



# Entrepreneurial Bricolage on New Product Development: The Moderating Role of Team Participation

Dede Kurnia<sup>(✉)</sup> , Hari Mulyadi, and Chairul Furqon 

Universitas Pendidikan, Kota Bandung, Indonesia  
dedekurnialagi@upi.edu

**Abstract.** This research aims to examine the moderating effect of Team Participation (TP) on the relationship between Entrepreneurial Bricolage (EB) and New Product Development (NPD). A cross-sectional method was applied with a total of 258 entrepreneurs in West Java Province as respondents. Moreover, the moderating role of TP variable was analyzed using Macro PROCESS for SPSS developed by Andrew F. Hayes. The results showed that TP in decision-making negatively moderated the positive relationship between EB and NPD. This was indicated by the reduction in the influence of EB on NPD as the moderating effect of TP in decision-making increased. This is associated with the ability of high TP to cause information overload which hampers the speed of information processing to cause slow bricolage action.

**Keywords:** Entrepreneurial Bricolage · New Product Development · Team Participation

## 1 Introduction

The increasing environmental dynamism is causing shorter product life cycles and also increasing the pressure on business organizations to adopt managerial practices to achieve innovative outcomes and enhance New Product Development (NPD) processes [1]. NPD is an important process for companies to achieve and maintain a competitive position and has become an interesting topic for researchers and practitioners [1, 2]. This is mostly required by new Micro, Small, and Medium Enterprises (MSMEs) facing challenges in developing new products due to difficulties in obtaining strategic resources [3, 4]. The situation was reported to be more serious among MSMEs in developing countries [5].

This means these MSMEs need an alternative strategy to develop new products and this led to the suggestion of applying the Entrepreneurial Bricolage (EB) strategy to sustain the process despite the environmental dynamism and difficulty in accessing resources [6, 7]. The EB concept is defined as the effort applied to create anything through the combination of available resources [8, 9]. It is believed to have the ability to assist new businesses to overcome resource constraints during the process of developing new products [10–14].

A business firm is generally founded by a heterogeneous team [15] and the high participation of the members has been reported to influence the corporate decision-making process [6, 16], including those related to implementing the EB strategy [9]. An empirical test is necessary to determine the moderating influence of Team Participation (TP) in the relationship between EB and NPD in order to provide information on the period and conditions of EB in promoting NPD. It is important to note that this concept has not been widely studied.

This research aims to examine the moderating effect of Team Participation (TP) on the relationship between Entrepreneurial Bricolage (EB) and New Product Development (NPD) in Small Medium Enterprise (SMEs).

## 2 Method

The population included all MSME actors in the food and beverage sector in West Java Province, Indonesia. The survey locations were determined based on the data from the Central Statistics Agency in 2020 which showed that the province has the largest number of food and beverage MSMEs in the country. A total of 258 owners willing to fill the questionnaire were selected through the non-probability sampling technique. Moreover, data were collected cross-sectionally through an online-based survey conducted from December to March 2022.

The research variables were measured through instruments designed with a numerical scale of points 1 to 7 and an anchoring technique due to their ability to produce interval data [17]. The EB was measured by adapting the questionnaire from Davidsson et al. [18], NPD from Yapu Zhao et al. [19], and TP through the instrument developed by Wang et al. [6]. The data were analyzed using AMOS to obtain an adequate Congeneric Measurement Model after which moderation analysis was conducted through the Macro PROCESS for SPSS developed by Andrew F. Hayes.

## 3 Result and Discussion

The confirmatory factor analysis conducted through multi-factor method using AMOS software showed that  $\chi^2 = 292.308$ ,  $df = 101$ ,  $RMSEA = 0.08$ ,  $CFI = 0.91$ , and  $TLI = 0.89$ . The CFI score which is more than 0.9 indicates the model fits the data and satisfies the Goodness of Fit (GOF) criteria [20].

A parameter estimate analysis which includes the parameter estimates, descriptive statistics, and correlations between variables was conducted and the results are presented in Table 1.

The Standardized Regression Weight estimation showed that all the indicators tested have a value  $> 0.50$  and their Construct Reliability is  $> 0.70$ . This means all indicators are valid and reliable. Moreover, the hypotheses were tested using Macro PROCESS and the results are presented in the following Table 2.

Table 2 shows that EB has a positive and significant effect on NPD ( $b_1 = 0.141$ ,  $t = 5.603$ ,  $p < 0.001$ ) and it was also observed for TP ( $b_1 = 1.660$ ,  $t = 4.156$ ,  $p < 0.001$ ). Meanwhile, it is discovered that TP negatively and significantly moderated the effect of EB on NPD ( $b_3 = -0.023$ ,  $t = -2.223$ ,  $p = 0.027$ ). These findings show that

**Table 1.** CR, AVE, descriptive statistics.

Variable	CR	M	SD	EB	NPD	TP
EB	0.82	38.08	6.73	1		
NPD	0.89	32.48	6.85	0.72 <sup>**</sup>	1	
TP	0.80	14.54	3.59	0.55	0.68 <sup>**</sup>	1

**Table 2.** Summary of Data Analysis Results.

		<i>Coeff.</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Constant	$i_y$	-9.967	5.391	-1.849	0.066
EB	$b_1$	0.819	0.146	5.603	0.000
TP	$b_2$	1.660	0.399	4.156	0.000
EB x TP	$b_3$	-.023	0.010	-2.223	0.027
		$R^2 = 0.657$ MSE = 16.32			
		$F(3,254) = 162.01, p < 0.001$			

TP is in the quasi-moderator category and this means it is a variable that interact and influence a dependent variable [21].

It is also discovered that EB has an effect on NPD and this strengthens the previous research that bricolage can assist new businesses in facing resource constraints [16, 22–24]. It also serves as the strategy of choice to ensure continuous innovation and development of a company during a period of crisis or when there are limited resources due to different reasons [11, 25, 26].

TP used in this research focuses on measuring the involvement of teams in decision-making and its effect on the relationship between EB and NPD, and the moderating influence is found to be weak as indicated in the following Table 3.

Table 3 shows that the lower mediating effect of TP (10.955) leads to a stronger influence of EB on NPD (0.570) while a higher moderating effect of TP (18,139) causes a weaker influence of EB on NPD (0.407). This is in line with the findings in Table 2 (EB x TP) which show that TP negatively and significantly moderates the relationship between EB and NPD. This implicitly indicates that the high involvement of team members in

**Table 3.** Conditional effects moderator.

TP	Effect	SE	t	p	95% CI
10.955	0.570	0.052	10.901	0.000	0.467 - 0.673
14.547	0.488	0.046	10.699	0.000	0.399 - 0.578
18.139	0.407	0.064	6.332	0.000	0.280 - 0.533

the decision-making process reduces the optimal usage of the bricolage strategy. This is due to the increasing amount of information being shared hampers the effectiveness and efficiency of processing the information [6, 27].

## 4 Conclusion

The findings showed that EB has become one of the most important aspects to support the sustainability and productivity of a business in accessing strategic resources. However, companies need to pay attention to and regulate the level of participation of the founding team in the decision-making process to avoid the accumulation of information which has the ability to hinder the implementation of bricolage.

**Acknowledgments.** The author appreciates the Educational Service Center Fundings (Pusat Layanan Pembiayaan Pendidikan, PUSLAPDIK) and Indonesia Endowment Fund for Education (Lembaga Pengelola Dana Pendidikan, LPDP) for providing the opportunity to continue this doctoral study at Universitas Pendidikan Indonesia (UPI) and complete this research.

## References

1. Araujo, T. R. de et al. Influence of new product development best practices on performance: an analysis in innovative Brazilian companies. *J. Bus. Ind. Mark.* 37, 266–281 (2022).
2. Thornton, S. C., Henneberg, S. C., Leischnig, A. & Naudé, P. It's in the Mix: How Firms Configure Resource Mobilization for New Product Success. *J. Prod. Innov. Manag.* 36, 513–531 (2019)
3. Brinckmann, J., Villanueva, J., Grichnik, D. & Singh, L. Sources of strategic flexibility in new ventures: An analysis of the role of resource leveraging practices. *Strateg. Entrep. J.* 13, 154–178 (2019).
4. Fackler, D., Cchnabel, C. & Wagner, J. Establishment Exits in Germany: The Role of Size and Age. *Small Bus. Econ.* 41, 683–700 (2013).
5. Yu, X., Li, Y., Chen, D. Q., Meng, X. & Tao, X. Entrepreneurial bricolage and online store performance in emerging economies. *Electron. Mark.* 29, 167–185 (2019).
6. Wang, X., Yu, X. & Meng, X. Entrepreneurial Bricolage and New Product Development Performance in New Ventures : The Contingent Effects of Founding Team Involvement. *Entrep. Res. J.* 1–27 (2021).
7. An, W., Zhao, X., Cao, Z., Zhang, J. & Liu, H. How Bricolage Drives Corporate Entrepreneurship: The Roles of Opportunity Identification and Learning Orientation. *J. Prod. Innov. Manag.* 35, 49–65 (2018).
8. Desa, G. Resource Mobilization in International Social Entrepreneurship: Bricolage as a Mechanism of Institutional Transformation. *Entrep. Theory Pract.* 36, 727–751 (2012).
9. Baker, T. & Nelson, R. E. Creating Something from Nothing: Resource Construction through Entrepreneurial Bricolage. *Adm. Sci. Q.* 50, 329–366 (2005).
10. Getnet, H., O'Cass, A., Ahmadi, H. & Siahtiri, V. Supporting product innovativeness and customer value at the bottom of the pyramid through context-specific capabilities and social ties. *Ind. Mark. Manag.* 83, 70–80 (2019).

11. Senyard, J., Baker, T., Steffens, P. & Davidsson, P. Bricolage as a Path to Innovativeness for Resource-Constrained New Firms. *J. Prod. Innov. Manag.* 31, 211–230 (2015).
12. Cunha, M. P. e, Rego, A., Oliveira, P., Rosado, P. & Habib, N. Product Innovation in Resource-Poor Environments: Three Research Streams. *J. Prod. Innov. Manag.* 31, 202–210 (2014).
13. Wu, L., Liu, H. & Zhang, J. Bricolage effects on new-product development speed and creativity: The moderating role of technological turbulence. *J. Bus. Res.* 70, 127–135 (2017).
14. Tasavori, M., Kwong, C. & Pruthi, S. Resource bricolage and growth of product and market scope in social enterprises. *Entrep. Reg. Dev.* 30, 336–361 (2018).
15. Liu, J., Chen, J. & Tao, Y. Innovation Performance in New Product Development Teams in China's Technology Ventures: The Role of Behavioral Integration Dimensions and Collective Efficacy. *J. Prod. Innov. Manag.* 32, 29–44 (2014).
16. Su, Z., Yang, J. & Wang, Q. The Effects of Top Management Team Heterogeneity and Shared Vision on Entrepreneurial Bricolage in New Ventures: An Attention-Based View. *IEEE Trans. Eng. Manag.* 1–14 (2020).
17. Nunnally, J. C. & Bernstein, I. H. *Psychometric Theory*. (McGraw-Hill, 1994).
18. Davidsson, P., Baker, T. & Senyard, J. M. A measure of entrepreneurial bricolage behavior. *Int. J. Entrep. Behav. Res.* 23, 114–135 (2017).
19. Zhao, Y., Liu, D., Zhang, W. & Chen, S. Top management service commitment and new product development in manufacturing firms: the moderating role of dysfunctional competition. *J. Bus. Ind. Mark.* 37, 14–28 (2022).
20. Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. *Multivariate Data Analysis*. (Prentice-Hall, Inc, 2014).
21. Sharma, S., Durand, R. M. & Gur-Arie, O. Identification and Analysis of Moderator Variables. *J. Mark. Res.* (1981).
22. An, W., Ruling, C. C., Zheng, X. & Zhang, J. Configurations of effectuation, causation, and bricolage: implications for firm growth paths. *Small Bus. Econ.* (2020).
23. Busch, C. & Barkema, H. From necessity to opportunity: Scaling bricolage across resource-constrained environments. *Strateg. Manag. J.* (2021).
24. Yu, X. et al. Entrepreneurial bricolage and its effects on new venture growth and adaptiveness in an emerging economy. *Asia Pacific J. Manag.* (2020).
25. Phillimore, J., Bradby, H., Knecht, M., Padilla, B. & Pemberton, S. Bricolage as conceptual tool for understanding access to healthcare in superdiverse populations. *Soc. Theory Heal.* (2019).
26. Smith, D. J. & Blundel, R. K. Improvisation and entrepreneurial bricolage versus rationalisation: A case-based analysis of contrasting responses to economic instability in the UK brass musical instruments industry. *J. Gen. Manag.* (2014).
27. Edmunds, A. & Morris, A. The problem of information overload in business organisations: a review of the literature. *Int. J. Inf. Manag.* 20, 17–28 (2000).

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

