample, obtaining objective data is challenging as they are private. Our sample firms were primarily drawn from two cities in India- Delhi and Jamshedpur. Hence, the sample may not represent all Indian firms operating in the harsh environment. A longitudinal data collection approach may be a more suitable method to evaluate the concept, as it shows that bricolage and effectuation could be tiered processes, but it will be challenging. Further, the results

from the interaction hypotheses are not very strong or conclusive. These results should be viewed cautiously, though they hint towards broad trends.

Our crucial claim was the "stepping stone" notion of bricolage. However, generalising these results to all scenarios may not be advisable, especially when existing research has suggested that bricolage and effectuation are parallel and interchangeable.

FUTURE STUDIES

Our work is pregnant with further research possibilities. Future research can conduct process studies with longitudinal investigations to investigate how bricolage becomes an effectuation. Studies of this kind can also examine the circumstances in which bricolage results in effectuation and how bricoleur fails to take action to effectuate. Although bricolage occurs due to "context," effectuation succeeds because the bricoleur manages to "de-contextualize" from the surrounding environment. These are conjectures and need to be explored in future studies. It would be beneficial for future research to investigate the conditions under which effectuation and bricolage occur sequentially and the conditions under which they occur parallelly. Most importantly, conceptual works in the future can explore how resource dependence and resource-based theories come together. If motivation is an energy helpful in resource construction, utilisation, and seeking, how does one convert it into another? These future investigations will contribute to the advancement of resource-based theories.

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TABLES & FIGURES

FIGURE 1 CONCEPTUAL MODEL DIAGRAM

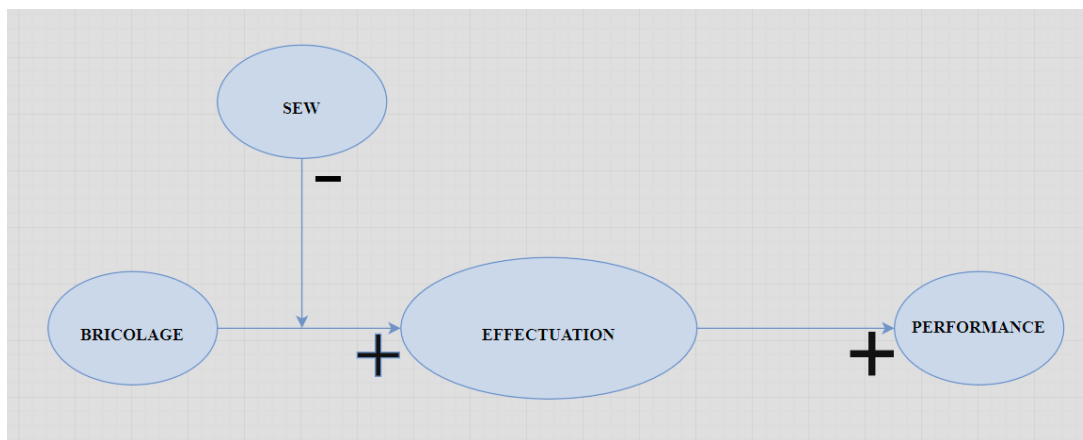


TABLE 12 DEMOGRAPHICS OF THE RESPONDERS

Demographic Variable	Code	Frequency	Per cent
Gender	1 (Male)	167	80.7
	2 (Female)	40	19.3
Founder Age	1 (17 to 30)	61	28.9
	2 (31 to 45)	115	54.5
	3 (45 to 59)	30	14.2
	4 (60 plus)	5	2.4
Founder Education	1 (Doctorate)	15	7.4
	2 (Post Graduation)	90	44.6
	3 (Graduation)	97	48.0
Revenue Size	1 (Less than 10 crores)	165	78.2
	2 (from 10 crs to 50 crs)	25	11.8
	3 (from 50 crs to 100 crs)	11	5.2
	4 (from 100 crs to 500 crs)	6	2.8
	5 (Above 500 crs)	4	1.9
Employee Size	1 (1 to 50)	160	75.8
	2 (51 to 100)	36	17.1
	3 (101 to 200)	7	3.3
	4 (201 to 500)	5	2.4
	5 (More than 500)	3	1.4

TABLE 2 (a) : MEANS, STANDARD DEVIATION AND CORRELATION TABLE (Study1)

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender (1)	1.16	.37	1								
Age (2)	1.92	.76	-.04	1							
Ownership (3)	1.62	1.28	.35**	-.11	1						
Sales (4)	1.46	.98	-.09	.12	.00	1					
Employees (5)	1.41	.77	-.20*	.13	-.03	.66**	1				
Bricolage (6)	3.81	.66	-.22*	.01	.01	-.09	-.01	1			
Effectuation (7)	3.69	.76	-.25**	.08	-.17	.19*	.17*	.40**	1		
Sew (8)	3.97	.92	-.17	.02	-.05	-.10	-.11	.30**	-.07	1	
Performance (9)	3.76	.84	-.22*	-.03	-.26**	.11	.05	.25**	.58**	-.00	1

TABLE 2(b): MEANS, STANDARD DEVIATION AND CORRELATION TABLE (Study 3)

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender (1)	1.23	.42	1								
Age (2)	2.23	.71	-.369**	1							
Education (3)	3.01	.62	.151*	-.116	1						
Industry (4)	2.09	1.48	-.009	-.074	.295**	1					
Employees (5)	1.56	.78	-.022	.173*	-.036	.173*	1				
Bricolage (6)	4.25	.53	.141*	-.074	.050	.077	.008	1			
Effectuation (7)	4.13	.75	.120	-.148*	-.014	-.270**	-.100	.421**	1		
Sew (8)	3.70	.67	.115	-.096	.081	.009	.031	.263**	.184**	1	
Performance (9)	4.20	.72	.038	.025	.100	.110	-.017	.450**	.367**	.271**	1

** . Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed).

TABLE 3: MODEL FIT FOR FACTORS

Model	Number of Parameters	Chi-Square	Degrees of Freedom	P-Value
1-factor	36	334.225	54	0
2-factor	47	131.055	43	0
3-factor	57	71.429	33	0.0001
4-factor	66	42.763	24	0.0106

TABLE 4: MODEL COMPARISON FOR FACTORS

Models Compared	Chi-Square	Degrees of Freedom	P-Value
1-factor against 2-factors	203.17	11	0
2-factors against 3-factors	59.627	10	0
3-factors against 4-factors	28.666	9	0.0007

TABLE 5(a) REGRESSION Study 1

	MODEL1	MODEL 2	MODEL 3	MODEL4	MODEL5	MODEL6
	Dependent variables					
	<i>Performa nce</i>	<i>Effectuati on</i>	<i>Effectuati on</i>	<i>Performa nce</i>	<i>Performa nce</i>	<i>Performa nce</i>
Variables	Beta	Beta	Beta	Beta	Beta	Beta
<i>Gender</i>	-0.22 **	-0.22**	-0.17*	-0.18	-0.08	-0.08
<i>Age</i>	-0.05	0.06	0.06	-0.04	-0.08	-0.07
<i>Education</i>	0.05	0.06	0.08	0.06	0.02	-0.01
<i>Revenue</i>	0.17	0.16	0.23	0.21*	0.08	0.08
<i>Number of employees</i>	-0.09	0.03	-0.02	-0.12	-0.1	-0.1
<i>Bricolage</i>			0.46**	0.27	0.01	0.03
<i>SEW</i>			-0.21**	-0.11	0.01	0.1
<i>Bricolage*SEW</i>			-0.09#	-0.01	-0.03	0.07
<i>Effectuation</i>					0.56***	0.49***
<i>Effectuation*SEW</i>						-0.2*
p< 0.10; *p< 0.05; **p< 0.01; ***p< 0.001						

TABLE 5(b) REGRESSION Study 3

	MODEL1	MODEL 2	MODEL 3	MODEL 4	MODEL5
	Dependent Variables				
	<i>Performance</i>	<i>Effectuation</i>	<i>Effectuation</i>	<i>Performance</i>	<i>Performance</i>
Variables	Beta	Beta	Beta	Beta	Beta
Gender	0.065	0.06	0.01	0.03	0.002
Age	0.017	-0.12	-0.05	0.07	0.081
Education	0.127	-0.01	0.01	0.12	0.144
Revenue	0.132	-0.03	-0.13	0.06	0.06
Ownership	0.192	-0.09	-0.06	0.21	0.18
Industry	0.117	-0.29	-0.3	0.12	0.09
Number of employees	-0.086	-0.01	0.01	-0.07	-0.05
Bricolage			0.59	0.47	0.4
SEW				0.07	
Bricolage*SEW				-0.22	
Effectuation					0.31

TABLE 6 (a): INDIRECT EFFECT (Study 2)

BRICOLAGE → EFFECTUATION → PERFORMANCE				
SEW	Effect	BootSE	BootLLCI	BootULCI
3.33	0.28	0.09	0.13	0.44
4.00	0.24	0.09	0.10	0.39
4.67	0.21	0.09	0.07	0.36

TABLE 6 (b): INDIRECT EFFECT (Study 3)

BRICOLAGE → EFFECTUATION → PERFORMANCE				
SEW	Effect	BootSE	BootLLCI	BootULCI
-0.67	0.21	0.0667	0.1125	0.3799
0	0.16	0.0476	0.0779	0.2636
0.6689	0.12	0.0529	0.0024	0.2096

TABLE 7(a) : DIRECT EFFECT (Study 2)

BRICOLAGE → PERFORMANCE				
	Effect	SE	LLCI	ULCI
Bricolage	0.06	0.11	-0.13	0.25

TABLE 7(b): DIRECT EFFECT (Study 3)

BRICOLAGE → PERFORMANCE				
	Effect	SE	LLCI	ULCI
Bricolage	0.3985	0.0922	0.2167	0.5802

FIGURE 2(a) : SEW MODERATING THE RELATIONSHIP BETWEEN EFFECTUATION AND PERFORMANCE (Study 2)

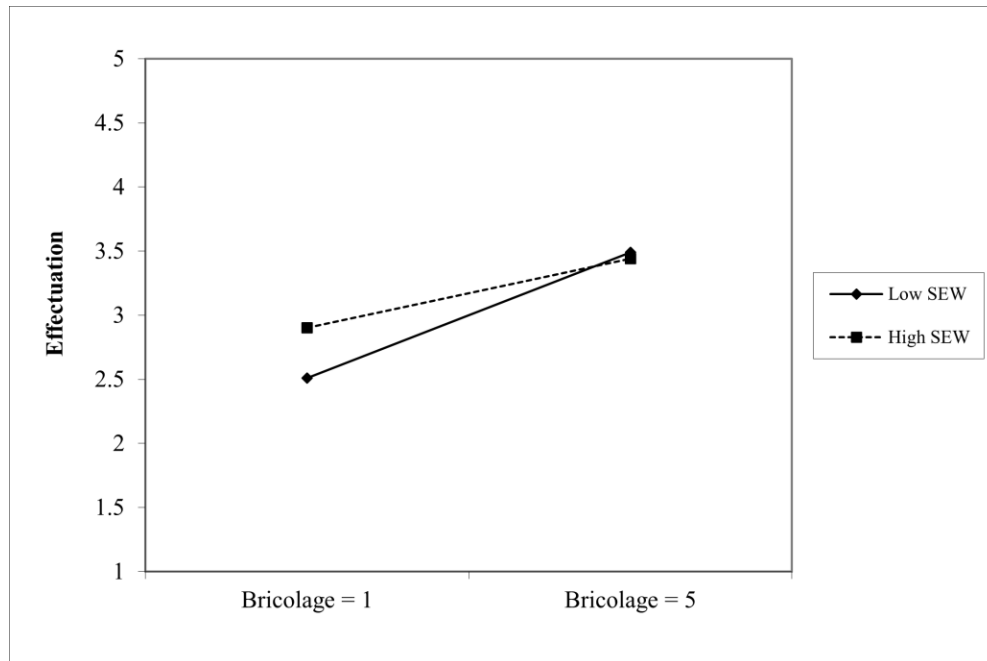


FIGURE 2(b) : SEW MODERATING THE RELATIONSHIP BETWEEN EFFECTUATION AND PERFORMANCE (Study 3)

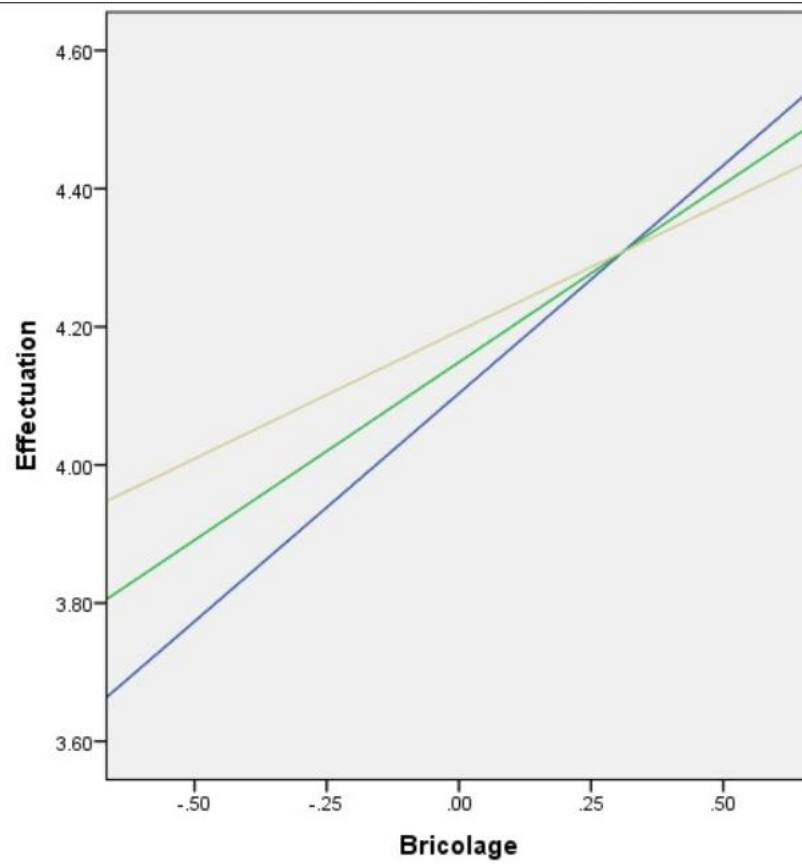


TABLE 8(a): CONDITIONAL EFFECTS OF BRICOLAGE AT VALUES OF SEW (Study 2)

BRICOLAGE → EFFECTUATION → PERFORMANCE				
SEW	Effect	SE	LLCI	ULCI
3.33	0.60	0.09	0.44	0.76
4.00	0.52	0.10	0.35	0.69
4.67	0.44	0.12	0.23	0.64

TABLE 8(b): CONDITIONAL EFFECTS OF BRICOLAGE AT VALUES OF SEW (Study 3)

BRICOLAGE → EFFECTUATION → PERFORMANCE				
SEW	Effect	SE	LLCI	ULCI
-0.67	0.66	0.087	0.49	0.83
0	0.52	0.09	0.34	0.70
0.67	0.37	0.12	0.14	0.60

TABLE 9(a): INDEX OF MODERATED MEDIATION (Study 2)

	Index	BootSE	BootLLCI	BootULCI
SEW	-0.06	0.03	-0.12	-0.004

TABLE 9(b): INDEX OF MODERATED MEDIATION (Study 3)

	Index	BootSE	BootLLCI	BootULCI
SEW	-0.07	0.06	-0.24	-0.03

TABLE 10(a): INTER CLASS CORRELATIONS (Study 2)

Variable	ICC
Effectuation	0.27
Performance	0.19
Bricolage	0.04
SEW	0.06

TABLE 10 (b): INTER CLASS CORRELATIONS (Study 3)

Variable	ICC
Effectuation	
Performance	
Bricolage	
SEW	

TABLE 11 (a) : REPRESENTING "WITHIN' PART OF THE MULTILEVEL MODEL (Study 2)

VARIABLES	PERFORMANCE	PERFORMANCE	EFFECTUATION
Gender	0	-0.00	-0.004
Age	-0.04	-0.04	-0.045
Education	0.04	0.03	0.037
Ownership	0.04	0.04	0.039
Revenue	-0.03	-0.04	-0.032
Number Of Employees	-0.03	-0.003	-0.003
Effectuation		0.43**	

Bricolage		-0.04	0.1*
Sew		0.02	0.1
Bricolage*Sew		0.036	- 0.06 \$

TABLE 11 (b) : REPRESENTING "WITHIN' PART OF THE MULTILEVEL MODEL (Study 3)

VARIABLES	PERFORMANCE	PERFORMANCE	EFFECTUATION
Gender			
Age			
Education			
Ownership			
Revenue			
Number Of Employees			
Effectuation			
Bricolage			
Sew			
Bricolage*Sew			