






Determinants of well-being logistics entrepreneurs: Mediation of ICT and business performance

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Keywords:

Business performance

Entrepreneurial orientation

Government intervention

Information and communication

technologies

Social capital.

JEL Classification:

I31; I28; L26.

Received: 6 November 2023

Revised: 3 May 2024

Accepted: 24 May 2024

Published: 29 July 2024

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Abstract

This study investigated the effects of business performance, social capital, government intervention, entrepreneurial orientation and information and communication technologies on the well-being of logistics entrepreneurs. All logistics entrepreneurs in Bali province were chosen as samples for this quantitative study design. SEM analysis using SMART-PLS provides an answer to the hypothesis. The study's findings demonstrate how the welfare of logistics entrepreneurs is influenced by several factors, including firm success, social capital, information and communication technology, government role and entrepreneurial orientation. In addition, company performance and information technology can act as moderators between the impact of social capital, government involvement and entrepreneurial orientation on the welfare of logistics entrepreneurs. The government must consider logistics entrepreneur's considerations as a tactic to boost economic growth. The government needs to take the right action to figure out what lawful payments can do to help logistics companies grow. The research's conclusions offer suggestions for how the government should play the role of facilitator. Although it has so far made services needed by logistics industry players easier to obtain, its position is primarily intended to make business activities related to tourism easier. In addition, the research's recommendations can serve as a guide for governments creating policies that address the welfare of logistics entrepreneurs.

Funding: This study received no specific financial support.

Institutional Review Board Statement: Not applicable.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Data Availability Statement: The corresponding author may provide study data upon reasonable request.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: Reviewed, edited, designed the study, collected the data, performed the analysis and supervised the study, A.A.B.J.S., I.K.S. and I.B.P.P. All authors have read and agreed to the published version of the manuscript.

1. Introduction

The role of logistics sometimes referred to as the "motor of economic development" benefits the macroeconomy by boosting national income, spurring economic growth, expanding the economy and creating jobs. It also helps businesses at the microeconomic level by enhancing their competitiveness and productivity. According to Chu (2012), Kayode (2013), Hayaloğlu (2015) and Coto-Millán (2016) the relationship between logistics and economic growth has been the subject of several prior studies. Both productivity increases and economic growth are accelerated by logistics activity. For the national and international economies to be profitable and efficient, the logistics industry must execute at a high level (Stough, 2017).

Exporting is one of the logistical operations that significantly affect the economy. The expansion of logistics companies in the transportation and storage industries has benefited from the growth of exports. Thus, the industries of transportation and storage have contributed significantly to Indonesia's economic expansion. According to Adam Smith's classical theory (Suryana, 2000) the two key factors driving economic growth are (1) growth in total Gross Domestic Product (GDP) output and (2) population expansion. This sector supports the export activity sector. A nation can increase its overall GDP output if it gains from its specialized efforts. Specialization is possible if there is a sizable market that can accept the output. According to Smith, engaging in foreign trade might lead to the acquisition of a large market. Activities related to international trade itself can be separated into two categories: import and export activities.

A company's efforts during a specific time period are measured to determine its business performance which is often done annually. According to Simbolon (2015) and Rahman, Tareq, Yunanda, and Mahdzir (2017) performance evaluations are important since they may be used as feedback to enhance or boost performance going forward in addition to serving as a gauge of a business's success during a specific time period. Business performance can be measured by looking at sales and earnings (Panudju, Asfar, & Fauziah, 2017; Purwaningsih & Kusuma, 2015; Purwidiyanti & Rahayu, 2015). According to a number of studies, entrepreneurial orientation (Hamel & Wijaya, 2020; Huda, Karsudjono, & Maharani, 2020; Sondra & Widjaja, 2021), the role of government (Pramaisihella & Cahyono, 2018; Sumantri, Fariyanti, & Winandi, 2013; Telagawathi, 2023), social capital (Analia, Syaikat, Fauzi, & Rustandi, 2019; Fanani & Fitriyati, 2021; Mashudi & Murjana, 2018) and communication information technology (Fahmi & Mudiantono, 2019; Rahmasari, 2018) are among the factors that have been found to have an impact on business performance.

Information and communication technology also has an impact on social capital, government function, company performance and entrepreneurial orientation. Information and communication technology plays a critical role for businesses in terms of enhancing the quality of information serving as a potent tool and strategy for efficiently integrating and processing data and developing new service products to give them a competitive edge over rivals (Naibaho, 2017). The study conducted by Fahmi and Mudiantono (2019) on Purworejo entrepreneurs provides evidence that information and communication technology significantly impacts the success of businesses. Rahmasari (2018) conducted a study of 100 freight-forwarding companies in Semarang, Central Java and discovered that ICTs had a major impact on business performance. According to Saputra, Handra, and Primayesa (2021) information and communication technology have a major impact on the well-being of people living in eastern Indonesia. Information and communication technology has a major impact on the welfare of craft businesses in Mataram City (Sulistiowati, 2022). Business performance has an impact on entrepreneurs' well-being. Export performance and the operations of logistics entrepreneurs are intimately related. Logistics entrepreneurs experience stronger company performance in proportion to their export performance.

Possessing an entrepreneurial mindset is essential for outperforming rivals in operational tasks (Asemokha, Musona, Torkkeli, & Saarenketo, 2019; Dess & Lumpkin, 2005; Rodríguez-Gutiérrez, Moreno, & Tejada, 2015). Companies with an entrepreneurial mindset can identify new chances and bolster their competitive position when conducting business in the market (Wiklund & Shepherd, 2003). According to Bujan (2020) and Amarteifio and Agbeblewu (2020) companies should prioritize enhancing their entrepreneurial attitude as it plays a crucial role in personal achievement in the company. Numerous academics, including Setiawan (2013) and Hamel and Wijaya (2020) have conducted studies on the relationship between entrepreneurial orientation and corporate performance. Setiawan (2013) investigated the connection between Palembang small company performance and entrepreneurial orientation concluding that the former significantly and favourably impacted the latter. Hamel and Wijaya (2020) concluded that entrepreneurial approaches significantly and favourably affect business performance based on their study of one hundred entrepreneurs in West Jakarta.

The government plays a crucial role in empowering entrepreneurs in Indonesia. government intervention is therefore necessary for entrepreneurs to perform better and compete in the global market (Laksmi & Arjawa, 2023). Government policies in Jember Regency have a major impact on business success (Pramaisihella & Cahyono, 2018). The government's engagement in Bogor Regency has a favourable and considerable impact on company success (Sumantri et al., 2013).

Many researchers have studied the well-being of entrepreneurs (Lakshmi, 2022; Mahadipta, Utama, Yasa, & Setyari, 2022; Mulya, Setiawina, Yasa, & Yasa, 2021; Purnamawati, Utama, Suartana, & Marhaeni, 2020). Previous research has not found much research conducted on logistics entrepreneurs in Bali Province. According to Miles (2017) there are various kinds of research gaps: (a) the evidence gap (b) the knowledge gap (c) the gap between practice and knowledge (d) the methodological gap (e) the empirical gap (f) the theoretical gap and (g) the demographic gap. Robinson et al. (2018) define the demographic gap as the existence of a group that has either never been researched before or is underserved. Therefore, the researcher decided that the welfare of logistics entrepreneurs in Bali Province would be the main subject of this study in light of the previously discussed issues and the existence of a research gap.

This study aimed to investigate the effects of business performance, social capital, government intervention, entrepreneurial orientation and information and communication technologies on the well-being

of logistics entrepreneurs. This paper is divided into five sections: introduction, methodology, results and discussion, conclusion and recommendations and finally limitations and suggestions for future research.

2. Method

This study employed a mixed-methods research approach. A sequential mixed-methods strategy, particularly a sequential explanatory strategy is employed in this study. The first stage of this research involved gathering and analyzing quantitative data to address the first, second and third problem formulations. These included the following: how the role of social capital, government and entrepreneurial orientation affects business performance. How do these factors affect business performance and the welfare of entrepreneurs and how do these factors indirectly affect the welfare of entrepreneurs through the operations of logistics companies in Bali Province? Next, information collection and discussion on how the government, social capital, entrepreneurial orientation and business performance all contribute to the betterment of logistics entrepreneurs in Bali Province during the second stage.

Since no previous study had been found that took advantage of the province's population of logistics entrepreneurs, the study was carried out there. The participants in this study are Bali Province-based logistics entrepreneurs. 178 small and medium-sized businesses make up the population of logistics entrepreneurs who are defined as business owners whose names appear in the company's deed of establishment and company directors who are regarded as capable, experienced and knowledgeable about logistics business activities. Saturated sampling or census is used in this study (see Table 1).

Table 1. Research population and sample.

No.	Regency/ City	Enterprises category		Total
		Small	Medium	
1	Denpasar	61	45	106
2	Badung	38	19	57
3	Gianyar	9	2	11
4	Buleleng	1	2	3
5	Karangasem	1	-	1
	Bali	110	68	178

There are three types of latent variables in this research: exogenous variables, mediating variables and endogenous variables. Latent variables are variables that cannot be measured directly while indicators are reflections of measurable latent variables (Widarjono, 2010). The identification of constructs and indicators for each variable is presented in Table 2.

Table 2. Research variables.

No.	Types of variables	Variables	Indicators		Category
1.	Exogenous	Entrepreneurial orientation (X ₁)	X ₁₁ : X ₁₂ : X ₁₃ :	Innovative Proactive Risk taking	Reflective
2.	Exogenous	Role of government (X ₂)	X ₂₁ : X ₂₂ : X ₂₃ :	Regulator Dynamist Facilitator	Reflective
3.	Exogenous	Social capital (X ₃)	X ₃₁ : X ₃₂ : X ₃₃ :	Trust Norm Networking	Reflective
4.	Mediating	Communication information technology (Y ₁)	Y ₁₁ : Y ₁₂ : Y ₁₃ :	Computer ownership Utilization of technology Computer maintenance	Reflective
5.	Mediating	Business performance (Y ₂)	Y ₂₁ : Y ₂₂ : Y ₂₃ :	Sales growth Profit growth Market share growth	Reflective
6.	Endogenous	Entrepreneur welfare (Y ₃)	Y ₃₁ : Y ₃₂ : Y ₃₃ : Y ₃₄ :	Income level Level of education Proportion of expenditure Positive feeling	Reflective

The data in this research were analyzed using descriptive techniques and inferential analysis with Structural Equation Modelling (SEM) and Partial Least Square (PLS). The PLS is a component- or variant-based SEM model. According to Ghazali (2018) PLS is an alternative approach to the shift from a covariance-

based to a variance-based SEM approach. The structural model is the part of the PLS that examines the relationships between the latent variables in the model illustrated in Figure 1.

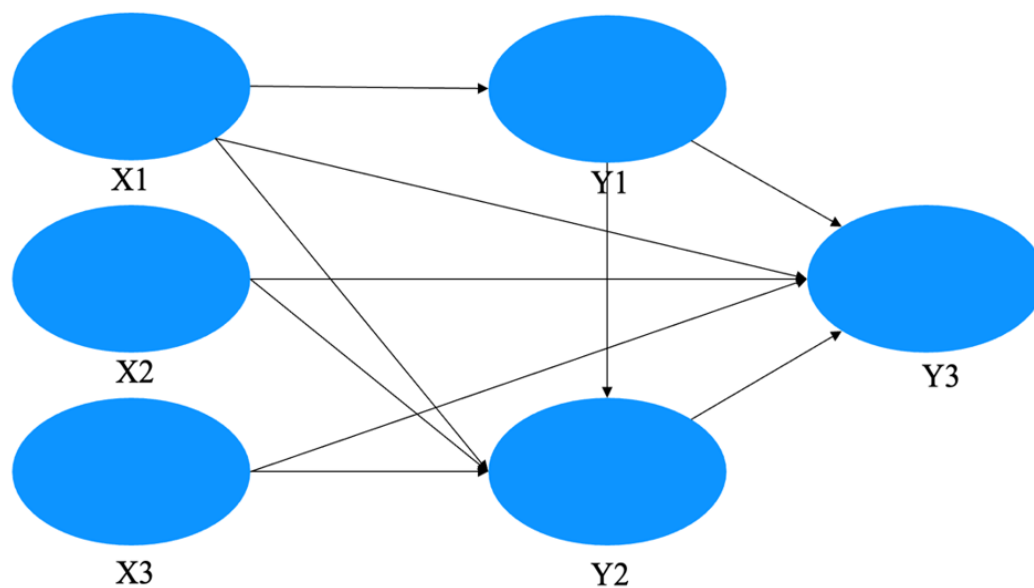


Figure 1. Conceptual framework.

3. Result and Discussion

3.1. Model Measurement

The degree of correlation between a model's constructs and indicators is measured by convergent validity. The loading factor values in Table 3 demonstrate convergent validity in SEM-PLS.

Table 3. Outer loading.

Relationship between indicators and constructs	Loading	SD	t-statistic	P value
$X_{1,1} \leftarrow X_1$	0.911	0.013	67.524	0.000
$X_{1,2} \leftarrow X_1$	0.937	0.011	87.743	0.000
$X_{1,3} \leftarrow X_1$	0.908	0.014	63.355	0.000
$X_{2,1} \leftarrow X_2$	0.893	0.017	51.750	0.000
$X_{2,2} \leftarrow X_2$	0.904	0.019	48.344	0.000
$X_{2,3} \leftarrow X_2$	0.871	0.020	43.391	0.000
$X_{3,1} \leftarrow X_3$	0.881	0.020	44.225	0.000
$X_{3,2} \leftarrow X_3$	0.920	0.012	74.397	0.000
$X_{3,3} \leftarrow X_3$	0.929	0.011	82.495	0.000
$Y_{1,1} \leftarrow Y_1$	0.923	0.013	72.158	0.000
$Y_{1,2} \leftarrow Y_1$	0.956	0.008	123.390	0.000
$Y_{1,3} \leftarrow Y_1$	0.916	0.017	52.990	0.000
$Y_{2,1} \leftarrow Y_2$	0.947	0.008	118.091	0.000
$Y_{2,2} \leftarrow Y_2$	0.921	0.011	84.906	0.000
$Y_{2,3} \leftarrow Y_2$	0.866	0.017	51.002	0.000
$Y_{3,1} \leftarrow Y_3$	0.921	0.010	88.020	0.000
$Y_{3,2} \leftarrow Y_3$	0.897	0.013	68.208	0.000
$Y_{3,3} \leftarrow Y_3$	0.888	0.017	51.698	0.000
$Y_{3,4} \leftarrow Y_3$	0.878	0.016	56.344	0.000

The construct's discriminant validity as determined by Average Variance Extracted (AVE), Composite Reliability (CR) which is a reflecting indicator typically used to assess a construct's internal consistency and Cronbach alpha all demonstrate the construct's viability. Table 3 demonstrates the excellent discriminant validity of the following constructs: information and communication technology (Y1), company performance (Y2), social capital (X3), entrepreneurial approach (X1) and the role of the government (X2). The findings of the construct discriminant validity analysis in Table 4 suggest that the AVE value is substantially higher than 0.5. Additionally, the Cronbach alpha and composite reliability values in Table 4 are greater than 0.70.

Table 4. The construct's discriminant validity.

Construct	Average variance extracted (AVE)	Composite reliability	Cronbach's alpha
Entrepreneurial orientation (X1)	0.844	0.942	0.908
Role of government (X2)	0.791	0.919	0.868
Social capital (X3)	0.829	0.936	0.896
Information and communication technology (Y1)	0.869	0.952	0.924
Business performance (Y2)	0.832	0.937	0.898
Entrepreneur's welfare (Y3)	0.803	0.942	0.918

Table 4 presents a construct's discriminant validity which can also be used to determine its validity. The cross-loading of indicators on their latent construct is used to assess the discriminant validity of reflective indicators. If the indicator has a cross-loading on one construct that is higher than the other constructs, then the discriminant validity is good. The following are the findings from the cross-loading of variables on the constructs: information communication technology (Y1), company performance (Y2), entrepreneur welfare (Y3), the role of the government (X2), social capital (X3) and entrepreneurial orientation (X1).

The cross-loading on the construct is greater than on other constructs. For instance, the loading value of X1.1 on construct X1 indicates that discriminant validity has been satisfied as shown in Table 5. The loading value of X1.1 compared to X1 is higher than the loading value of X1.1 compared to X2 which is 0.574. Similarly, the loading value of X1.1 to X3 is 0.602, the loading value of X1.1 to Y1 is 0.651, the loading value of X1.1 to Y2 is 0.764 and the loading value of X1.1 to Y3 is 0.780. Additionally, the comparison of each indicator's loading to its structure also reveals a higher value than that of loading with other constructions.

Table 5. Cross-loading.

Indicators	Construct					
	X ₁	X ₂	X ₃	Y ₁	Y ₂	Y ₃
X _{1.1}	0.911	0.574	0.602	0.651	0.764	0.780
X _{1.2}	0.937	0.618	0.570	0.692	0.711	0.759
X _{1.3}	0.908	0.604	0.565	0.673	0.685	0.711
X _{2.1}	0.621	0.893	0.561	0.640	0.671	0.678
X _{2.2}	0.543	0.904	0.516	0.533	0.605	0.584
X _{2.3}	0.568	0.871	0.546	0.505	0.608	0.614
X _{3.1}	0.589	0.549	0.881	0.663	0.731	0.763
X _{3.2}	0.511	0.488	0.920	0.621	0.689	0.694
X _{3.3}	0.615	0.620	0.929	0.664	0.778	0.777
Y _{1.1}	0.685	0.651	0.713	0.923	0.771	0.789
Y _{1.2}	0.680	0.562	0.661	0.956	0.732	0.765
Y _{1.3}	0.681	0.552	0.620	0.916	0.686	0.741
Y _{2.1}	0.735	0.662	0.783	0.729	0.947	0.878
Y _{2.2}	0.743	0.634	0.727	0.674	0.921	0.847
Y _{2.3}	0.667	0.642	0.696	0.742	0.866	0.841
Y _{3.1}	0.786	0.654	0.749	0.782	0.908	0.921
Y _{3.2}	0.721	0.634	0.731	0.714	0.811	0.897
Y _{3.3}	0.731	0.646	0.712	0.734	0.827	0.888
Y _{3.4}	0.686	0.594	0.747	0.710	0.812	0.878

A model describing the link between latent variables in a research model is called the structural model often known as the inner model. R-Square (R²) is the measure used in SEM-PLS to quantify the structural model. For every endogenous variable, the R² coefficient is included in the goodness-of-fit inner model. The R² value is employed to assess how different changes in external latent variables affect the explanation of endogenous latent variables. A higher R² value implies a stronger prediction model in the study. When the R² values for the endogenous latent variables in the structural model exceed 0.67, the influence of exogenous factors that affect endogenous variables falls into the strong category.

The results that fall into the weak category are 0.19–0.33 whereas the results that fall into the intermediate category are 0.33-0.67 (Ghozali & Latan, 2015). The R² value for each of the study's dependent variables is shown in Table 6.

Table 6. Quantify the structural model.

Variables	R-square	Category
Communication and information technology (Y ₁)	0.535	Currently
Business performance (Y ₂)	0.807	Strong
Entrepreneurial welfare (Y ₃)	0.916	Strong

3.2. Hypothesis Testing

3.2.1. The Influence of Entrepreneurial Orientation on Information and Communication Technology for Logistics Entrepreneurs in Bali Province

This analysis aims to determine the direct influence between variables or constructs. The magnitude is indicated by the path coefficient value while the significance is at the 0.05 level with a p-value < 0.05 and indicated by the t-statistics value > t-table = 1.65. The results of the data analysis to determine the first research objective are to analyze the influence of entrepreneurial orientation on information and communication technology.

Table 7. Hypothesis testing results 1.

Correlation	Original sample	Standard deviation	t-statistics	p-values
X ₁ → Y ₁	0.732	0.047	15.436	0.000

Table 7 demonstrates that information and communication technology (Y₁) is directly and significantly impacted positively by the entrepreneurial orientation variable (X₁). It is possible to conclude that entrepreneurial orientation directly and significantly influences information and communication technology because the calculated value of X₁ (enthusiastic orientation) towards Y₁ (information and communication technology) is greater than table (15.436 > 1.65) and the P value is less than 0.05 (0.000 < 0.05). This implies that the value of information and communication technology rises in tandem with the importance of having an entrepreneurial mindset. Entrepreneurs must adapt to become more competitive in the modern global economy. A crucial element that will ascertain entrepreneurs' competitiveness is their utilization of information and communication technologies. Information and Communication Technologies (ICT) utilization can enhance corporate transformation by facilitating the rapid, accurate and efficient exchange of vast volumes of information. The majority of productivity is attained through ICT investment. Logistics entrepreneurs use information and communication technology especially in the form of computer equipment. Computers serve as tools for data processing for entrepreneurs in the logistics industry. This includes gathering, processing, collecting, storing and manipulating data in many ways to create high-quality, timely and engaging information for the general public. Logistics entrepreneurs use information derived from computer data processing to help them solve difficulties and accomplish their company objectives. The findings of this study are consistent with those of Lailah and Soehari's (2020) research which found that an entrepreneurial mindset significantly and favourably influences information and communication technology. An entrepreneur must be able to adapt to become more competitive in addition to being innovative. Using technological advancements in information is one of them.

3.2.2. The Influence of Entrepreneurial Orientation, the Role of Government, Social Capital and Information and Communication Technology on the Business Performance of Logistics Entrepreneurs in Bali Province

The results of the data analysis to achieve the second research objective are to analyze the influence of entrepreneurial orientation, the role of government, social capital and information and communication technology on business performance.

Table 8. Hypothesis testing results 2.

Correlation	Original sample	Standard deviation	t-statistics	p-values
X ₁ → Y ₂	0.301	0.055	5.426	0.000
X ₂ → Y ₂	0.158	0.059	2.664	0.008
X ₃ → Y ₂	0.387	0.069	5.645	0.000
Y ₁ → Y ₂	0.187	0.062	3.006	0.003

Table 8 shows that the entrepreneurial-oriented variable (X₁) has a positive and significant impact on business performance (Y₂). It can be concluded that there is a direct and significant relationship between entrepreneurial orientation and business performance given that the p-value is less than 0.05 (0.000 < 0.05) and the calculated t-statistics from the test of the influence of entrepreneurial orientation (X₁) on business performance (Y₂) are larger than the t-table (5.426 > 1.65). This implies that business performance has a higher value compared to an increase in entrepreneurial orientation.

The government role variable (X2) has a favorable and large impact on business success (Y2) because the calculated t-value from the test of the government's role (X2) on business performance (Y2) is greater than the t-table (2.664>1.65) and the p-value is less than 0.05 (0.008<0.05). It is possible to conclude that the government's role directly and significantly improves business performance. This suggests that the importance of government involvement increases in direct proportion to the value of corporate success. The social capital variable (X3) has a favorable and considerable impact on business performance (Y2). The test of social capital's influence on business performance (Y2) yielded a t-value bigger than the t-table (5.645>1.65) and a p-value less than 0.05 (0.000 < 0.05) indicating a direct and substantial relationship between social capital and business performance.

Information and communication technology (Y1) has a favorable and considerable impact on business performance (Y2). The calculated t-value from the test of the influence of information and communication technology (Y1) on business performance (Y2) is greater than the t-table (3.006>1.65) and the p-value is less than 0.05 (0.003<0.05) indicating that technology and information communication have a direct, positive and significant impact on business performance. This implies that the value of company performance rises in tandem with the value of information and communication technologies because it has a higher original sample value (0.387) than the other variables. The social capital variable is thought to have the greatest impact on company success based on its relationship to that performance. Additionally, the government role variable is evaluated as having the least impact on business success when compared to other variables with an initial sample value of 0.158.

The performance of a firm can be influenced by a variety of factors. One of which is entrepreneurial orientation. An entrepreneur's capacity to use possibilities for success as a foundation is known as their entrepreneurial orientation. Entrepreneurial logistics possess a clear vision and the courage to take calculated risks to improve performance. Businesses providing logistics services must constantly innovate if they are to thrive due to intense competition. This innovation must be able to deliver high-quality services that satisfy customer demands while constantly keeping punctuality, consistency and process efficiency in mind. Entrepreneurs providing logistics services not only innovate but also take a proactive approach to managing their company.

The findings of this study are consistent with those of Lin, Peng, and Kao's (2008) study which demonstrated that innovation improves the performance of small and medium-sized businesses (SMEs) in Taiwan's info-electronic sector. The findings of a study by Gunday (2011) on Turkey's manufacturing sector demonstrate how performance is impacted by the four aspects of innovation: product, process, marketing and organization. In Palembang, Setiawan (2013) also looked at the relationship between entrepreneurial orientation and small business success. She discovered that there was a strong and positive correlation between the two. Hamel and Wijaya (2020) came to the conclusion that a company's success is positively and significantly impacted by its entrepreneurial orientation after studying 100 business owners in West Jakarta.

3.2.3. The Influence of Entrepreneurial Orientation, the Role of Government, Social Capital, Information Communication Technology and Business Performance on the Welfare of Logistics Entrepreneurs in Bali Province

The results of data analysis to achieve the third research objective, namely analyzing the influence of entrepreneurial orientation, the role of government, social capital and information and communication technology on business performance are presented in Table 9.

Table 9. Hypothesis testing results 3.

Correlation	Original sample	Standard deviation	t-statistics	p-values
X ₁ → Y ₃	0.164	0.056	2.912	0.004
X ₂ → Y ₃	0.019	0.030	0.624	0.533
X ₃ → Y ₃	0.147	0.041	3.590	0.000
Y ₁ → Y ₃	0.138	0.061	2.244	0.025
Y ₂ → Y ₃	0.570	0.058	9.899	0.000

According to Table 9, there is a direct and noteworthy positive relationship between the entrepreneurial orientation variable (X1) and entrepreneurial welfare (Y3). It is possible to conclude that entrepreneurial orientation directly and significantly influences entrepreneurial welfare because the calculated t value from the test of the influence of entrepreneurial orientation (X1) on entrepreneurial welfare (Y3) is greater than the t table (2.912>1.65) and the P value is less than 0.05 (0.004<0.05). This implies that the value of entrepreneurial welfare rises in tandem with the value of entrepreneurial orientation.

The welfare of entrepreneurs is directly and positively impacted by the government role variable (X2), though not significantly (Y3). It can be inferred that the government has no direct influence on the welfare of entrepreneurs because the calculated t value from the test of the role of the government (X2) on entrepreneurial welfare (Y3) is smaller than the t-table (0.624<1.65) and the p-value is greater than 0.05 (0.533>0.05). This indicates that the value of entrepreneurs' welfare does not increase in proportion to the importance of the government's participation.

Entrepreneurial welfare (Y3) is directly and significantly impacted positively by the social capital component (X3). It can be said that social capital significantly and positively influences entrepreneurial welfare given that the P value is less than 0.05 ($0.000 < 0.05$) and the calculated t-statistics from the test of social capital's influence on entrepreneurial welfare (Y3) are larger than the t-table ($3.590 > 1.65$). This implies that the value of entrepreneurial welfare rises in tandem with the value of social capital.

Entrepreneurial welfare (Y3) is directly and significantly impacted positively by the information and communication technology variable (Y1). Since the P value is less than 0.05 ($0.025 < 0.05$) and the calculated t-statistics from the test of the influence of information and communication technology (Y1) on entrepreneurial welfare (Y3) are larger than the t table ($2.244 > 1.65$), it can be said that technology and information communication directly and significantly improve the welfare of entrepreneurs. This implies that the importance of entrepreneurial well-being rises in tandem with the value of information and communication technologies.

Entrepreneurial welfare (Y3) is positively and significantly impacted by the business performance variable (Y2). It is possible to conclude that business performance directly and positively affects entrepreneurial welfare because the calculated t-statistics from the test of the relationship between business performance (Y2) and entrepreneurial welfare (Y3) are greater than the t-table ($9.899 > 1.65$) and the p-value is less than 0.05 ($0.000 < 0.05$). This implies that the welfare value of the entrepreneur rises in tandem with the business performance value. It seems that the company performance variable with an initial sample value of 0.570 has a greater influence on that welfare than the other elements based on its relationship to the welfare of entrepreneurs. Additionally, the government role variable is evaluated as having the least impact on the welfare of entrepreneurs when compared to other variables with an initial sample value of 0.019.

Entrepreneurs in the logistics services sector exhibit basic entrepreneurial behavior can better manage their companies are creative and inventive and have an achievement-oriented mindset. If business owners exhibit innovative behavior such as incorporating novel concepts into their operations, they can help logistics service companies thrive in the marketplace. Entrepreneurs in the logistics industry need to be proactive in addition to advanced. A positive evaluation of the logistics entrepreneurs' businesses can be obtained by expressing satisfaction with their services. The loyalty of logistics company service users will be impacted by positive service user evaluations. Greater customer loyalty will result in higher revenue for logistics firms providing their services. The happiness of logistics entrepreneurs is impacted by this increase in revenue. The happiness experienced is a sign of good emotions when business owners in logistics have the fortitude and self-assurance to handle challenges in their industry.

The study's findings are consistent with those of [Thelken and de Jong \(2020\)](#) who found that an entrepreneurial mindset significantly and favorably affects the welfare of farmers in *Gianyar Regency, Tampaksiring District and Subak Pulagan*. Farmers' entrepreneurial orientation needs to be strengthened to promote farmer well-being. According to [Wakhidati, Sugiarto, and Aunurrohman \(2020\)](#) farmers with a basic entrepreneurial attitude can run their enterprises more effectively are creative and inventive and have an achievement-oriented mindset. Farmers are able to increase farmer welfare and thrive in local marketplaces.

3.2.4. The Role of Information and Communication Technology in Mediating the Influence of Entrepreneurial Orientation on the Business Performance of Logistics Entrepreneurs in Bali Province

The data analysis results enable the fourth study goal which is to investigate how information and communication technology mediates the effect of entrepreneurial attitude on firm success. [Table 9](#) illustrates how information and communication technology functions as a mediator between the effects of an entrepreneurial perspective on corporate performance. The computed t-statistics from the test of the indirect influence of entrepreneurial orientation (X1) on company performance (Y2) through information and communication technology (Y1) are larger than the t-table ($2.764 > 1.65$) and the p-value is less than 0.05 ($0.006 < 0, 05$).

Table 10. Hypothesis testing results 4.

Correlation	Mediator	Original sample	Standard deviation	t-statistics	p-values
X ₁ → Y ₂	Y ₁	0.137	0.049	2.764	0.006

The impact of an entrepreneurial mindset on the performance of businesses is mediated by information and communication technology. Entrepreneurs in the logistics industry have chances to innovate in providing logistics services through the utilization of information and communication technologies. An entrepreneurial orientation can be determined by innovation. Innovative logistics entrepreneurs need to expand their entrepreneurial perspective and improve their company's performance.

The innovations made by logistics entrepreneurs in marketing their logistics service firms serve as an example of this state in the area. Using social media can have a lot of advantages, depending on how well you spend your time and how much it costs. The demonstration of time efficiency can be achieved through the prompt and effortless delivery of information from logistics companies to logistics service users. [Lestari, Astuti, and Ridwan \(2019\)](#) stated that an entrepreneur's attitude influences their capacity to innovate through

technology in products, hence enhancing marketing performance in micro, small and medium-sized enterprises (MSMEs) within the food industry sector of Denpasar City. Previous studies by [Tubey, Kyalo, and Mulwa \(2019\)](#) demonstrate innovation's capacity to act as mediators between risk-taking and entrepreneurial orientation and provide credence to these findings.

3.2.5. The Welfare of Logistics Entrepreneurs in Bali Province is impacted by a Number of Factors, Including Social Capital, Government, Entrepreneurial Attitude and Information and Communication Technology

These factors are mediated by the role of company success. The sixth study objective which examines how company performance mediates the impact of entrepreneurial orientation, the role of the government, social capital and information and communication technology on the well-being of entrepreneurs is achieved through the results of data analysis. [Table 10](#) demonstrates how the impact of entrepreneurial attitude on entrepreneurial welfare is mediated by firm performance. The P-value is less than 0.05 ($0.000 < 0.05$) and the calculated t-value from the test of the indirect influence of entrepreneurial orientation (X1) on entrepreneurial welfare (Y3) through business performance (Y2) is larger than the t table ($4.476 > 1.65$). It can be said that business performance partially mediates (partial mediation) the influence of entrepreneurial orientation on entrepreneurial welfare because entrepreneurial orientation positively and significantly affects entrepreneurial welfare either directly or indirectly through business performance.

Table 11. Hypothesis testing results 5.

Correlation	Mediator	Original sample	Standard deviation	t-statistics	p-values
X ₁ → Y ₃	Y ₂	0.350	0.078	4.476	0.000
X ₂ → Y ₃	Y ₂	0.090	0.033	2.753	0.006
X ₃ → Y ₃	Y ₂	0.221	0.043	5.087	0.000
Y ₁ → Y ₃	Y ₂	0.107	0.037	2.846	0.005

According to [Table 11](#), the P-value is less than 0.05 ($0.006 < 0.05$) and the computed t-statistics from the indirect influence test of the government's involvement (X2) on entrepreneurs' welfare (Y3) through company success (Y2) are larger than the t-table ($2.753 > 1.65$). It can be concluded that business performance fully mediates (full mediation) the influence of the government's role on entrepreneurs' welfare given that the government's role directly affects business performance in a positive and significant way but indirectly affects the welfare of entrepreneurs in a positive but not significant way and indirectly through business performance in a positive and significant way.

The p-value is less than 0.05 ($0.000 < 0.05$) and the computed t-value from the test of the indirect influence of social capital (X3) on entrepreneurial welfare (Y3) through company success (Y2) is higher than the t-table ($5.087 > 1.65$). It can be said that business performance partially mediates (partial mediation) the influence of social capital on entrepreneurs' well-being because social capital positively and significantly affects entrepreneurs' welfare either directly or indirectly through business performance.

The p-value is less than 0.05 ($0.005 < 0, 05$) and the computed t-value from the test of the indirect influence of information and communication technology (Y1) on entrepreneurial welfare (Y3) through business performance (Y2) is higher than the t-table ($2.846 > 1.65$). The impact of communication technology on the well-being of entrepreneurs can be partially mediated (partial mediation) by business performance given that communication might have an indirect or direct impact on business performance. Information technology has a positive and significant impact on the welfare of entrepreneurs.

Innovation which is a manifestation of an entrepreneurial mindset can help logistics entrepreneurs operate more profitably which raises their standard of living. Logistics entrepreneurs can enhance their market share by using innovative strategies and this can lead to a rise in profit growth. The rise in earnings will affect logistics entrepreneurs' ability to make more money. The direct involvement of the government cannot bring logistics businesses wealth. The government's job is to help entrepreneurs run their firms more efficiently by acting as a middleman for logistics entrepreneurs. The rising revenue experienced by logistics entrepreneurs is influenced by this improvement in business performance. Entrepreneurs in the logistics industry use their income to pay for living expenses. Logistics entrepreneurs can increase their company's market share by connecting with other logistics entrepreneurs through the network that they have established. Increasing market share gives logistics business owners the chance to make more money. The living expenses of logistics entrepreneurs can be paid for with increased revenue. Positive emotions will be experienced by logistics entrepreneurs when their living expenditures are met. Since the logistics entrepreneur is accountable for the family, positive emotions might be attained as a result of the work done. A measure of wealth is the amount of money that can be used to cover living expenses for logistics entrepreneurs.

Businesses in the logistics industry can thrive by implementing new information and communication technology to manage their operations. Technology adoption improves the financial success of logistics entrepreneurs. The rise in market share is indicative of a company's favorable success. The logistics service company must deliver timely, accurate and targeted information and services to maintain its present market

share. The increase in an entrepreneur's income will depend on how well they fulfill their objectives for market share. The well-being of logistics entrepreneurs is reflected in this state.

4. Conclusion and Recommendation

Information and communication technology is influenced by an entrepreneurial attitude. The study's findings support the idea that innovation when used as a vehicle for an entrepreneurial mindset may be effectively executed when information and communication technology are available. Entrepreneurial attitude, social capital, government role and information and communication technology have a big impact from a company performance standpoint. Logistics business players can enhance their business performance through innovative practices that are a reflection of their entrepreneurial approach. It is impossible to separate the government's involvement in enhancing the commercial performance of logistics business players from the policies it issues to assist logistics business managers in their operations. If an institution has a business network, logistics, business administration and business activities can all function effectively. It is impossible to separate the role of information and communication technology as a medium from the connectivity between business actors inside an institutional network.

The welfare of logistics industry actors in Bali Province is not influenced by the involvement of the government in contrast to entrepreneurial orientation, social capital, information and communication technology and business performance. The welfare of logistics business players would be impacted by the income development that business actors' initiatives can generate. The actors in the logistics industry have a social network that gives them confidence in their ability to resolve any issue that arises during business operations. Information and communication technology play an important role as a medium to address the issues that logistics industry operators face. Logistics business players have greater life satisfaction when their concerns are resolved and this can lead to improved business performance.

The impact of entrepreneurial attitudes on the business performance of logistics industry actors in Bali province is mediated by information and communication technology. Information and communication technology can be used as a medium to support the innovations made by logistics industry actors which can lead to gains in market share, revenue growth and profitability.

Business performance acts as a mediator between the welfare of logistics business actors in Bali province and entrepreneurial orientation, the role of the government, social capital and information and communication technology. There is an increase in market share, income, and profits due to the innovation carried out by logistics business actors. This growth is made possible by the government's role and is reinforced by the network that exists within an institutional organization of logistics business actors. The network also affects business actors' confidence in their ability to solve problems. The capacity and self-assurance to resolve issues would make logistics business actors feel satisfied with their lives.

The research's conclusion offers suggestions for how the government should play the role of facilitator. Although it has so far made services needed by logistics industry players easier to obtain, its position is primarily intended to make business activities related to tourism easier. We shall therefore make business activity services the logistics business actor's priority going forward. Since tourism is a human activity, the movement of products undoubtedly goes hand in hand with it. It is impossible to separate the transportation of goods from the existence of logistics service providers. Furthermore, cohesiveness within the organizational network is a crucial factor for logistics business operators in terms of company continuity. The same actions and movements to enhance the welfare of other business actors demonstrate unity.

5. Limitations and Suggestions for Future Research

Although this research makes a contribution, it only considers responses from logistics business actors in Bali province, Indonesia. The welfare of business actors studied in this research from the information and communication technology variable only includes ownership of business-supporting infrastructure. When we talk about ICT, it's not just about physical forms such as infrastructure but also how ICT can be adopted and used. It also needs to be understood that prosperity can also be realized through a feeling of happiness (subjective prosperity). Talking about welfare needs to be understood not only from objective (economic) elements. Indicators are needed not only from an economic perspective but also from a happiness perspective to better capture the meaning of welfare.

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