

THE ROLE OF LAST MILE DELIVERY IN THE BUSINESS PERFORMANCE OF E-COMMERCE FIRMS

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Appendix 1. Descriptive statistics of the selected items

Construct	Items	Question	Outer loadings	Adapted from
Last mile delivery		<i>In the last two years, our company has managed the last mile by</i>		Naclerio and De Giovanni (2022)
	LM1	Training programs ^a	0.123	
	LM2	Changing the transportation modes	0.799	
	LM3	Rescheduling unattended deliveries	0.807	
	LM4	Reengineering the urban logistics systems	0.784	
	LM5	Promoting cheap deliveries	0.762	
	LM6	Reducing the delivery cost	0.793	
	LM7	Increasing the quality of the delivered goods	0.756	
	LM8	Increasing transparency ^a	0.036	
	LM9	Reinforcing tracking system	0.765	
	LM10	Investing in information system ^a	0.123	
	LM11	Integrating the TSL providers ^a	-0.090	
E-commerce use				Anabila et al., (2024)
	EC1	We advertise our products/services on the Internet	0.738	
	EC2	We sell our product/service online	0.798	
	EC3	We communicate with suppliers and other stakeholders online	0.808	
	EC4	We ensure that products ordered online are delivered to customers's pecifications	0.738	
	EC5	We receive payment by electronic means, e.g. mobile money, visa etc	0.767	
AI integration	EC6	We complement our online interactions with social media communications/interactions	0.800	Salah and Ayyash, (2024)
	AI1	We believe that AI integration will monitor consumer behaviour	0.781	
	AI2	AI Integration Provide product information faster	0.796	
	AI3	We believe using AI integration can capture consumer imagination	0.828	
	AI4	AI integration may be used to track and manage an online retailer's inventory	0.833	
	AI5	AI Integration can be used to Identify fake customers and their patterns	0.824	
Business performance				Sy and Can (2025)
	BP1	My company has been increasing reliability in providing products/services	0.819	

Construct	Items	Question	Outer loadings	Adapted from
	BP2	The quality of my company's services has been steadily improving	0.842	
	BP3	My company has been increasing the supply of products/services related to the products that customers want to buy	0.815	
	BP4	My company's profit has increased significantly	0.835	
	BP5	Overall, my company's performance is very good	0.829	
Note(s): ^a Excluded from analysis				
Source(s): The authors				

Appendix 2. Measurement model assessment results

Construct	Indicator	Outer loadings	Cronbach's alpha	CR	AVE
E-commerce use (EC)	EC1	0.738	0.867	0.900	0.601
	EC2	0.798			
	EC3	0.808			
	EC4	0.738			
	EC5	0.767			
	EC6	0.800			
Last mile delivery (LM)	LM2	0.798	0.894	0.917	0.612
	LM3	0.810			
	LM4	0.785			
	LM5	0.761			
	LM6	0.795			
	LM7	0.755			
	LM9	0.770			
AI integration (AI)	AI1	0.781	0.871	0.907	0.660
	AI2	0.796			
	AI3	0.828			
	AI4	0.833			
	AI5	0.824			
Business performance (BP)	BP1	0.818	0.886	0.916	0.686
	BP2	0.842			
	BP3	0.815			
	BP4	0.835			
	BP5	0.829			

Appendix 3. Discriminant validity - HTMT criterion

Latent Constructs	AI	BP	EC	LM
AI integration (AI)				
Business performance (BP)	0.373			
E-commerce use (EC)	0.098	0.496		
Last mile delivery (LM)	0.092	0.377	0.131	

Appendix 4. Interaction plot

