

## Uncertain Supply Chain Management

homepage: [www.GrowingScience.com/uscm](http://www.GrowingScience.com/uscm)**Increasing product competitiveness in weaving SMEs: The role of competency, creativity, and performance****Ida Ayu Oka Martini<sup>a\*</sup>, I Wayan Edi Arsawan<sup>b</sup>, Desak Made Febri Purnama Sari<sup>a</sup> and Nilna Muna<sup>a</sup>**<sup>a</sup>Universitas Pendidikan Nasional, Denpasar, Indonesia<sup>b</sup>Politeknik Negeri Bali, Indonesia**ABSTRACT***Article history:*

Received April 12, 2023

Received in revised format May 18, 2023

Accepted May 30 2023

Available online

May 30 2023

*Keywords:**Employee performance**Product competitiveness**Employee competency**Employee creativity*

This study examines the link between employee competency, creativity, and performance in generating product competitiveness in the weaving industry. It also analyzed the moderating role of time sufficiency in reinforcing employee performance and product competitiveness. This study was designed quantitatively by administering a questionnaire to 662 employees from 331 weaving SMEs in Indonesia using structural equation modelling. The analysis revealed that employee competency positively affects creativity, performance, and product competitiveness. Additionally, time sufficiency was confirmed as moderator in strengthening the linkage between employee creativity, performance, and product competitiveness.

© 2023 Growing Science Ltd. All rights reserved.

**1. Introduction**

The highly competitive entrepreneurial environment and market fluctuations are evident today, where modernity brings uncertainty, imbalance, and the disparity between desired and actual market circumstances (Arsawan, De Hariyanti, Atmaja, Suhartanto, & Koval, 2022; Shpak, Seliuchenko, Kharchuk, Kosar, & Sroka, 2019). It demands heightened concentration on several external aspects, such as collaboration with the supply chain (Patricio, Axelsson, Blomé, & Rosado, 2018; Shin, Park, & Park, 2019), cooperation with partners (Messersmith & Guthrie, 2010), and internal aspects, such as innovation (Cosenz & Bivona, 2020; Nowacki & Bachnik, 2016), creativity (Fong, Men, Luo, & Jia, 2018; Hu, Gu, & Chen, 2013; Jiang, Wang, & Zhao, 2012) and even employees' competency (Kamukama, Kyomuhangi, Akisimire, & Orobia, 2017; J. Zhou, Bi, Liu, Fang, & Hua, 2018). Nevertheless, the production of competitive products is of vital importance for business sustainability. In parallel, product competitiveness is a wide-ranging phenomenon from multiple perspectives and relevant interdisciplinary areas (Shpak et al., 2019). Therefore, it is worth explaining that different business areas generate specific conditions and thus significantly impact product competitiveness (Kahupi, Eirikur Hull, Okorie, & Millette, 2021). Subsequently, considering the distinctiveness, it is reasonable to focus research on specific products.

The paramount direction for economic development is enhancing product exports and raising national trademarks in the overseas market (Brache & Felzensztein, 2019; Colclough, Moen, Hovd, & Chan, 2019; Stoian, Dimitratos, & Plakoyiannaki, 2018). In the domestic market, almost every industry has a product or trademark that is in demand and well-recognized. However, Indonesian SMEs struggle in the international market (Arsawan, Koval, et al., 2022). This situation is attributed to the competitiveness of the products, notably for national brands. A closer look at the export results of Indonesian products reveals that woven fabrics are in heavy demand by the international market since they consistently maintain traditional

\* Corresponding author

E-mail address [davyuokamartini@undiknas.ac.id](mailto:davyuokamartini@undiknas.ac.id) (I. A. O. Martini)

patterns. However, woven fabrics contribute only a minor proportion of Indonesia's exports (Permatasari, Dhewanto, & Dellyana, 2022). The relative underrepresentation of this product in the export structure is a consequence of certain constraints.

This study endeavors to fill the subsequent research gaps. Firstly, employee competencies and creativity are considered volatile but pivotal tools in developing and enhancing respective businesses in creative industries. (Lau, 2016). Observing employees' perception of creativity is fundamental to the creative industry in hiring creative individuals (Zeb, Abdullah, Hussain, & Safi, 2019), developing organizational creativity training programs, and fostering creative organizations (Ali *et al.*, 2019; Liu *et al.*, 2017). Second, eliciting superior employee performance is a significant challenge for organizational managers in the current hyper-competitive business environment (Parwita *et al.*, 2021). While multiple studies have confirmed the effect of employee competencies on performance, the mediators' role in this linkage, i.e., employee creativity, should be adequately investigated (Ranjit, 2022). Therefore, exploring the mediating role of employee creativity in the linkage between competency and performance will be valuable in providing insights into the linkage between the two constructs.

Third, to the authors' best knowledge, from an extensive literature analysis, no study has examined product competitiveness by involving drivers such as employee performance. It is although products that have advantages and are favored by the market are produced by employees who have innovation and creativity (Kwan, Leung, & Liou, 2018; Stojcic, Hashi, & Orlic, 2018; Valaei & Rezaei, 2017), knowledge quality (Arsawan *et al.*, 2022; Ganguly *et al.*, 2019) and high performance (Ranjit, 2022; Roberts & David, 2020; Swanson, Kim, Lee, Yang, & Lee, 2020). This new linkage could become unique into the interconnection of organizational behavior and marketing. Fourth, while existing literature reveals that product competitiveness is a complex construct affected by many drivers, there is a need for more insight into how employee creativity and performance reinforce product competitiveness. Thus, the role of moderation should be considered (de Clercq & Pereira, 2020) to enrich the current understanding of these mechanisms. To that extent, this study is designed to further analyze the predictors of competitiveness by including a relevant variable that previous studies, i.e., time sufficiency, have yet to examine.

Encouraged by the preceding research gaps, the authors scrutinize the linkage between competency, creativity, and time sufficiency on employee performance and product competitiveness in weaving SMEs in Indonesia for three main reasons. First, the weaving industry is among the SMEs that have consistently developed and maintained traditional patterns, making it renowned at the local, national, and international levels (Permatasari *et al.*, 2022). Nevertheless, the rising popularity of the weaving industry's products has prompted competitors to create similar products at more affordable prices, causing weaving products to experience a gradual decline in buyers. Second, SMEs are flourishing in Indonesia but remain poor in innovation (Arsawan *et al.*, 2022); consequently, there is a pressing need to improve employees' creativity and performance (Lau, 2016; Liu, Gong, Zhou, & Huang, 2017). Third, citing data from the 2022 global competitiveness index, Indonesia's competitiveness ranking has slipped in 2022. The Institute for Management Development (IMD) 2022 report claims that Indonesia's competitiveness is currently in the 44th position from the 37th in 2021. It is a negative sign that urges SME products to improve their quality and competitiveness. Subsequently, inspecting the performance drivers on product competitiveness is justified. The subsequent sections of this article discuss the theoretical framework and hypothesis development, methods, and results to propose scenarios, and empirical results to expand the discussion on product competitiveness in weaving SMEs.

## 2. Literature Review and Hypotheses Development

### 2.1 Product competitiveness in the weaving industry

Organizations must optimize their potential and resources in an international market that demands high-quality products. The literature reveals that product competitiveness is conformity, superiority, and free from deficiencies compared to competitors' products (Desmichel & Kocher, 2020). Moreover, (Wang *et al.*, 2022) reveal that product competitiveness is the comprehensive ability of a particular product in a highly competitive market. The identification of product competitiveness has been performed regarding; 1) market share (Chen & Chang, 2013), 2) sales growth rate (M. Zhou, Govindan, & Xie, 2020), 3) export rate (export/sales volumes), 4) profit growth rate, 5) productivity growth rate (Kahupi *et al.*, 2021), 6) new product rate (unique product/total sales) (Stock, Tsai, Jiang, & Klein, 2021) and 7) innovation rate (total number of products/number of unique products) (L. Liu & Jiang, 2016). These indicators even reflect an organization's competitive advantage and development potential. In the SME sector, product competitiveness has yet to be thoroughly exploited. However, for SMEs that are perceived to have limited resources (Arsawan *et al.*, 2022), their ability to develop highly competitive products is essential to increase market share and profits. In addition, it is worth enhancing various innovations to create new and high-quality products (Ko & Choi, 2019; Stojcic *et al.*, 2018). Notably, high-performance products are highly prioritized in the international market, besides the importance of innovation and creativity (Falahat, Ramayah, Soto-Acosta, & Lee, 2020).

### 2.2 Employee competency, creativity and performance

Drawing from the Resource Based View (Barney, 1991), organizations can acquire financial, information, and technological resources; however, competitive advantage can be accomplished by merely optimizing the distinctive role of its human capital (Barney, 2001). Consequently, organizations need to improve their competencies on an ongoing basis. Employee competencies are the defining features of an employee's persona, helping predict behaviors related to completing routine

activities (Kaur & Kaur, 2022). Employee competencies are a critical determinant of organizational success because it is essential to perform the job (Krishnaveni, 2013). Besides, competency is the foundation for enhancing creativity and excelling in a specific domain (Lau, 2016). Past studies have scrutinized the linkage between employee competencies and individual performance (Krishnaveni, 2013; Kucharska & Erickson, 2019; Zainol & al Mamun, 2018). However, the linkage between competency and employee creativity has yet to be adequately investigated (Ranjit, 2022). It is regardless of the notion that competency as the underpinning for building creativity as core capabilities can enhance the ability to configure ideas and knowledge into creativity (Arsawan et al., 2022). Accordingly, developed specialized competencies help employees match their preferred job roles, thus; becoming valuable sources of competitive advantage.

Creativity is pivotal to competitiveness in a business landscape of risk and uncertainty (Pattnaik & Sahoo, 2020). Creative employees excel as they can generate new ideas (Hur, Moon, & Rhee, 2016; Ranjit, 2022). When employees are allowed to participate, they become more creative and can make decisions that ultimately enhance their performance. Furthermore, the mechanism encourages employees to evolve new concepts regarding to work processes, services, and products that benefit the organizations (al Wali, Muthuveloo, & Teoh, 2022). Thus, creativity is a pathway to enhance performance by adapting to change, technology, and the environment (Karaboga, Erdal, Karaboga, & Tatoglu, 2022). Many studies found empirical evidence regarding a linkage between creativity and employee performance from multiple perspectives, i.e., (Eschleman, Madsen, Alarcon, & Barelka, 2014; Janssen & Giebels, 2013) found a significant linkage between creativity and employee performance. According to the description, the hypotheses are formulated.

**H<sub>1</sub>:** *Employee competencies significant to creativity.*

**H<sub>2</sub>:** *Employee competencies significant to performance.*

Deriving from the Resource Based View (J. Barney, 1991), qualified human resources are an indispensable trigger for building competitive advantage. One feature of competitive advantage is quality products that can satisfy customers (Kahupi et al., 2021). Consequently, developing employee core competency will generate competitive products in the international market (Falk & de Lemos, 2019). Moreover, employee competency is the cornerstone for developing new products (Stock et al., 2021), increasing value creation (Sánchez-Gutiérrez, 2019), and organizational reputation (Saeidi, Sofian, Saeidi, Saeidi, & Saeidi, 2015). The discussion, as mentioned earlier, has provided a basis for determining the formulated hypothesis.

**H<sub>3</sub>:** *Employee competencies significant to product competitiveness.*

### *2.3 Employee creativity toward product competitiveness*

Employees with creative skills possess distinctive traits that help distinguish them from their co-workers, as they are more independent, confident, and risk-taking (Arsawan et al., 2022). These features represent flexibility and make employees more adaptable (Mittal & Dhar, 2015) and open to new experiences (Zeb et al., 2019), contributing to enhanced performance (Ali, Ali, Leal-Rodríguez, & Albort-Morant, 2019). Ribeiro et al. (2018) report that creative employees perform significantly better due to their cognitions, behaviors, and motivational abilities (Janssen & Giebels, 2013). Besides, with their creativity, employees will seek challenges and try to meet targets to perform better (Hur et al., 2016). Subsequently, creativity is the starting point for employees to innovate in terms of processes, methods, and products. Implementing knowledge into meaningful ideas can result in new product-creation approaches (Stock et al., 2021). To the authors' best knowledge, the linkage between creativity and product competitiveness has yet to be explored in the existing literature, even though the importance of product competitiveness could be generated from the value of employee creativity. For example, employees invent or develop high-value products with their creativity and compete in a competitive market (Presutti, Cappiello, & Johanson, 2022). Given the above description, the hypotheses are formulated.

**H<sub>4</sub>:** *Employee creativity significant to performance*

**H<sub>5</sub>:** *Employee creativity significant to product competitiveness*

### *2.4 Employee performance and product competitiveness*

Performance is a multifaceted construct that engages expected outcome behaviors (Janssen & Giebels, 2013). Further, performance is associated with explicit behaviors encompassing assigned responsibilities following job descriptions (Pattnaik & Sahoo, 2020). High performance will make products or services that meet established standards derived from input-process-output logic (Hur et al., 2016). Employees who have high performance will produce high-quality products because the process involves behavior, cognition, and motivation (Wang et al., 2022). To the authors' best knowledge, empirical studies that explore the linkage between the two constructs are lagging, considering they are in different domains. However, this is worth investigating since previous studies have only focused on a single discipline, while cross-disciplinary collaboration is unquestionably essential. In this case, scrutinizing the linkage between employee performance and product competitiveness will yield insights into the linkage between the two constructs and bring new perspectives to the relevant area. Consequently, this is the formulated hypothesis.

**H<sub>6</sub>:** *Employee performance significant to product competitiveness.*

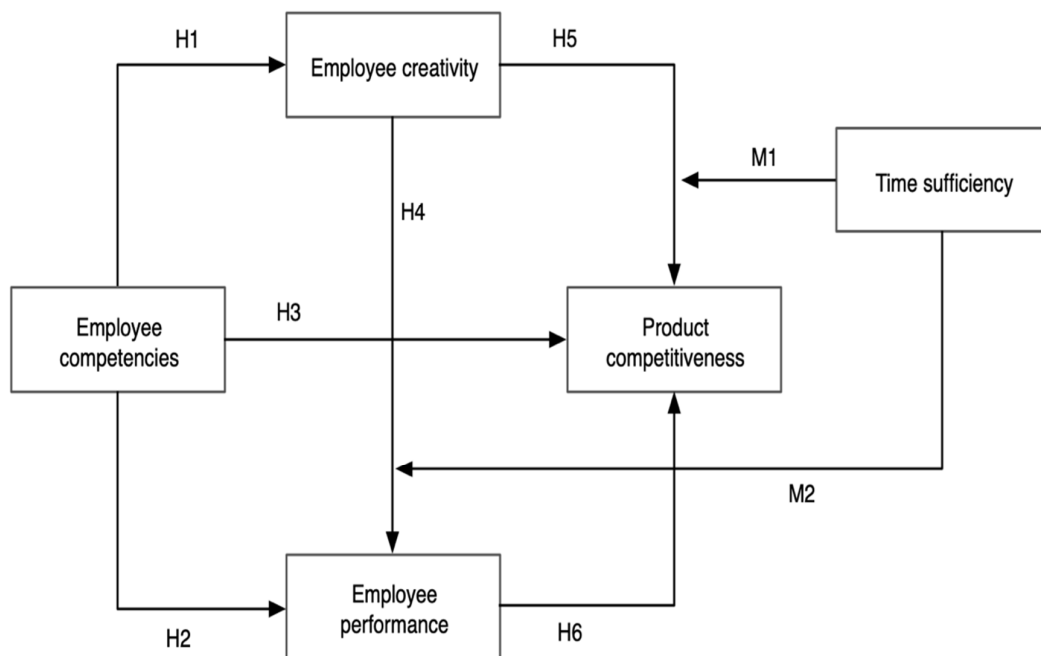
### 2.5 The moderating role of time sufficiency

The perception of time sufficiency can stimulate employees to develop new ideas, become more creative, and be motivated to perform highly (Arsawan et al., 2022; Ba et al., 2021). With workloads that match their responsibilities, employees will allocate ideas to improve their abilities and exchange knowledge (Pooja et al., 2016), resulting in maximum performance. Moreover, when employees perceive that the workload is realistic and that there is time sufficiency to accomplish the work, they can develop capabilities, motivation, and professionalism (Migdadi, 2020). Therefore, these activities can ultimately enhance employee performance. Conversely, when employees have poor perceptions and are overwhelmed by time, creative behavior is lower due to concerns that their actions may not contribute to a positive impact (Avery, Tonidandel, Volpone, & Raghuram, 2010). Furthermore, with time pressure that can lead to stress, employees are less likely to be motivated (de Clercq and Pereira, 2020), which affects their performance. Thus, in this study, time sufficiency can reinforce the linkage between creativity and performance because potential employees can perform work in greater detail, allocating maximum resources and potential. Besides, time sufficiency will also be a moderator when the values of employee creativity in making highly competitive products. The role of time sufficiency is allocating knowledge that encourages continuous innovation resulting in high-value products (Arsawan et al., 2022).

**H<sub>7</sub>:** Time sufficiency moderate linkage between employee creativity and product competitiveness.

**H<sub>8</sub>:** Time sufficiency moderate linkage between employee creativity and employee performance.

The relationship between employee competency, creativity, and performance as determinants of product competitiveness and moderation mechanism is presented in Fig. 1.



**Fig. 1.** Theoretical framework

## 3. Methodology

### 3.1 Population and Research Sample

To derive the baseline sample, we utilized a regional data set from the Bali Province authority to determine the SMEs that would be the subject of the study. The population was 2,215 weaving SMEs from nine regencies in Bali Province, Indonesia. Subsequently, the sample frame was selected by applying the simple random sampling method, i.e., a lottery method without replacement, where the sample has only one chance of being chosen equally. The sample frame size was decided using Krejcie and Morgan's (1970) formula, resulting in a total of 331 SMEs enlisted to contribute to the study. Furthermore, 2 employee

respondents from each sample were selected as an ideal target given their involvement in product creation and evaluation of the research variables. Using Google Forms, data was gathered over 6 months, from April to September 2022. Eventually, we elicited a total of 662 responses that were further scrutinized to address the goals of this study.

### 3.2 Measurements

Past studies evaluated the constructs; thus, these construct measurements were adopted for this study. Employee competency was measured by 10 indicators adopted from Kim and Jung's (2022)'s study. Employee creativity was measured by 4 dimensions, i.e., people, process, pressure, and product, with a total of 13 indicators (Hansen, Mcmurchie, & Monllor, 2012; Parwita et al., 2021). The measurement of employee performance variables (Ayu Putu Widani Sugianingrat et al., 2019; Pradhan & Jena, 2017) consisted of: adaptive, contextual, and task performances. Product competitiveness was measured by 3 indicators adopted from Liu and Jiang's (2016) study, and time sufficiency was measured by 3 indicators adopted from (Arsawan et al., 2022; de Clercq and Pereira, 2020).

**Table 1**  
Measurements

Variables	Sources
Employee competency	(Kim & Jung, 2022)
Employee creativity	(Hansen et al., 2012; Parwita et al., 2021).
Job performance	(Ayu Putu Widani Sugianingrat et al., 2019; Pradhan & Jena, 2017)
Product competitiveness	(L. Liu & Jiang, 2016).
Time sufficiency	(Arsawan et al., 2022; de Clercq and Pereira, 2020)

Variables evaluation implemented a 7-point Likert scale of "1: strongly disagree to 7: strongly agree". The questionnaire was piloted on 30 employees in Indonesian to verify the accuracy of the instructions and statements. It led to slightly modifying the wording of the questionnaire instructions and questions. Subsequently, variance-based partial least squares (PLS-SEM) was implemented to estimate the proposed model formation and to analyze the indirect and direct linkages between variables. Therefore, SmartPLS 3.2.8 software was deployed for this endeavor. Moreover, the measurement model was evaluated as suggested by (Hair, Hult, Tomas, Ringle, & Sarstedt, 2016) to evaluate the constructed variables' validity and reliability. Further, this study examined the structural model to test hypotheses about the linkages between variables. Finally, since the purpose was to validate dynamic capabilities theory in building a model of organizational agility, the deployment of SEM-PLS was appropriate (Hair Jr, Matthews, Matthews, & Sarstedt, 2017).

## 4. Results

Table 2 depicts the demographic profile of the respondents, primarily ages ranging from 36-40 years (29.48%) with experience between 11-15 years, indicating highly qualified experience and expertise in this business area (Permatasari et al., 2022). In addition, in terms of education, the dominant respondents held diplomas, indicating that employees have earned the knowledge to do creative performance (Arsawan et al., 2022; Ganguly et al., 2019).

**Table 2**  
Respondent profiles

Description (n=662)	Frequency	Percentage (%)	
Age	<25	2	0.30
	25-30	41	6.20
	31-35	137	20.69
	36-40	195	29.48
	41-45	165	24.94
	46-50	94	14.19
	>50	28	4.20
Gender	Male	490	74.00
	Female	172	26.00
Education	High school	7	1.10
	Diploma	612	92.40
	Bachelor	43	6.50
Experiences	<5	63	9.50
	6-10	183	27.60
	11-15	211	31.80
	16-20	163	24.80
	>20	42	6.30

### 4.1 Outer model measurement

Table 3 illustrates that the indicators loading factor values exceeded the suggested level of 0.6. The composite reliability value exceeded the advanced level of 0.7, and the AVE value exceeded the suggested level of 0.5. The composite reliability value exceeded the recommended level of 0.7, and the AVE value exceeded the proposed level of 0.5. Adhering to experts (Hair Jr

et al., 2016), data analysis specified that the square root value of the AVE was greater than the construct correlation value, denoting that the discriminant validity condition was met. Hence, indicators fulfilled the requirements of construct reliability and validity (Hair Jr et al., 2017). Considering the VIF value was between 1.584- 4.480 (lower than 5), the data had no conflict with common method variance (Hair et al., 2016).

**Table 3**  
Measurement of indicators

Indicators	Loading	CA	CR	AVE
<b>Employee competency</b>		0.962	0.967	0.746
1. Adopt new and improved ways	0.869			
2. Understand customers' needs and match	0.834			
3. Increase customers' satisfaction and loyalty	0.880			
4. Offer appropriate assistance	0.868			
5. Act as a trusted advisor	0.851			
6. Something that happened unexpectedly	0.880			
7. Control the important things	0.891			
8. Feel nervous and stressed	0.848			
9. Confident about ability	0.856			
10. Feel that things were going your way	0.857			
<b>Employee creativity</b>		0.934	0.944	0.628
<b>People</b>		0.868	0.919	0.791
1. New combination	0.881			
2. New approach	0.903			
3. Value to organization	0.884			
<b>Process</b>		0.880	0.926	0.808
1. New technique	0.864			
2. Find new process	0.899			
3. New path	0.932			
<b>Pressure</b>		0.845	0.906	0.764
1. Employee gives encouragement	0.851			
2. Expected to be more creative	0.905			
3. Produce better work	0.865			
<b>Product</b>		0.886	0.921	0.745
1. Appreciate ideas	0.866			
2. Accepts new approach	0.883			
3. High-value products	0.876			
4. Products with customized specifications	0.826			
<b>Employee performance</b>		0.960	0.964	0.656
<b>Task performance</b>		0.923	0.942	0.766
1. Maintain a high standard of work	0.850			
2. Capable of handling assignments	0.895			
3. Passionate about work	0.876			
4. Handle multiple assignments	0.892			
5. Complete my assignments on time	0.861			
<b>Adaptive performance</b>		0.930	0.950	0.826
1. Perform collective intelligence	0.914			
2. Manage change in my job	0.913			
3. Handle effectively work team	0.919			
4. Mutual understanding	0.889			
<b>Contextual performance</b>		0.917	0.938	0.752
1. Help my co-workers	0.821			
2. Handle extra responsibilities	0.831			
3. Empathy to my co-workers	0.900			
4. Participate in group discussions	0.900			
5. Praise my co-workers	0.880			
<b>Product competitiveness</b>		0.791	0.878	0.706
1. Sales of the new products	0.817			
2. Market share of the new products	0.885			
3. Profit of the new products	0.816			
<b>Time sufficiency</b>		0.834	0.901	0.752
1. Work too fast	0.875			
2. Work under time pressure	0.890			
3. Deal with a backlog at work	0.834			

#### 4.2 Inner model measurement

The bootstrap method with 5000 samples was implemented to establish the significant path coefficients and indicators (Chin, 2010). Subsequently, the goodness-of-fit (GoF) of the model value was 0.651, indicating that the model's fitness was extensive. Further, it implied that the proposed product competitiveness model applied to the SME sector. Moreover, the examination of the standardized residual root mean square (SRMR) resulting in a value of 0.086 and the normed fit index (NFI) demonstrated a value of 0.687, respectively, suggesting that the model was a good fit (Tenenhaus, Vinzi, Chatelin, & Lauro, 2005). Furthermore, an examination of R2 revealed that employee competencies, creativity, and performance described

a 0.388 (38.8%) variance in product competitiveness. Ultimately, all Q2 values are positive, suggesting that the variables have a good predictive relevance (Chin, 2010).

4.3 Hypotheses testing

As displayed in Table 4. employee competencies were significant and directly affected creativity ( $\beta = 0.475, p < 0.05$ ), employee performance ( $\beta = 0.415, p < 0.05$ ), and product competitiveness ( $\beta = 0.460, p < 0.05$ ). Consequently, hypotheses H1, H2, and H3 were supported. Moreover, employee creativity was significant to employee performance and product competitiveness ( $\beta = 0.171, p < 0.05$  dan  $\beta = 0.114, p < 0.05$ ), supporting hypotheses H4 and H5. Finally, employee performance was significant to product competitiveness ( $\beta = 0.149, p < 0.05$ ), supporting hypothesis H6.

**Table 4**  
Hypotheses testing and effect on variables

Hypotheses	Direct		Indirect		Total	
	$\beta$	t-value	$\beta$	t-value	$\beta$	t-value
EC → Cre (H1)	0.474	14.882	-	-	0.474	14.882
EC → Perf (H2)	0.415	9.610	0.081	3.328	0.496	12.938
EC → PC (H3)	0.460	11.947	-	-	0.460	11.947
Cre → Perf (H4)	0.171	3.423	-	-	0.171	3.423
Cre → PC (H5)	0.114	3.006	0.054	2.953	0.119	5.959
Perf → PC (H6)	0.149	3.749	-	-	0.149	3.749

Notifications: EC: employee competency; Cre: employee creativity; Perf: employee performance; PC: product competitiveness

4.4 Moderating testing

We finally investigated the role of time sufficiency as a moderator in this research model. Adhering to the scholars' recommendation (Henseler & Fassott, 2010), the moderating role of strategic flexibility was examined by multicluster analysis. The analysis results indicated that time sufficiency was a moderator in the linkage between employee creativity and performance ( $\beta = 0.086, STDEV 0,041, T \text{ Statistic } 2.102 > 1,96, PV 0.036$ ); thus, hypothesis 9 was accepted. Likewise, in the linkage between employee creativity and product competitiveness, time sufficiency was confirmed to be a moderating variable ( $\beta = 0.082, STDEV 0.37, T \text{ Statistic } 2.193 > 1,96, PV 0.029$ ), which supported hypothesis 10. The results are reported in Table 5. and Fig. 2.

**Table 5**  
Moderating testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decisions
TS*ECR → Employee Performance	0.086	0.085	0.041	2.102	0.036	Moderation
TS*ECR → Product Competitiveness	0.082	0.078	0.037	2.193	0.029	Moderation

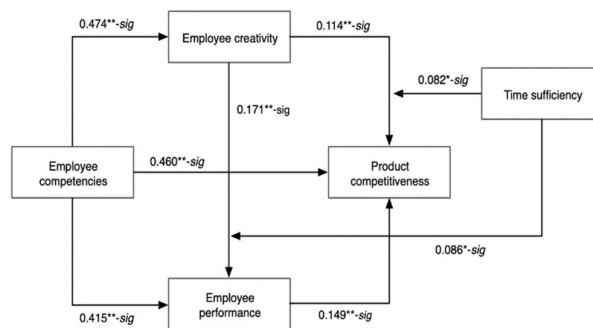


Fig. 2. Output analysis

5. Discussion

First, the study scrutinized the product competitiveness of weaving SMEs by integrating employee competency and a creativity-based performance model. The results indicated that the integrated model fits, demonstrating that employee competencies and creativity-based performance models can be successfully integrated. The integrated model has robust explanatory power of product competitiveness in the SME sector. This result was notable because it was built on the existing creativity-based employee performance model (Hur et al., 2016; Ranjit, 2022) and added the impact of employee competencies (Kim & Jung, 2022; Lau, 2016). To boost the product competitiveness of weaving SMEs, the emergence of

employee competencies and creativity enhanced employee performance, leading to the rise of product competitiveness of weaving SMEs. Conceptually, these findings contributed to a new insight that employee competencies and creativity-based employee performance combined to help predict product competitiveness in the context of weaving SMEs. Accordingly, future studies investigating product competitiveness should incorporate employee competencies as a determinant of employee performance.

Second, the total effect analysis confirmed that employee competencies, creativity, and performance significantly impacted product competitiveness, with employee creativity having the most substantial effect. Hence, although creativity and performance were important in determining the product competitiveness of weaving SMEs, these findings demonstrated that employee competencies powerfully drove product competitiveness. This finding led to the conclusion that the product competitiveness of weaving SMEs was driven by the importance of improving employee competencies rather than creativity and performance. These findings suggested that product competitiveness resulted from competencies that generated high-value products.

Third, apart from the impact on product competitiveness, this study disclosed that although competencies and creativity were crucial determinants of employee performance, employee competencies had the most substantial effect compared to other drivers. Hence, employee performance was driven by high competencies. A potential explanation was that employee performance performed well when employee competencies were present, increasing team creativity, knowledge sharing, and knowledge networks (Arsawan et al., 2022). This finding supported the results of other studies that found competencies as the primary determinant of employee performance (Kim & Jung, 2022; Lau, 2016). In the present study, where competencies outweighed creativity as a determinant, the finding imposed that competencies were the primary triggers in achieving employee performance (Hur et al., 2016; Shen, Chou, Schaubroeck, & Liu, 2023). Ultimately, the results revealed the moderating role of time sufficiency on creativity, employee performance, and product competitiveness. This finding suggested that the consequences of creativity and performance on product competitiveness were more robust with the inclusion of the time sufficiency variable.

## 6. Theoretical contribution

This study delivers theoretical implications in four significant respects. First, this study extends the creativity-based employee performance model (Hur et al., 2016; Ranjit, 2022) by integrating social exchange theory (Freeman, 1984, 1998). Integrating competencies and a creativity-based performance model enables us to understand better SME managers' efforts in constructing product competitiveness. The theoretical contribution is evident in the suitability of the proposed model, where employee competencies are embedded as drivers of employee creativity and performance. From the creativity-based performance model, the fit of the proposed integrated model offers a significant contribution, which has yet to be adequately addressed in past studies. Consequently, this study advances the state of knowledge on the utility of social exchange theory to illuminate the linkage between parties in building SME product performance and competitiveness (Albats, Alexander, Mahdad, Miller, & Post, 2020) by providing valuable evidence to elaborate the linkage in the context of SMEs.

Secondly, this study identified employee creativity and performance as the pathways for reinforcing employee competency in generating product competitiveness, thus acting as sequential mediators. Nevertheless, with the highest total effect value, the creativity-performance-product competitiveness path has the highest value. This result is a noteworthy finding that SMEs are keen on creativity to produce the best performance and highly competitive products. The explanation could be the managerial involvement of SMEs to focus more on recruiting highly creative employees because they are significant for every business growth and advancement in the creative industry (Lau, 2016). Supporting employees' perceptions about creativity is fundamental for creative industries in hiring creative individuals (Zeb et al., 2019), fostering organizational creativity training programs, and cultivating creative organizations (Ali et al., 2019; D. Liu et al., 2017) are among the strategic efforts to raise performance.

Third, this study enhanced the dynamic capabilities theory (Teece, Pisano, & Shuen, 2009) regarding the role of creativity in enhancing product performance and competitiveness. Creativity enhances the innovative capability to build and reorganize internal competencies into highly competitive products (Ferreira, Coelho, & Moutinho, 2020; Weaven et al., 2021). Fourth, this study enhances the job demands-resource theory (Bakker & Demerouti, 2007; Demerouti, Nachreiner, Bakker, & Schaufeli, 2001) regarding the effect of time sufficiency on the linkage between employee creativity and performance and the linkage between employee creativity and product competitiveness. Finally, the moderating role of this study offers further support for time sufficiency as a variable to be explored in the future (Arsawan et al., 2022). Allowing time sufficiency increases employee creativity, which ultimately can improve employee performance. In addition, by granting time sufficiency, employees can be more creative in creating high-value products because they are empowered to explore their best abilities, knowledge, innovation, and potential.

## 7. Managerial implications

This study also points to managerial implications, primarily for the SME sector. First, the study captured the competencies' pivotal role that affects the creativity and performance of weaving SME employees. Accordingly, the study strongly



recommends that managers develop training programs to enhance competencies and creativity. For example, intensively conduct training to encourage creative thinking and relevant decision-making. Second, SME managers need to stimulate employees to increase their creativity, enabling them to produce competitive performance and products. For this objective, programs can include recognizing or building employee knowledge networks. For example, SME managers can reward employees who consistently improve their competency and increase creativity. Third, maintaining product competitiveness in the international market will involve collaboration between competency, creativity, employee performance, and time sufficiency as internal drivers. For this reason, managers can implement communication programs by involving employees in product creation to become more creative and allow time sufficiency to complete the work. Subsequently, employees will be more vigorous, have reduced stress levels, and have a greater engagement with their workplace.

## 8. Limitations and future research

Regardless of the implications, several limitations will be addressed for the convenience of future research. The data investigated were obtained from employees of weaving SMEs in Bali Province, Indonesia, which limits the generalizability of the study's findings. This limitation can be improved by replicating the study in a different region or country. Scrutinizing the proposed model across industries can also broaden understanding of product competitiveness and its determinants. Also, this study incorporates employee creativity and performance to predict product competitiveness. Given the importance of innovation (i.e., products, processes, and methods) in enabling highly competitive products, further research could examine this factor as an additional variable. In addition, future research needs to consider technology adoption to predict creativity, performance, and product competitiveness, notably as a moderator variable. Furthermore, this is necessary considering that creativity to produce competitive products can be enhanced by adopting technology that can facilitate manufacturing and improve quality.

## References

- al Wali, J., Muthuveloo, R., & Teoh, A. P. (2022). Unravelling the nexus between creative self-efficacy, humble leadership, innovative work behaviour and job performance amongst physicians in public hospitals. *Asia-Pacific Journal of Business Administration*.
- Albats, E., Alexander, A., Mahdad, M., Miller, K., & Post, G. (2020). Stakeholder management in SME open innovation: interdependences and strategic actions. *Journal of Business Research*, 119, 291–301. Retrieved from <https://doi.org/https://doi.org/10.1016/j.jbusres.2019.07.038>
- Ali, I., Ali, M., Leal-Rodriguez, A. L., & Albort-Morant, G. (2019). The role of knowledge spillovers and cultural intelligence in enhancing expatriate employees' individual and team creativity. *Journal of Business Research*, 101(November), 561–573. Retrieved from <https://doi.org/10.1016/j.jbusres.2018.11.012>
- Arsawan, I. W. E., De Hariyanti, N. K. ssy, Atmaja, I. M. A. D. S., Suhartanto, D., & Koval, V. (2022). Developing Organizational Agility in SMEs: An Investigation of Innovation's Roles and Strategic Flexibility. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 149. Retrieved from <https://doi.org/https://doi.org/10.3390/joitmc8030149>
- Arsawan, I. W. E., Koval, V., Rajiani, I., Rustiarni, N. W., Supartha, W. G., & Suryantini, N. P. S. (2022). Leveraging knowledge sharing and innovation culture into SMEs sustainable competitive advantage. *International Journal of Productivity and Performance Management*, 71(2), 405–428. Retrieved from <https://doi.org/10.1108/IJPPM-04-2020-0192>
- Arsawan, I. W. E., Koval, V., Suhartanto, D., Harbar, Z., & Maslennikov, Y. (2022). Employee-driven innovation capability: the role of knowledge, creativity, and time sufficiency. *Intellectual Economics*, 16(2).
- Avery, D. R., Tonidandel, S., Volpone, S. D., & Raghuram, A. (2010). Overworked in America? How work hours, immigrant status, and interpersonal justice affect perceived work overload. *Journal of Managerial Psychology*, 25(2), 133–147
- Ayu Putu Widani Sugianingrat, I., Rini Widyawati, S., Alexandra de Jesus da Costa, C., Ximenes, M., dos Reis Piedade, S., & Gede Sarmawa, W. (2019). The employee engagement and OCB as mediating on employee performance. *International Journal of Productivity and Performance Management*, 68(2). Retrieved from <https://doi.org/10.1108/IJPPM-03-2018-0124>
- Ba, Z., Mao, J., Ma, Y., & Liang, Z. (2021). Exploring the effect of city-level collaboration and knowledge networks on innovation: Evidence from energy conservation field. *Journal of Informetrics*, 15(3), 101198. Retrieved from <https://doi.org/10.1016/j.joi.2021.101198>
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. Retrieved from <https://doi.org/10.1108/02683940710733115>
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120. Retrieved from <https://doi.org/10.1177/014920639101700108>
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643–650.
- Brache, J., & Felzensztein, C. (2019). Geographical co-location on Chilean SME's export performance. *Journal of Business Research*, 105(November), 310–321. Retrieved from <https://doi.org/10.1016/j.jbusres.2017.11.044>
- Chen, Y. S., & Chang, C. H. (2013). The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity. *Journal of Business Ethics*, 116(1), 107–119. Retrieved from <https://doi.org/10.1007/s10551-012-1452-x>
- Chin, W. W. (2010). How to Write Up and Report PLS Analyses. In *Handbook of Partial Least Squares* (pp. 655–690).

- Colclough, S. N., Moen, Ø., Hovd, N. S., & Chan, A. (2019). SME innovation orientation: Evidence from Norwegian exporting SMEs. *International Small Business Journal: Researching Entrepreneurship*, 37(8), 780–803. Retrieved from <https://doi.org/10.1177/0266242619870731>
- Cosenz, F., & Bivona, E. (2020). Fostering growth patterns of SMEs through business model innovation. A tailored dynamic business modelling approach. *Journal of Business Research*. Retrieved from <https://doi.org/https://doi.org/10.1016/j.jbusres.2020.03.003>
- de Clercq, D., & Pereira, R. (2020). Knowledge-sharing efforts and employee creative behavior: the invigorating roles of passion for work, time sufficiency and procedural justice. *Journal of Knowledge Management*, 24(5), 1131–1155. Retrieved from <https://doi.org/10.1108/JKM-06-2019-0274>
- Demerouti, E., Nachreiner, F., Bakker, A. B., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. Retrieved from <https://doi.org/10.1037/0021-9010.86.3.499>
- Desmichel, P., & Kocher, B. (2020). Luxury Single- versus Multi-Brand Stores: The Effect of Consumers' Hedonic Goals on Brand Comparisons. *Journal of Retailing*, 96(2). Retrieved from <https://doi.org/10.1016/j.jretai.2019.09.002>
- Eschleman, K. J., Madsen, J., Alarcon, G., & Barelka, A. (2014). Benefiting from creative activity: The positive relationships between creative activity, recovery experiences, and performance-related outcomes. *Journal of Occupational and Organizational Psychology*, 87(3). Retrieved from <https://doi.org/10.1111/joop.12064>
- Falahat, M., Ramayah, T., Soto-Acosta, P., & Lee, Y. Y. (2020). SMEs internationalization: The role of product innovation, market intelligence, pricing and marketing communication capabilities as drivers of SMEs' international performance. *Technological Forecasting and Social Change*, 152(January), 119908. Retrieved from <https://doi.org/10.1016/j.techfore.2020.119908>
- Falk, M., & de Lemos, F. F. (2019). Complementarity of R&D and productivity in SME export behavior. *Journal of Business Research*, 96(January 2018), 157–168. Retrieved from <https://doi.org/10.1016/j.jbusres.2018.11.018>
- Ferreira, J., Coelho, A., & Moutinho, L. (2020). Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*, 92–93(July), 0–1. Retrieved from <https://doi.org/10.1016/j.technovation.2018.11.004>
- Fong, P. S. W., Men, C., Luo, J., & Jia, R. (2018). Knowledge hiding and team creativity: the contingent role of task interdependence. *Management Decision*, 56(2), 329–343. Retrieved from <https://doi.org/10.1108/MD-11-2016-0778>
- Freeman, E. R. (1984). Strategic management: a stakeholder approach, ser. *Pitman Series in Business and Public Policy*. Pitman.
- Freeman, E. R. (1998). A Stakeholder Theory of Modern Corporation In Hartman. *Perspectives in Business*.
- Ganguly, A., Talukdar, A., & Chatterjee, D. (2019). *Evaluating the role of social capital, tacit knowledge sharing, knowledge quality and reciprocity in determining innovation capability of an organization*. *Journal of Knowledge Management* (Vol. 23). Retrieved from <https://doi.org/10.1108/JKM-03-2018-0190>
- Hair, J. F., Hult, G., Tomas, M., Ringle, C. M., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123.
- Hair Jr, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I—method. *European Business Review*, 28(1), 63–76. Retrieved from <https://doi.org/10.1108/EBR-09-2015-0094>
- Hansen, D. J., Memurichie, L., & Monllor, J. (2012). Opportunity development: An exploratory study of ecopreneurs using a creativity perspective. *Journal of Research in Marketing and Entrepreneurship*, 14(1), 27–39. Retrieved from <https://doi.org/10.1108/14715201211246733>
- Henseler, J., & Fassott, G. (2010). Testing moderating effects in PLS path models: An illustration of available procedures. In *Handbook of partial least squares* (pp. 713–735). Springer.
- Hu, H., Gu, Q., & Chen, J. (2013). How and when does transformational leadership affect organizational creativity and innovation?: Critical review and future directions. *Nankai Business Review International*, 4(2), 147–166. Retrieved from <https://doi.org/10.1108/20408741311323344>
- Hur, W.-M., Moon, T., & Rhee, S.-Y. (2016). Exploring the relationships between compassion at work, the evaluative perspective of positive work-related identity, service employee creativity, and job performance. *Journal of Services Marketing*, 30(1), 103–114.
- Janssen, O., & Giebels, E. (2013). When and why creativity-related conflict with coworkers can hamper creative employees' individual job performance. *European Journal of Work and Organizational Psychology*, 22(5). Retrieved from <https://doi.org/10.1080/1359432X.2012.669524>
- Jiang, J., Wang, S., & Zhao, S. (2012). Does HRM facilitate employee creativity and organizational innovation? A study of Chinese firms. *International Journal of Human Resource Management*, 23(19), 4025–4047. Retrieved from <https://doi.org/10.1080/09585192.2012.690567>
- Ranjit, G. (2022). Explicating intrinsic motivation's impact on job performance: employee creativity as a mediator. *Journal of Strategy and Management*. Retrieved from <https://doi.org/10.1108/JSMA-04-2021-0091>
- Kahupi, I., Eirikur Hull, C., Okorie, O., & Millette, S. (2021). Building competitive advantage with sustainable products – A case study perspective of stakeholders. *Journal of Cleaner Production*, 289, 125699. Retrieved from <https://doi.org/10.1016/j.jclepro.2020.125699>
- Kamukama, N., Kyomuhangi, D. S., Akisimire, R., & Orobia, L. A. (2017). Competitive advantage: Mediator of managerial competence and financial performance of commercial banks in Uganda. *African Journal of Economic and Management Studies*, 8(2), 221–234. Retrieved from <https://doi.org/10.1108/AJEMS-10-2016-0142>
- Karaboga, T., Erdal, N., Karaboga, H. A., & Tatoglu, E. (2022). Creativity as a mediator between personal accomplishment and task performance: A multigroup analysis based on gender during the COVID-19 pandemic. *Current Psychology*. Retrieved from <https://doi.org/10.1007/s12144-021-02510-z>

- Kaur, S., & Kaur, G. (2022). Human resource practices, employee competencies and firm performance: a 2-1-2 multilevel mediational analysis. *Personnel Review*, 51(3). Retrieved from <https://doi.org/10.1108/PR-08-2020-0609>
- Kim, J., & Jung, H. S. (2022). The Effect of Employee Competency and Organizational Culture on Employees' Perceived Stress for Better Workplace. *International Journal of Environmental Research and Public Health*, 19(8). Retrieved from <https://doi.org/10.3390/ijerph19084428>
- Ko, Y. J., & Choi, J. N. (2019). Overtime work as the antecedent of employee satisfaction, firm productivity, and innovation. *Journal of Organizational Behavior*, 40(3), 282–295. Retrieved from <https://doi.org/10.1002/job.2328>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Krishnaveni, J. (2013). A STUDY ON MAPPING OF EMPLOYEES' COMPETENCY. *Indian Journal of Economics and Development*, 1(3).
- Kucharska, W., & Erickson, G. S. (2019). The influence of IT-competency dimensions on job satisfaction, knowledge sharing and performance across industries. *VINE Journal of Information and Knowledge Management Systems*, ahead-of-p(ahead-of-print). Retrieved from <https://doi.org/10.1108/vjikms-06-2019-0098>
- Kwan, L. Y. Y., Leung, A. K. y., & Liou, S. (2018). Culture, Creativity, and Innovation. *Journal of Cross-Cultural Psychology*, 49(2), 165–170. Retrieved from <https://doi.org/10.1177/0022022117753306>
- Lau, K. W. (2016). Understanding creativity competency for organizational learning: A study of employees' assumptions on creativity competency in creative industry. *Journal of Management Development*, 35(10). Retrieved from <https://doi.org/10.1108/JMD-12-2015-0174>
- Liu, D., Gong, Y., Zhou, J., & Huang, J. C. (2017). Human resource systems, employee creativity, and firm innovation: The moderating role of firm ownership. *Academy of Management Journal*, 60(3), 1164–1188. Retrieved from <https://doi.org/10.5465/amj.2015.0230>
- Liu, L., & Jiang, Z. (2016). Influence of technological innovation capabilities on product competitiveness. *Industrial Management and Data Systems*, 116(5). Retrieved from <https://doi.org/10.1108/IMDS-05-2015-0189>
- Messersmith, J. G., & Guthrie, J. P. (2010). High performance work systems in emergent organizations: Implications for firm performance. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in Alliance with the Society of Human Resources Management*, 49(2), 241–264.
- Migdadi, M. M. (2020). Knowledge management processes, innovation capability and organizational performance. *International Journal of Productivity and Performance Management*. Retrieved from <https://doi.org/10.1108/IJPPM-04-2020-0154>
- Mittal, S., & Dhar, R. L. (2015). Transformational leadership and employee creativity: Mediating role of creative self-efficacy and moderating role of knowledge sharing. *Management Decision*, 53(5), 894–910. Retrieved from <https://doi.org/10.1108/MD-07-2014-0464>
- Nowacki, R., & Bachnik, K. (2016). Innovations within knowledge management. *Journal of Business Research*, 69(5), 1577–1581. Retrieved from <https://doi.org/10.1016/j.jbusres.2015.10.020>
- Parwita, G. B. S., Arsawan, I. W. E., Koval, V., Hrinchenko, R., Bogdanova, N., & Tamosiuniene, R. (2021). Organizational innovation capability: Integrating human resource management practice, knowledge management and individual creativity. *Intellectual Economics*, 15(2).
- Patricio, J., Axelsson, L., Blomé, S., & Rosado, L. (2018). Enabling industrial symbiosis collaborations between SMEs from a regional perspective. *Journal of Cleaner Production*, 202, 1120–1130. Retrieved from <https://doi.org/10.1016/j.jclepro.2018.07.230>
- Pattnaik, S. C., & Sahoo, R. (2020). Employee engagement, creativity and task performance: role of perceived workplace autonomy. *South Asian Journal of Business Studies*, 10(2). Retrieved from <https://doi.org/10.1108/SAJBS-11-2019-0196>
- Permatasari, A., Dhewanto, W., & Dellyana, D. (2022). The role of traditional knowledge-based dynamic capabilities to improve the sustainable performance of weaving craft in Indonesia. *Journal of Enterprising Communities*. Retrieved from <https://doi.org/10.1108/JEC-11-2021-0156>
- Pooja, A. A., de Clercq, D., & Belausteguigoitia, I. (2016). Job stressors and organizational citizenship behavior: The roles of organizational commitment and social interaction. *Human Resource Development Quarterly*, 27(3), 373–405.
- Pradhan, R. K., & Jena, L. K. (2017). Employee Performance at Workplace: Conceptual Model and Empirical Validation. *Business Perspectives and Research*, 5(1). Retrieved from <https://doi.org/10.1177/2278533716671630>
- Presutti, M., Cappiello, G., & Johanson, M. (2022). Analysing Social Capital and Product Innovativeness in the Relationship Evolution of Born-Global Companies the Mediating Role of Knowledge Acquisition. *International Entrepreneurship and Management Journal*, 18(3). Retrieved from <https://doi.org/10.1007/s11365-020-00663-0>
- Ribeiro, N., Duarte, A. P., & Filipe, R. (2018). How authentic leadership promotes individual performance: Mediating role of organizational citizenship behavior and creativity. *International Journal of Productivity and Performance Management*, 67(9). Retrieved from <https://doi.org/10.1108/IJPPM-11-2017-0318>
- Roberts, J. A., & David, M. E. (2020). Boss phubbing, trust, job satisfaction and employee performance. *Personality and Individual Differences*, 155(October 2018), 109702. Retrieved from <https://doi.org/10.1016/j.paid.2019.109702>
- Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research*, 68(2). Retrieved from <https://doi.org/10.1016/j.jbusres.2014.06.024>
- Sánchez-Gutiérrez, J. (2019). The impact on competitiveness of customer value creation through relationship capabilities and marketing innovation. *Journal of Business and Industrial Marketing*, 34(3), 618–627. Retrieved from <https://doi.org/10.1108/JBIM-03-2017-0081>
- Shen, Y., Chou, W.-J., Schaubroeck, J. M., & Liu, J. (2023). Benevolent leadership, harmonious passion, and employee work behaviors: A multi-level moderated mediation model. *Journal of Business Research*, 157, 113571.

- Shin, N., Park, S. H., & Park, S. (2019). Partnership-based supply chain collaboration: Impact on commitment, innovation, and firm performance. *Sustainability*. Retrieved from <https://doi.org/10.3390/su11020449>
- Shpak, N., Seliuchenko, N., Kharchuk, V., Kosar, N., & Sroka, W. (2019). Evaluation of Product Competitiveness: A Case Study Analysis. *Organizacija*, 52(2). Retrieved from <https://doi.org/10.2478/orga-2019-0008>
- Stock, G. N., Tsai, J. C.-A., Jiang, J. J., & Klein, G. (2021). Coping with uncertainty: Knowledge sharing in new product development projects. *International Journal of Project Management*, 39(1), 59–70. Retrieved from <https://doi.org/https://doi.org/10.1016/j.ijproman.2020.10.001>
- Stoian, M. C., Dimitratos, P., & Plakoyiannaki, E. (2018). SME internationalization beyond exporting: A knowledge-based perspective across managers and advisers. *Journal of World Business*, 53(5), 768–779. Retrieved from <https://doi.org/10.1016/j.jwb.2018.06.001>
- Stojcic, N., Hashi, I., & Orlic, E. (2018). Creativity, innovation effectiveness and productive efficiency in the UK. *European Journal of Innovation Management*, 21(4), 564–580. Retrieved from <https://doi.org/10.1108/EJIM-11-2017-0166>
- Swanson, E., Kim, S., Lee, S.-M., Yang, J.-J., & Lee, Y.-K. (2020). The effect of leader competencies on knowledge sharing and job performance: Social capital theory. *Journal of Hospitality and Tourism Management*, 42, 88–96. Retrieved from <https://doi.org/https://doi.org/10.1016/j.jhtm.2019.11.004>
- Teece, D. J., Pisano, G., & Shuen, A. (2009). Dynamic capabilities and strategic management. *Knowledge and Strategy*, 18(March), 77–116. Retrieved from <https://doi.org/10.1093/0199248540.003.0013>
- Tenenhaus, M., Vinzi, V. E., Chatelin, Y.-M., & Lauro, C. (2005). PLS path modeling. *Computational Statistics & Data Analysis*, 48(1), 159–205.
- Valaei, N., & Rezaei, S. (2017). Does Web 2.0 utilisation lead to knowledge quality, improvisational creativity, compositional creativity, and innovation in small and medium-sized enterprises? A sense-making perspective. *Technology Analysis and Strategic Management*, 29(4), 381–394. Retrieved from <https://doi.org/10.1080/09537325.2016.1213806>
- Wang, Z., Ji, Y., Zhang, T., Li, Y., Wang, L., & Qu, S. (2022). Product competitiveness analysis from the perspective of customer perceived helpfulness: a novel method of information fusion research. *Data Technologies and Applications*, (ahead-of-print), 1–28.
- Weaven, S., Quach, S., Thaichon, P., Frazer, L., Billot, K., & Grace, D. (2021). Surviving an economic downturn: Dynamic capabilities of SMEs. *Journal of Business Research*, 128, 109–123. Retrieved from <https://doi.org/https://doi.org/10.1016/j.jbusres.2021.02.009>
- Zainol, N. R., & al Mamun, A. (2018). Entrepreneurial competency, competitive advantage and performance of informal women micro-entrepreneurs in Kelantan, Malaysia. *Journal of Enterprising Communities*, 12(3), 299–321. Retrieved from <https://doi.org/10.1108/JEC-11-2017-0090>
- Zeb, A., Abdullah, N. H., Hussain, A., & Safi, A. (2019). Authentic leadership, knowledge sharing, and employees' creativity. *Management Research Review*, 43(6), 669–690. Retrieved from <https://doi.org/10.1108/MRR-04-2019-0164>
- Zhou, J., Bi, G., Liu, H., Fang, Y., & Hua, Z. (2018). Understanding employee competence, operational IS alignment, and organizational agility – An ambidexterity perspective. *Information and Management*, 55(6), 695–708. Retrieved from <https://doi.org/10.1016/j.im.2018.02.002>
- Zhou, M., Govindan, K., & Xie, X. (2020). How fairness perceptions, embeddedness, and knowledge sharing drive green innovation in sustainable supply chains: An equity theory and network perspective to achieve sustainable development goals. *Journal of Cleaner Production*, 260, 120950. Retrieved from <https://doi.org/https://doi.org/10.1016/j.jclepro.2020.120950>



© 2023 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).