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## Understanding the Role of Resource Constraints, Bricolage Behavior and Frugal Innovation in Creating Social Value among The Social Ventures of Pakistan

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### ABSTRACT

**Purpose:** Organizations grappling with resource scarcity are compelled to engage in frugal innovation and adopt bricolage behaviors to advance their social value-creation objectives within resource-constrained contexts. This study investigates the role of frugal innovation as a mediator in mitigating resource scarcity and enhancing social value creation among 131 small and medium-sized social enterprises in Pakistan.

**Design/Methodology/Approach:** Employing a survey questionnaire through purposive (judgmental) sampling, yielding 87.3% response rate, data was analyzed using SPSS23 and SMART PLS3.

**Findings:** Results demonstrate that resource constraints positively influence bricolage behavior. Moreover, both resource constraints and bricolage behavior positively correlate with frugal innovation, which subsequently enhances social value creation. Specifically, the relationship between resource constraints and frugal innovation is significantly mediated by bricolage behavior. Furthermore, the impact of resource constraints and bricolage behavior on social value creation is significantly mediated through frugal innovation. Importantly, resource constraints positively contribute to social value creation via the serial mediation of bricolage behavior and frugal innovation.

**Implications/Originality/Value:** This study offers valuable insights for practitioners and researchers seeking to understand strategies through which social enterprises can flourish in resource-limited environments.

The abstract should demonstrate the contribution of the research that has rarely/never been done before.

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## **1. Introduction**

The world faced severe socio-economic and environmental challenges, including injustice, poverty, hunger, and health issues in the 21<sup>st</sup> century (Gambella et al., 2021). Around the globe, many countries are dealing with problems and complexities such as the unavailability of educational opportunities, child labor, lack of jobs, political instability, and unexpected natural calamities (Waqar et al., 2020). İrengün and Arikboğa, (2015) elaborate that current political, social, and administrative techniques and policies are unable to cope with these issues due to a lack of resources. The government is primarily responsible for providing basic services to society (Poornima & Rajini, 2021). Due to tricky issues and a lack of resources, it becomes challenging for the government to address these social issues.

Social enterprises try to invest their ideas, time, and finances to work along the lines of sustainable development goals (SDGs). The agenda is to solve major social problems such as poverty alleviation, women empowerment, affordable quality healthcare facilities, and educational opportunities (Pisoni et al., 2018). Social ventures adopt bricolage behavior to cope with the scarcity of resources in which they recombine their resources (Baker & Nelson, 2005) and achieve their operational and social objectives.

In today's volatile environment, with rapid technological changes, organizations are now focusing on affordable, innovative products in new emerging markets to capture underserved consumers (Ravishankar & Gurca, 2015). Entrepreneurs who strive in a resource-scarce environment adopt bricolage behavior to come up with frugal innovation and develop affordable and quality products (Hossain, 2017). New entrepreneurial ventures have remarkable groundbreaking solutions to many social problems but lack expertise (Albert, 2019). Therefore, these enterprises strive to perform well in resource-constrained environments to survive (Sarkar, 2018). This enables them to adopt frugal innovation using bricolage behavior which works as a solution for low-income populations and creates social impact (Levänen et al., 2016; Hossain, 2020).

Frugal innovation is a smart way to create innovative and inexpensive products with limited resources (Hossain, 2020). Further, covers multiple key concepts (Hossain, 2018). Therefore, it is challenging to define frugal innovation in a unified manner. Frugal innovation is generally defined as the development of a product in a resource-constrained environment, without compromising the quality of the product or service while maintaining a lower price than the existing products (Zeschky et al., 2014). Hossain et al., (2016) stated that frugal innovation is recognized as a technique that acts as a solution to resource scarcity; therefore, it has been used to innovate and develop under financial, technological, human, and other resource constraints.

Concepts, such as double and triple bottom line exist because of the increasing social, economic, and environmental issues (Jabbour et al., 2019). There is an emerging debate gaining the attention of organizations that alongside the efficient provision of products and services, it is important to ensure affordability for the low-income segment of society (Fernando et al., 2019). Convincingly, this will address various social and economic concerns. Therefore, bricolage behavior through frugal innovation is necessary for social value creation (Jabbour et al., 2019). Frugal innovation and bricolage behavior work in synergy and give multiple productive results to accomplish the needs of the base of the pyramid population and provide them with affordable and quality products (Bhatti et al., 2018). The acquired technology to innovate is important for business development (Seles et al., 2019). The aggressive approaches to achieving social targets assist organizations in surviving the competitive environment around them (Hossain, 2020).

Therefore, this research using empirical tools is an attempt to test how social enterprises use bricolage behavior to create social value through frugal innovation in resource-constraint environments. Thus, frugal innovation acts as a mediator between bricolage behavior and social value creation. Theoretical support for this study is provided by bricolage theory and resource-based-view theory (RBV).

## **2. Literature Review**

### **2.1 Bricolage Theory**

This study is backed by the bricolage theory (Baker & Nelson, 2005). It states that bricolage is the art by which enterprises introduce and modify new and technologically advanced products and services using existing resources (An et al., 2018). Entrepreneurs use bricolage to recombine their internal resources in resource-scarce environments to achieve their goals (Garud & Prabhu, 2021). Within these resource constraints, bricolage is adopted by business ventures that create significant social value for society (Busch & Barkema, 2021). Therefore, bricolage can be an ultimate solution for social ventures, to act as a catalyst in minimizing the impact of resource scarcity while creating social value (Poornima & Rajini, 2021).

### **2.2 Resource Constraints and Bricolage Behavior**

Adequate resources are essential for every organization (Arya et al., 2021; Rahman et al., 2021). Access to standard and high-quality resources is crucial for the success of entrepreneurial ventures (Korsgaard et al., 2021). In a resource-constrained environment, social ventures face resource shortage. To cope with this resource meagre environment, these social ventures implement bricolage behavior in their operational activities with the help of resources at hand (Lévi-Strauss, 1967; Baker & Nelson, 2005; Hota et al., 2019). Social ventures innovatively utilize their resources by using bricolage behavior. Hence, it can be said that bricolage is a practical technique that gives a creative and innovative combination of available resources to an organization (Halme et al., 2012). Therefore, the study hypothesizes that:

**H<sub>1</sub>:** Resource constraints have a positive significant impact on the firm's bricolage behavior.

### **2.3 Resource Constraints and Frugal Innovation**

Innovation in a resource-scarce environment is mostly called by the practitioners as frugal innovation (Cai et al., 2019). Social entrepreneurs produce inexpensive and valuable products and services by using frugal innovation that fulfill the requirements of resource meager segment of society. The products and services provided as a result of frugal innovation are of high quality alongside affordable price ranges (Chatterjee et al., 2019). Thus frugal innovation is frequently found in the markets of developing countries with deprived communities. Hence, social ventures use multiple combinations of their resources to produce more value in the sense of good and cheap offerings with the help of limited internal resources. This leads to organizations frugally innovating to maximize their values for deprived populations (Tasavori et al., 2018). Therefore, the research hypothesizes that:

**H<sub>2</sub>:** Resource constraints have a significant positive relationship with frugal innovation.

### **2.4 Bricolage Behavior and Frugal innovation**

In emerging economies, where entrepreneurs have insufficient resources, they adapt their behaviors towards bricolage in which they follow/implement advanced ways to use their internal resources in an efficient manner (Baker and Nelson, 2005). They create high-quality inexpensive goods with the help of their limited resources and innovate frugally (Poornima & Rajini, 2021). Moreover, by using bricolage, firms can produce resource-efficient products and services that can meet the needs of the underprivileged segment of society (Kickul et al., 2018). Hence, this research hypothesizes that:

**H<sub>3</sub>:** Bricolage behavior has a significant positive relationship with frugal innovation.

## **2.5 Frugal Innovation on Social Value Creation**

Frugal innovation is the key factor in producing social value creation (Pisoni et al., 2018). Frugal innovation in low-income societies helps social enterprises perk up the living standard. They offer them basic products and valued services that help them improve their lifestyle in a very affordable way (Albert, 2019). The main aim of frugal innovation is to create social value in which cost-effective products and services having critical values are provided to the consumers (Rosca et al., 2017). Frugal innovation is determined as a corporate strategy for social ventures to cope with social issues and at the same time frugal innovation creates revenues for the organization (Radjou et al., 2014). This might help these social ventures create social value via frugal innovation. Therefore, this research hypothesizes that:

**H<sub>4</sub>:** Frugal innovation has a significant positive relationship with the social value creation.

## **2.6 The Mediating Effects**

Entrepreneurial ventures require resources to achieve their operational goals and create social value. Among these ventures lie social ventures working for society to create social value. Social ventures operate in resource-constrained environments. Ananthram and Chan (2021) state that ventures find alternatives and adopt advanced procedures, by which they apply different combinations of their available resources and frugally innovate their businesses to produce social value by providing high-quality cheap supplies to the deserved consumers (Iqbal et al., 2021). Frugal innovation is mainly adopted by firms operating in resource-constrained environments to create social value by providing cost-effective products and services (Hossain & Sarkar, 2021). Therefore, this research hypothesizes that:

**H<sub>5</sub>:** Frugal innovation mediates the relationship between resource constraints and social value creation.

Bricolage behavior is a way in which organizations efficiently use their internal resources to deal with social concerns and create a competitive edge for themselves in the market (Baker and Nelson, 2005). Bricolage behavior is considered to be a mean that leads to innovation especially under the conditions of meagre resources (Linaa, 2013). Moreover, bricolage enables social ventures to implement frugal innovation in a resource-scarred environment (Senyard et al., 2014). Social ventures work in resource scarcity. To cope with social problems such as social injustice, poverty, and unequal educational and healthcare facilities, social entrepreneurs strive to facilitate the marginalized society to create social value by attempting to provide them with basic needs (Poornima & Rajini, 2021). Bricolage assists firms in implementing frugal innovation. Through frugal innovation, bricolage behavior helps social entrepreneurs to create economical and good-quality products with limited resources for the population having low purchasing power (Cai et al., 2019), thus creating social value. Therefore, this research hypothesizes that:

**H<sub>6</sub>:** Frugal innovation mediates the relationship between bricolage behavior and social value creation.

**H<sub>7</sub>:** Resource constraints has a positive indirect effect on social value creation via both bricolage behavior and frugal innovation.

## **3. Methodology**

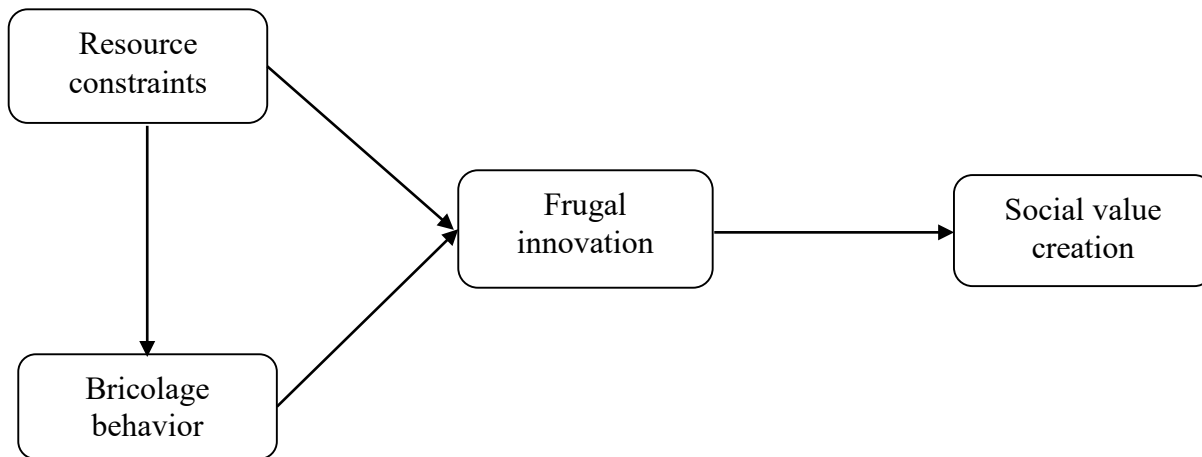
### **3.1 Survey and Data Collection**

Data for this research was collected from the social SMEs of Pakistan. The research questionnaire used for collecting data was adapted. The survey method was used alongside the distribution of questionnaires

electronically. New ventures and entrepreneurs who cumulatively work for their new enterprises in Pakistan were targeted for data collection. 160 research questionnaires were distributed among social enterprises and SMEs, out of which 140 were received and 9 responses were not useful. The total responses were 131 for analysis. The percentage of responses received was 81.87%. The sample size was finalized through G\*power software. The software suggested a sample size of 120 responses. For analyzing the research data, we used SPSS statistical software and SMART PLS. After a primary screening of the collected data, we investigated the validity and reliability of the data. The hypothesized relation between independent and dependent constructs was analyzed via regression analysis.

**Figure 01:**

*Research Model*



### 3.2 Measurements

A seven-point Likert scale was used to measure the constructs, where 1 depicted “Strongly Disagree” and 7 depicted “Strongly Agree”. Scales that fulfilled the validity and reliability criteria were used to measure the constructs. Using Keupp and Gassmann's (2013) six items scale, resource constraint was measured. The sample item of the scale is “My firm is missing the external financial means to accomplish our innovation objectives”. The construct bricolage behavior was measured by adopting Senyard et al. (2009) eight-item scale. The sample item of the scale is “We combine resources to accomplish new challenges that the resources weren’t originally intended to accomplish”. For measuring frugal innovation, the scale of Rossetto et al. (2017), consisting of 9 items, was adopted. The sample item of the scale was “Frugal innovation significantly reduces cost in the operational process.” While using Jalilvand (2017) 4-item scale, social value creation (SVC) was measured. The sample item for the scale was “This enterprise continuously creates social benefits for its beneficiaries.”

### 4. Analysis

To analyze the gathered data, we utilize Smart PLS 3 and SPSS in data analysis to evaluate the variables and to inspect the association between research constructs. SPSS was used to evaluate the demographic characteristics of respondents. While Smart PLS 3 was to examine the hypothesized relationships. Among diverse techniques of PLS, Partial least square structural equation modeling (PLS-SEM) was used. The motive for employing (PLS-SEM) is that this technique is highly regarded for testing the predicted model (Hair et al., 2021).

**4.1 Demographic Profile**

There were 131 responses collected, 76 were collected from males which is 58% and 55 were from females which was 42% of the total responses. Entrepreneurs between the ages of 20 and 30 were 38(29%) of the total responses collected. The respondents who gave responses between the age of (31-40) were 55(55%) of the total respondents. The respondents over the age of 40 years were 21, which is 16% of the total sample size. While we talk about the experience of these entrepreneurs, persons with experience between 1 to 5 years were 70, which is 53.4% of total responses, while persons with experience between 6 to 10 years were 49, which is 37.4% of total responses. Responses taken from the individuals with a work experience of 11 to 20 years were 6 which is 4.6% of responses, and the respondents who had work experience of more than 20 years are just 6 and 4.6% of the total sample size. The qualification data of respondents were also collected; individuals with intermediate degrees were 11 which formulated 8.4% of the total responses. Individuals who had a bachelor’s degree were 73 and covered 55.7% of total responses. While respondents having master’s, degrees were 45 which made up 34.4% of 131 responses, and entrepreneurs that fell in other qualifications were only 2 which is 1.5% of the total responses of collected data.

**4.2 Measurement model assessment**

A measurement model can be employed to evaluate the outer model. The reliability of constructs and its items is measured in this model (Henseler et al., 2009). For assessing the measurement model, factor loading, composite reliability, convergent validity, and discriminant validity were determined. The examination of outer loading in SMRT PLS, as advised by Hulland (1999), was determined to check the items' reliability. According to researchers, factor loading larger than (0.5) is valid and our research meets the accepted criteria as shown in Table 1 and Figure 2.

The average variance (AVE) is identified to measure convergent validity and the valid range of 0.5 was achieved (Hair et al., 2021). A scale's internal consistency is measured by the Composite reliability (Netemeyer et al., 2003). CR values should be more than 0.70, according to Bagozzi and Yi (1988), all CR values in this investigation are more than 0.90, indicating that data correctness and dependability are satisfactory (Hair et al., 2011).

**Table 1:**  
*Reliability and validity of constructs*

<b>Constructs</b>	<b>Factors</b>	<b>Loading</b>	<b>AVE</b>	<b>CR</b>
Bricolage Behavior	BB1	0.883	0.583	0.917
	BB2	0.834		
	BB3	0.806		
	BB4	0.836		
	BB5	0.600		
	BB6	0.720		
	BB7	0.651		
	BB8	0.734		
Frugal innovation	FI1	0.786	0.551	0.916
	FI2	0.586		
	FI3	0.638		
	FI4	0.788		
	FI5	0.780		

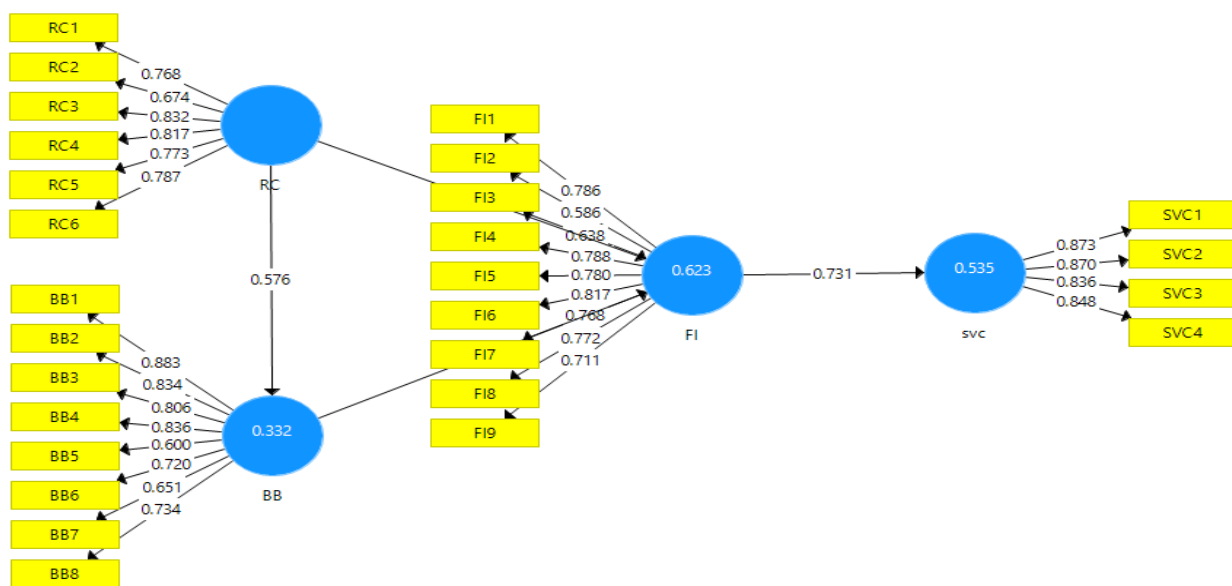
	FI6	0.817		
	FI7	0.768		
	FI8	0.772		
	FI9	0.711		
Resource constrains	RC1	0.768	0.603	0.901
	RC2	0.674		
	RC3	0.832		
	RC4	0.817		
	RC5	0.773		
	RC6	0.787		
Social value creation	SVC1	0.873	0.734	0.917
	SVC2	0.870		
	SVC3	0.836		
	SVC4	0.848		

Next, Table 2 verifies that our research model has achieved discriminant validity, as the heterotrait-monotrait ratio (HTMT) (Henseler et al., 2009) is below the threshold of 0.85 that was suggested by (Henseler et al., 2015).

**Table 2:**  
(HTMT) – Matrix

	BB	FI	RC	Svc
BB	0.764			
FI	0.692	0.742		
RC	0.576	0.709	0.777	
Svc	0.650	0.731	0.571	0.857

**Figure 02:**  
Measurement Model



### 4.3 Structural Model Assessment

In Smart PLS 3 specific Algorithms and Bootstrapping were run to test the proposed hypothesis and structural

models. The relationships between variables are determined via route analysis (Wright, 1921). Further, to assess the structural model we identify the beta value and coefficient of determination ( $R^2$ ). Additionally, predictive relevance ( $Q^2$ ) was also determined for the inner model assessment. The anticipated hypothesis is depicted in Figure. 3.

**Figure 03:**  
Structural Model

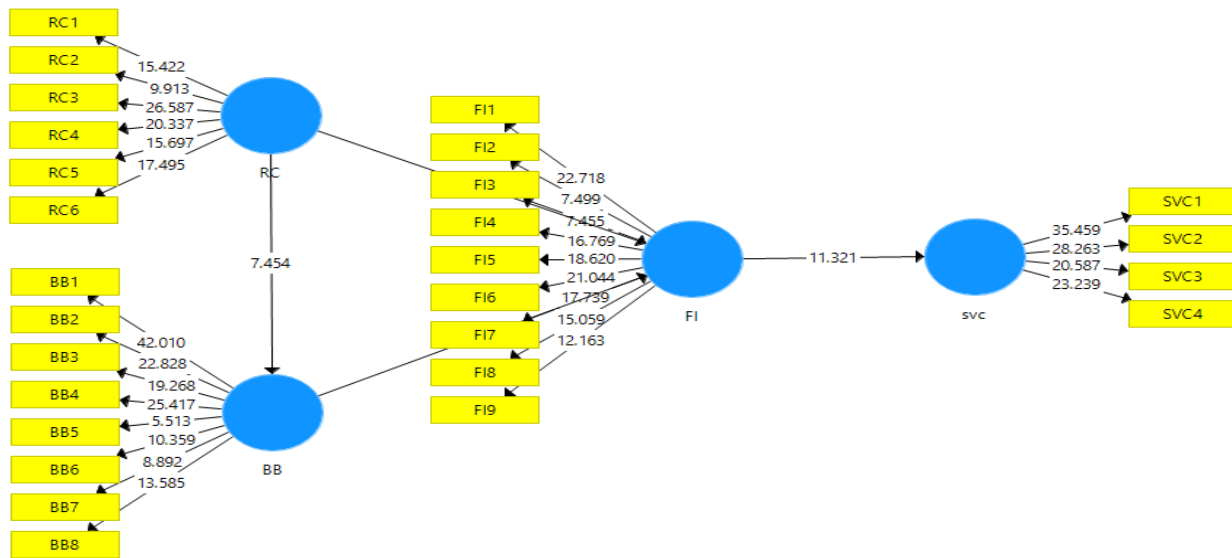


Table 3 below shows the results of the direct hypothesis. In hypothesis H1 we tested the relation between bricolage behavior and frugal innovation. According to the output this association is supported, with ratios ( $b=0.424$ ,  $t=3.246$ ,  $p=0.001$ ). In hypothesis H2 we tested the relation between frugal innovation and social value creation. The results indicate this hypothesis is accepted, with output values ( $b=0.731$ ,  $t=11.321$ ,  $p=0.000$ ). In hypothesis H3 we tested the relationship among resource constraints and bricolage behavior. The output values depict that this hypothesis is significantly supported, with values ( $b=0.576$ ,  $t=7.454$ ,  $p=0.000$ ). Likewise, the hypothesis H4 among resource constraints and frugal innovation at output values ( $b=0.465$ ,  $t=4.012$ ,  $p=0.000$ ) is also supported.

**Table 03:**  
Direct path results

Hypothesis	Path coefficients	Std	T value	P value	Comments
RC -> BB	0.576	0.077	7.454	0.000	Supported
RC -> FI	0.465	0.116	4.012	0.000	Supported
BB -> FI	0.424	0.131	3.246	0.001	Supported
FI -> SVC	0.731	0.065	11.321	0.000	Supported

In further hypothesis, we tested indirect relations, the findings of which are displayed in Table 3. In H5 we tested the mediation impact of resource constraints on frugal innovation through bricolage behavior. Results demonstrate that this linkage is supported, with ratios ( $b=0.244$ ,  $t=2.795$ ,  $p=0.005$ ). In H6 we tested the mediating effect of frugal innovation between bricolage behavior and social value creation. The results show this relationship is supported, with values ( $b=0.310$ ,  $t=2.856$ ,  $p=0.004$ ). Moreover, in H7 we tested the serial



mediation impact from resource constraints through bricolage behavior and frugal innovation to social value creation. With values (b=0.179, t=2.428, p=0.016) this hypothesis is significant and supported. Lastly, in H8 we tested the mediating effect of resource constraints on frugal innovation via social value creation. With output values (b=0.340, t=3.990, p=0.000) this hypothesis is also supported.

**Table 03:**

*Indirect path results*

Hypothesis	Path coefficients	Std	T value	P value	Comments
RC -> FI -> SVC	0.340	0.085	3.990	0.000	Supported
BB -> FI -> SVC	0.310	0.109	2.856	0.004	Supported
RC -> BB -> FI -> SVC	0.179	0.074	2.428	0.016	Supported

**4.4 Explanatory Power**

Additionally, we use the coefficient of determination (R<sup>2</sup>) and predictive relevance (Q<sup>2</sup>) to determine the explanatory power of our research model.

**4.4.1 Coefficient of determination (R<sup>2</sup>)**

The R square, as proposed by Hensler et al., (2009), is an important criterion for determining the correlations between constructs. According to Hair et al., (2006), the degree to which independent factors explain dependent variables can be measured by R<sup>2</sup>. The minimum value of R<sup>2</sup> varies depending on the nature and context of the study (Hair et al., 2010). According to Chin (1998), at 0.19 explanatory power is weak, at 0.33 it is moderate, while it is significant and considered significant at 0.60. The findings of our model are represented in the table. 4 indicates that the explanatory power of our model falls in the moderate range.

**Table 04:**

*Values of R<sup>2</sup>*

	R Square	R Square Adjusted
BB	0.332	0.327
FI	0.623	0.617
SVC	0.535	0.531

**4.4.2 Predictive Relevance (Q<sup>2</sup>)**

Q<sup>2</sup> analysis is performed to test the framework's predictive significance as suggested by Chin (2010). According to Henseler et al., (2009), if Q<sup>2</sup> is greater than 0, the model's predictive relevance is considered supreme. The findings are displayed in the table. 5, reveal that the values for BB, RC, and SVC were greater than zero, indicating substantial predictive power

**Table 05:**

*Values of Q<sup>2</sup>*

	SSO	SSE	Q <sup>2</sup>
BB	1,048.000	871.956	0.168
FI	1,179.000	814.179	0.309
RC	786.000	786.000	
SVC	524.000	333.638	0.363

## **5. Discussion**

Resource constraints set the stage for exploring and learning different ways like the bricolage behavior to innovate (Korsgaard et al., 2021). Various studies endorse that such learning through bricolage contributes significantly to the innovation ability (Slater & Narver, 1995; Wang & Ahmed, 2004). The study results show that resource constraints work as the predecessor of bricolage and both the constructs have a strong positive relation (Hota et al., 2019). Iqbal et al., (2021) stated that there is a major effect on bricolage behavior under resource-constrained conditions. As affordability is the major concern of the people belonging to the low income economies, therefore, firms in emerging economies focus on frugal innovation due to resource constraints (Ernst et al., 2015; Subramaniam et al., 2015).

Prior studies suggest that bricolage behavior fosters innovative ideas by efficiently utilizing scarce available resources, thereby catering to consumers with limited purchasing power (Chatterjee et al., 2021; Guo et al., 2016). Similarly, frugal innovation has a positive relation with social value creation. Cai et al. (2019) describe how social enterprises in emerging markets adopt frugal innovation in their operational strategies, resulting in the production of resource-efficient products and services that are both cost-effective and of high value.

The results from the responses demonstrate the mediation effect of frugal innovation between resource constraints and social value creation. As Iqbal et al. (2021); Pisoni et al. (2018); Khan, (2016) elaborate frugal innovation is the combination of multiple methods and techniques, that facilitate the organization to solve the problems regarding resource scarcity. This in turn further enables organizations to create social value by addressing key social issues. Frugal innovation also mediates the relationship between bricolage behavior and social value creation. Social entrepreneurs operate in a scarcity of resources, they prefer bricolage behavior in which they innovate themselves frugally to produce affordable and good quality products (Radjou et al., 2014).

The observed positive relationship between resource constraints and bricolage behavior aligns with existing literature, indicating that firms in emerging markets employ bricolage to generate cost-effective yet value-enhancing innovations (Cai et al., 2019; Linaa, 2013). The results of this research are in correspondence with the previous studies by (Brieger et al., 2019; Levanen et al., 2022; Hossain, 2020; Hossain, 2018). Social enterprises, when encountered by the resource-poor environment, create social value as the required performance indicator, by following the important sequential pathway of bricolage behavior and frugal innovation. This is done by creating job opportunities, skill development programs, and overcoming resource scarcity which helps the firms to produce resource-efficient offerings in the form of frugal innovation.

### **5.1 Theoretical Contribution**

The constructs analyzed in this research (resource constraints, bricolage behavior, frugal innovation, and social value creation) provide a unique analysis of bricolage behavior in resource constraint environments from a social entrepreneurial perspective in Pakistan. The impact of frugal innovation on social value creation is analyzed quantitatively. This fills the gap discussed by Iqbal et al. (2021) that there is a lack of quantitative work on resource constraints and social value creation under the context of Pakistan.

The creation of social value is challenging and bit hectic for social entrepreneurs as multiple factors influence social organizations (Eng et al., 2020). This study highlights factors that can help create social value in resource-constrained environments. Moreover, the study sheds light on how bricolage behavior and frugal innovation can

be used to work in resource-constrained environments. Finally, this research has seen the effect of bricolage behavior and frugal innovation on social value creation. In previous studies, bricolage behavior and frugal innovation were not studied in a single framework.

## **5.2 Practical Contribution**

Resources have core importance for every organization in developing countries like Pakistan, where social enterprises face severe resource scarcity, and must innovatively use existing/ internal resources (Liu et al, 2021). The findings of our research work are of significant value for social enterprises as well as practitioners who strive for the creation of social value in resource resource-constrained environments.

Organizations face resource scarcity and are unable to use resources effectively to create value (Baker, & Nelson, 2005). Therefore, this research implies that enterprises can adopt bricolage behavior, which leads them towards frugal innovation. With frugal innovation, social enterprises create social value by delivering quality products and services in terms of cheap and quality products, healthcare facilities, employment opportunities, and educational facilities to the low-income segment of society (Santos et al, 2020).

## **5.3 Limitations/ Future Recommendations**

This research has certain limitations. Conducted in Pakistan, it does not account for the operational environments of social enterprises in developed countries. The research model emphasizes cost advantage and resource efficiency, which have global relevance; thus, there is a need for similar studies in diverse geographical areas. Additionally, this study focuses exclusively on small and new ventures. Future research should examine the operational tactics of established and stable organizations. Furthermore, the primary emphasis of this study is on social value creation, which aligns with the double-bottom line approach that considers both financial and social benefits. However, developing countries like Pakistan face significant environmental challenges. Consequently, future studies should incorporate environmental factors to address the perspective of sustainable ventures.

## **6. Conclusion**

In resource resource-constrained environments significant role in addressing social problems. Bricolage behavior can be practiced by enterprises so that they can frugally innovate themselves (Hossain and Sarkar, 2021). From the results, we conclude that, in Pakistan, organizations face a ruthless shortage of resources. Therefore, these organizations, social entrepreneurial ventures play a uncover innovative means by which they increase their productivity in resource-constraint environments to create social value. They practice frugal innovation by adapting bricolage behavior. This research holds practical implications for social ventures in Pakistan.

## **References**

- Albert, M. 2019. Sustainable frugal innovation – The connection between frugal innovation and sustainability. *Journal of Cleaner Production*, 237, 117747. <https://doi:10.1016/j.jclepro.2019.117747>.
- Ananthram, S., and C. C. A. Chan. 2021. Institutions and frugal innovation: The case of Jugaad. *Asia Pacific Journal of Management*, 38 (3), 1031–1060. <https://doi:10.1007/s10490-019-09700-1>.
- An, W., X. Zhao, Z. Cao, J. Zhang, and H. Liu. 2018. “How bricolage drives corporate entrepreneurship: The roles of opportunity identification and learning orientation.” *Journal of Product Innovation Management*, 35 (1), 49–65. <https://doi.org/10.1111/jpim.12377>
- Arya, B., Horak, S., Bacouel-Jentjens, S. and Ismail, K. (2021), Leading entrepreneurial sustainability initiatives in emerging economies, *International Journal of Emerging Markets*, 18(1), 64-85.

<https://doi.org/10.1108/IJOEM-08-2020-0951>

- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94. <https://doi.org/10.1007/BF02723327>
- Baker, T., Nelson, R.E., 2005. Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50 (3), 329-366. <https://doi.org/10.2189/asqu.2005.50.3.329>
- Brieger, S. A., & De Clercq, D. (2019). Entrepreneurs' individual level resources and social value creation goals: The moderating role of cultural context. *International Journal of Entrepreneurial Behavior & Research*, 25(2), 193-216. <https://doi.org/10.1108/IJEER-12-2017-0503>
- Bhatti, Y., Basu, R.R., Barron, D., Ventresca, M.J., 2018. Frugal innovation: Models, means, methods. Cambridge University Press.
- Busch, C., and H. Barkema. 2021. From necessity to opportunity: Scaling bricolage across resource-constrained environments. *Strategic Management Journal* 42, 741-773. <https://doi.org/10.1002/smj.3237>
- Cai, Q., Ying, Y., & Liu, Y., & Wu, W. (2019). Innovating with limited resources: The antecedents and consequences of frugal innovation. *Sustainability*, 11(20), 5789. <https://doi.org/10.3390/su11205789>
- Chatterjee, S., Chaudhuri, R., & Vrontis, D. (2021). Antecedents and consequence of frugal and responsible innovation in Asia: Through the lens of organization capabilities and culture. *Asia Pacific Journal of Management*, 1-25. <https://doi.org/10.1007/s10490-021-09797-3>
- Chatterjee, S., Ghosh, S. K., Chaudhuri, R., & Nguyen, B. (2019). Are CRM systems ready for AI integration? A conceptual framework of organizational readiness for effective AI-CRM integration. *The Bottom Line*, 32(2), 144-157. <https://doi.org/10.1108/BL-02-2019-0069>
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336. <https://doi.org/10.4324/9781410604385-10>
- Ciambotti, G., & Pedrini, M. (2021). Hybrid harvesting strategies to overcome resource constraints: Evidence from social enterprises in Kenya. *Journal of Business Ethics*, 168(3), 631-650. <https://doi.org/10.1007/s10551-019-04256-y>
- Eng, T.-Y., Ozdemir, S., Gupta, S., & Kanungo, R. P. (2020). International social entrepreneurship and social value creation in cause-related marketing through personal relationships and accountability. *International Marketing Review*, 37(5), 945-976. <https://doi.org/10.1108/IMR-12-2018-0360>
- Ernst, H., Kahle, H. N., Dubiel, A., Prabhu, J., & Subramaniam, M. (2015). The antecedents and consequences of affordable value innovations for emerging markets. *Journal of Product Innovation Management*, 32(1), 65-79. <https://doi.org/10.1111/jpim.12171>
- Fernando, Y., Jabbour, C.J.C., Wah, W.-X., 2019. Pursuing green growth in technology firms through the connections between environmental innovation and sustainable business performance: Does service capability matter? *Resource conservation and recycling*, 141, 8-20. <https://doi.org/10.1016/j.resconrec.2018.09.031>
- Gambella, F., Quaranta, G., Morrow, N., Vcelakova, R., Salvati, L., Gimenez Morera, A., & Rodrigo-Comino, J. (2021). Soil degradation and socioeconomic systems' complexity: Uncovering the latent nexus. *Land*, 10(1), 30. <https://doi.org/10.3390/land10010030>
- Garud, N., and G. N. Prabhu. 2021. Linking R&D inventors' social skills and bricolage to R&D performance in resource constrained environments in emerging markets." *IEEE Transactions on Engineering Management* 68 (3), 713-724. <https://doi.org/10.1109/TEM.2020.2997796>
- Guo, H., Su, Z., & Ahlstrom, D. (2016). Business model innovation: The effects of exploratory orientation,

- opportunity recognition, and entrepreneurial bricolage in an emerging economy. *Asia Pacific Journal of Management*, 33(2), 533-549. <https://doi.org/10.1007/s10490-015-9428-x>
- Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3 ed.): Sage publications. [https://doi.org/10.1007/978-3-030-80519-7\\_1](https://doi.org/10.1007/978-3-030-80519-7_1)
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. (2010). *Multivariate Data Analysis*, 7th ed., Prentice Hall, Upper Saddle River, NJ.
- Halme, M., Lindeman, S. and Linna, P. (2012), Innovation for inclusive business: Intrapreneurial bricolage in multinational corporations. *Journal of Management Studies*, 49(4), 743-784. <https://doi.org/10.1111/j.1467-6486.2012.01045.x>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing* (pp. 277-319) Emerald Group Publishing Limited. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
- Hossain, M., Simula, H., Halme, M., 2016. Can frugal go global? Diffusion patterns of frugal innovations. *Technology in Society*. 46, 132-139. <https://doi.org/10.1016/j.techsoc.2016.04.005>
- Hossain, M., 2017. Mapping the frugal innovation phenomenon. *Technology in Society*, 51, 199-208 <https://doi.org/10.1016/j.techsoc.2017.09.006>
- Hossain, M., 2018. Frugal innovation: A review and research agenda. *Journal of Cleaner Production*, 182, 926-936. <https://doi.org/10.1016/j.jclepro.2018.02.091>
- Hossain, M. (2020). Frugal innovation: Conception, development, diffusion, and outcome. *Journal of Cleaner Production*, 262, 121456. <https://doi.org/10.1016/j.jclepro.2020.121456>
- Hossain, M., & Sarkar, S. (2021). Frugal entrepreneurship: profiting with inclusive growth. *IEEE Transactions on Engineering Management*, 70(11), 3812-3825. <https://doi.org/10.1109/TEM.2021.3088589>
- Hota, P. K., Mitra, S., & Qureshi, I. (2019). Adopting bricolage to overcome resource constraints: The case of social enterprises in rural India. *Management and Organization Review*, 15(2), 371-402. <https://doi.org/10.1017/mor.2019.19>
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195-204. [https://doi.org/10.1002/\(SICI\)1097-0266\(199902\)20:2%3C195::AID-SMJ13%3E3.0.CO;2-7](https://doi.org/10.1002/(SICI)1097-0266(199902)20:2%3C195::AID-SMJ13%3E3.0.CO;2-7)
- İrengün, O., & Arikboğa, Ş. (2015). The effect of personality traits on social entrepreneurship intentions: A field research. *Procedia-Social and Behavioral Sciences*, 195, 1186-1195. <https://doi.org/10.1016/j.sbspro.2015.06.172>
- Iqbal, Q., Ahmad, N. H., & Halim, H. A. (2021). Insights on entrepreneurial bricolage and frugal innovation for sustainable performance. *Business Strategy & Development*, 4(3), 237-245. <https://doi.org/10.1002/bsd2.147>
- Jabbour, C. J. C., Sarkis, J., de Sousa Jabbour, A. B. L., Renwick, D. W. S., Singh, S. K., Grebinevych, O., & Filho, G.

- M. (2019). Who is in charge? A review and a research agenda on the 'human side' of the circular economy. *Journal of Cleaner Production*, 222, 793-801. <https://doi.org/10.1016/j.jclepro.2019.03.038>
- Jalilvand, M. R. (2017). The effect of innovativeness and customer-oriented systems on performance in the hotel industry of Iran. *Journal of Science and Technology Policy Management*, 8(1), 43-61. <https://doi.org/10.1108/JSTPM-08-2016-0018>
- Keupp, M. M., & Gassmann, O. (2013). Resource constraints as triggers of radical innovation: Longitudinal evidence from the manufacturing sector. *Research Policy*, 42(8), 1457-1468. <https://doi.org/10.1016/j.respol.2013.04.006>
- Khan, R. (2016). How frugal innovation promotes social sustainability. *Sustainability*, 8(10), 1034. <https://doi.org/10.3390/su8101034>
- Kickul, J., Griffiths, M., Bacq, S., & Garud, N. (2018). Catalyzing social innovation: Is entrepreneurial bricolage always good? *Entrepreneurship & Regional Development*, 30(3-4), 407-420. <https://doi.org/10.1080/08985626.2017.1413771>
- Korsgaard, S., Müller, S., & Welter, F. (2021). It's right nearby: How entrepreneurs use spatial bricolage to overcome resource constraints. *Entrepreneurship & Regional Development*, 33(1-2), 147-173. <https://doi.org/10.1080/08985626.2020.1855479>
- Levänen, J., Hossain, M., Lyytinen, T., Hyvärinen, A., Numminen, S., & Halme, M. (2016). Implications of frugal innovations on sustainable development: evaluating water and energy innovations. *Sustainability*, 8(1), 4. <https://doi.org/10.3390/su8010004>
- Levänen, J., Hossain, M., & Wierenga, M. (2022). Frugal innovation in the midst of societal and operational pressures. *Journal of Cleaner Production*, 347, 131308. <https://doi.org/10.1016/j.jclepro.2022.131308>
- Levi-Strauss, C. (1967). *The Savage Mind*. Chicago, IL: University of Chicago Press.
- Lewin, Arie Y. 1998. "Introduction—Jazz Improvisation as A Metaphor for Organization Theory." *Organization Science*, 9(5), 539-539. <https://doi.org/10.1287/orsc.9.5.539>
- Liu, Z., Xiao, Y., Jiang, S., & Hu, S. (2021). Social entrepreneurs' personal network, resource bricolage and relation strength. *Management Decision*, 59(11), 2774-2791. <https://doi.org/10.1108/MD-05-2019-0674>
- Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. Sage Publications.
- Pisoni, A., Michelini, L., & Martignoni, G. (2018). Frugal approach to innovation: State of the art and future perspectives. *Journal of Cleaner Production*, 171, 107-126. <https://doi.org/10.1016/j.jclepro.2017.09.248>
- Poornima, A., & Rajini, G. (2021). Bricolage as an intervention to resource constraints in social entrepreneurship- A systematic literature review. *Turkish Journal of Computer and Mathematics Education*, 12(7), 698-709. Retrieved from <https://turcomat.org/index.php/turkbilmat/article/view/2640>
- Rahman, S. A., Alam, M. M. D., Khan, G. M., & Kennedy, R. E. (2021). Shaping bricolage behaviour: The role of personality traits among female entrepreneurs in an emerging economy. *International Journal of Emerging Markets*, 18 (3), 525-546. <https://doi.org/10.1108/IJOEM-09-2020-1156>
- Radjou, N., Prabhu, J., Ahuja, S., & Roberts, N. (2014). Frugal innovation. *The Economist*.
- Ravishankar, M. N., & Gurca, A. (2015). A bricolage perspective on technological innovation in emerging markets. *IEEE Transactions on Engineering Management*, 63(1), 53-66. <https://doi.org/10.1109/TEM.2015.2494501>
- Rosca, E., Arnold, M., & Bendul, J. C. (2017). Business models for sustainable innovation—an empirical analysis of frugal products and services. *Journal of Cleaner Production*, 162, 133-145.

<https://doi.org/10.1016/j.jclepro.2016.02.050>

- Rossetto, D. E., Borini, F. M., Bernardes, R. C., & Frankwick, G. L. (2017). A new scale for measuring frugal innovation: The first stage of development of a measurement tool. In *VI SINGEP-International Symposium on Project Management, Innovation, and Sustainability* (Vol. 6, pp. 1-16).
- Santos, L. L. dos, Borini, F. M., & Pereira, R. M. (2020). Bricolage as a path towards organizational innovativeness in times of market and technological turbulence. *Journal of Entrepreneurship in Emerging Economies*, 13(2), 282-299. <https://doi.org/10.1108/JEEE-02-2020-0039>
- Sarkar, S. (2018). Grassroots entrepreneurs and social change at the bottom of the pyramid: the role of bricolage. *Entrepreneurship & Regional Development*, 30(3-4), 421-449. <https://doi.org/10.1080/08985626.2017.1413773>
- Seles, B. M. R. P., de Sousa Jabbour, A. B. L., Jabbour, C. J. C., Latan, H., & Roubaud, D. (2019). Do environmental practices improve business performance even in an economic crisis? Extending the win-win perspective. *Ecological economics*, 163, 189-204. <https://doi.org/10.1016/j.ecolecon.2019.04.013>
- Senyard, J., Baker, T., & Davidsson, P. (2009). Entrepreneurial bricolage: Towards systematic empirical testing. *Frontiers of Entrepreneurship Research*, 29(5), 5. Available at: <http://digitalknowledge.babson.edu/fer/vol29/iss5/5>
- Senyard, J., Baker, T., Steffens, P., & Davidsson, P. (2014). Bricolage as a path to innovativeness for resource-constrained new firms. *Journal of Product Innovation Management*, 31(2), 211-230. <https://doi.org/10.1111/jpim.12091>
- Subramaniam, M., Ernst, H., & Dubiel, A. (2015). From the special issue editors: Innovations for and from emerging markets. *Journal of Product Innovation Management*, 32(1). <https://doi.org/10.1111/jpim.12167>
- Tasavori, M., Kwong, C., & Pruthi, S. (2018). Resource bricolage and growth of product and market scope in social enterprises. *Entrepreneurship & Regional Development*, 30(3-4), 336-361. <https://doi.org/10.1080/08985626.2017.1413775>
- Waqar, A., Jamil, M., & Fadzil, A. F. M. (2020). Comprehensive review of social entrepreneurship: Developing the conceptual framework for describing the phenomenon of social new venture creation. *Worldview*, 30, 46.
- Wright, S. (1921) Correlation and causation. *Journal of Agricultural Research* 20(7), 557-585
- Zeschky, M. B., Winterhalter, S., & Gassmann, O. (2014). From cost to frugal and reverse innovation: Mapping the field and implications for global competitiveness. *Research-Technology Management*, 57(4), 20-27. <https://doi.org/10.5437/08956308X5704235>

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### **Disclaimer**

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