

Supply Chain Performance as a Mediating Factor in the Effect of Supply Agility on Company Performance

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Abstract

This study's objective is to examine the relationship between supply agility and firm performance using supply chain performance as an intermediary variable. The basic data for this study came from 100 actors in the broiler industry who were dispersed throughout Banten Province. There were also a number of other goals, such as disseminating data on the models used to mediate the relationship between supply chain performance and firm performance. These goals can be met by measuring supply agility, which will verify some claims and provide a better planning model for business success. The findings demonstrated that supply agility has a favorable and noteworthy impact on business and supply chain performances. Performance of the supply chain has a positive and considerable impact on firm performance as an intervening variable. These findings can be utilized to investigate how management affects the performance of the supply chain as well as the connection between supply agility and business performance.

Keywords; Supply agility, supply chain performance, and company performance.

Introduction

Businesses are becoming more and more consumer-focused as they expand. This is because it's important to match items to consumer needs. The capacity for responding to environmental changes, or agility, frequently improves when there is ambiguity. The ability to respond to resources and create value between the parties involved in the supply chain is improved by efficient operations. Additionally, expanding and enhancing supply chain collaboration networks promote the exchange of goods and information among supply chain participants. Given the increasingly complicated demands and wishes of consumers as well as the unpredictability of the environment, supply agility is crucial in this situation. This circumstance prompts the supply chain strategy to be improved in order to more rapidly and easily meet consumer demand. It is anticipated that the associated parties will effectively control the flow of information and goods to satisfy consumer demand. The ability of members, including suppliers, to accept requests (McKone-Sweet & Lee, 2009). To react swiftly to shifting consumer demands and needs, organizational and cross-functional interactions must be strengthened (De Angelis, Howard, & Miemczyk, 2018). Agility has an impact on the supply chain's success since it guarantees efficient operations. The livestock sub-sector is a crucial component of agricultural development, which attempts to meet the community's demands for food and nutrition as well as to improve the quality of its human resources. Additionally, the welfare of the breeder community needs to be improved. One of the animal sectors, poultry, has a large economic impact on the country. The structure of the chicken industry requires institutional development at the farmer level by creating patterns of

mutually beneficial collaboration, according to empirical studies undertaken by (, 2015). This is still relevant for boosting farmer performance effectiveness.

The interaction between socioeconomic actors based on accepted standards and the analysis of vertical interaction are linked to the institutionalization of the broiler supply chain. Marketing, processing, product distribution, and participants in both traditional and contemporary marketplaces are examples of vertical interactions in the broiler supply chain. Manuscript & Studies (2016). The supply chain include every actor, whether they are directly or indirectly connected, such as producers, suppliers, transportation services, warehousing, retailers, and the actual customers (Manuscript & Studies, 2016).

In order to meet the demand for animal protein while also raising people's income, Banten is a very important location for growing the broiler chicken industry. According to BPS 2019 data, there are 201,162,025 broilers living in this area. Since there is a significant demand for meat as a result, broiler farming development is required.

The outcomes of earlier studies on supply agility and business performance varied. Research has shown that supply agility has a subtle but significant impact on a company's performance (Khan & Pillania, 2008; Nagham, 2012; Fayezi, Zutshi, & O'Loughlin, 2017). (Tan, Tan, Wang, & Sedera, 2017). According to (Yang 2014) and (Eckstein, Goellner, Blome, & Henke, 2015), supply agility has a favorable impact on business success. Therefore, the purpose of this study is to examine how supply agility affects firm success.

2. Literature Review

2.1 Supply Chain Performance

Supply chain management is the strategic planning of each organization's role across the supply chain's activities with the ultimate goal of integrating supply and demand management. Among the advantages of developing an effective supply chain management system for the business are enhanced productivity, lower costs, quicker processing and delivery, more profitability, and increased customer loyalty (William J. Stevenson and Sum cheeChuong, 2014). According to Russell and Taylor (2016:12), supply chain management is a science that integrates and controls the flow of products, services, and information in the supply chain to be cost-effective and responsive to customer needs. In order to provide value for customers, supply chain management involves suppliers in internal business processes MukhsindanTulus 2021.

2.2. Supply agility

According to Jermstittiparsert&Kampoomprasert& Al-Tit (2017), supply agility is the capacity of supply chains to react swiftly and efficiently to market changes (Um, 2017). As an alternative, it can be described as a company's capacity to

The created research model is displayed below.

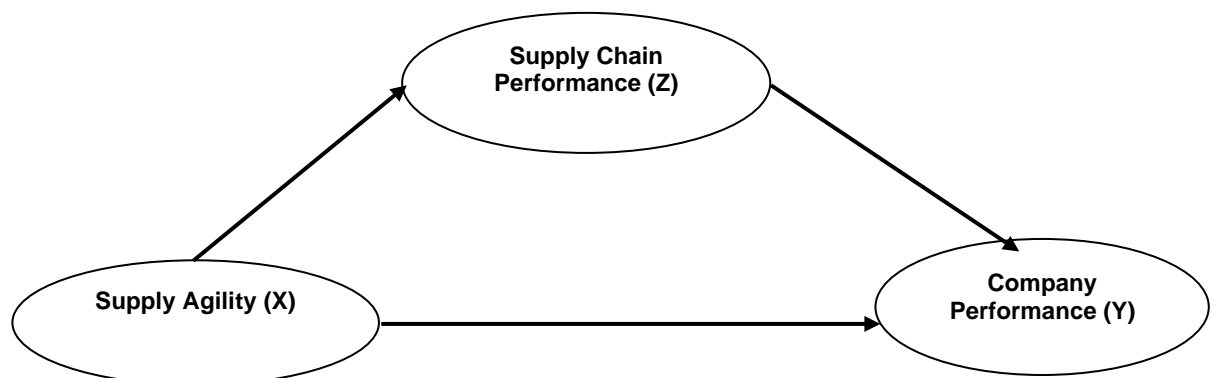


Figure 1: Research Model

3. Research Methods

3.1 Types of research

The research that will be conducted will be quantitative. Siyoto&Sodik (2015: 17) define quantitative research as the explicit, structured, and methodical study of design from beginning to conclusion. Research that uses quantity, including collection, processing with statistical methods, and result interpretation, is referred to as quantitative research. For data that includes numbers to be studied, these variables are measured in accordance with statistical processes (Addison, 2015).

3.2 Measurement of Variables

The location of the variables to be researched as well as

modify strategies and activities throughout its supply chain in response to threats, opportunities, and changing surroundings (Gligor, Holcomb, &Feizabadi, 2016). (Ayoub & Abdallah, 2019). Supply agility is a growing dynamic capability that is crucial in the present corporate climate, according to study (Roberts & Grover, 2012), and (Meyer, Niemann, &Peckover, 2017).

2.3 Company Performance

Performance is the skill demonstrated by the work products within a specific time frame in accordance with set standards. According to Al Humdan, Shi, and Behnia (2020) and Ponis&Koronis (2012), the concept of integrating physical activities within a company means that the supply chain is a "network" of organizations with upstream and downstream vertical relationships. Company performance is a measure of how market-oriented and profit-oriented an organization is. Included in this are various methods and actions that result in goods and services that end users can use (Nazir et al., 2018).

2.4 Research Model

their relationship were described by this study. The Supply Agility Indicator was adapted from Yusuf et al. and Gligor& Holcomb (2012). (2014). It has five indicators: adaptability (SupAg1), alertness (SupAg2), quickness (SupAg3), assertiveness (SupAg4), and accessibility (SupAg5) (SupAg5). Supplychain performance metrics were used from Mukhsin&Najmudin, Mak Wai Kin et al., and Panayides& Venus Lun (2009, 2015). (2020). It includes cost (SCP1), delivery (SCP2), speed (SCP3), dependability (SCP4), and quality improvement (SCP5) as its five indicators (SCP5). Six indicators, including sales proceeds (CP1), target production costs (CP2), product quality (CP4), market share (CP5), profitability (CP5), and customer satisfaction (CP5), were taken from Jandaghi, Jafari, and Salimi (2015), Muazu (2019), and Mukhsin (2020). (CP6). The broilers in Banten Province made up the study's population. Prior to producing a random selection, the purposive random sampling approach was utilized as a foundation. In this study, 100 broilers from the province of Bantenserved as the samples.

3.3 Data sources and types

The majority of the primary data used in this study came from responses given by respondents to questions about the performance of broilers in the province of Banten. Utilizing a prepared questionnaire, data were gathered.

3.4 Test of hypotheses

PLS is an alternate strategy that switches from a covariance-based to a variant-based SEM approach. It is a component-based or variant-based structural equation model (variance). Covariance-based SEM typically evaluates causality or theories, whereas PLS is more of a prediction model and a potent analytical technique (Cheah, Memon, Chuah, Ting, & Ramayah, 2018).

4. The Findings and Discussion

4.1 Findings

Validity with Discrimination. By comparing the loading value on the construct with the intended should be bigger than the

loading value with other constructs, this value, known as the cross loading factor value, is helpful in determining if the construct has a discriminant that appropriately, so it shows latent constructions. It is preferable to predict their block's size than the block size itself. according to Table 1.

Average Variance Extracted (AVE)					
Construct	Original Sample	Sample Mean	Standard Deviation	T_Statistic	P_Values
Company Performance	0.705	0.705	0.047	15,055	0.000
Supply Chain Management	0.661	0.661	0.049	13,446	0.000
Supply Agility	0.697	0.698	0.053	13,026	0.000

Table 1: Discriminant Validity

4.1.1 Reliability Test

Cronbach's Alpha was calculated for each variable as reliability test. When the Cronbach's Alpha value is more than

0.7, the data s considered to be credible.

Composite Reliability					
Construct	Original Sample	Sample Mean	Standard Deviation	T_Statistic	P_Values
Company Performance	0.904	0.903	0.020	44,850	0.000
Supply Chain Management	0.853	0.852	0.029	29,616	0.000
Supply Agility	0.873	0.872	0.029	30,211	0.000

Table 2: Composite Reliability

Table 2 demonstrates the high reliability of each variable's internal consistency. When a research instrument has a

composite reliability rating and a cronbach's alpha of greater than 0.7, it is deemed dependable Ghozali&Latan (2014).

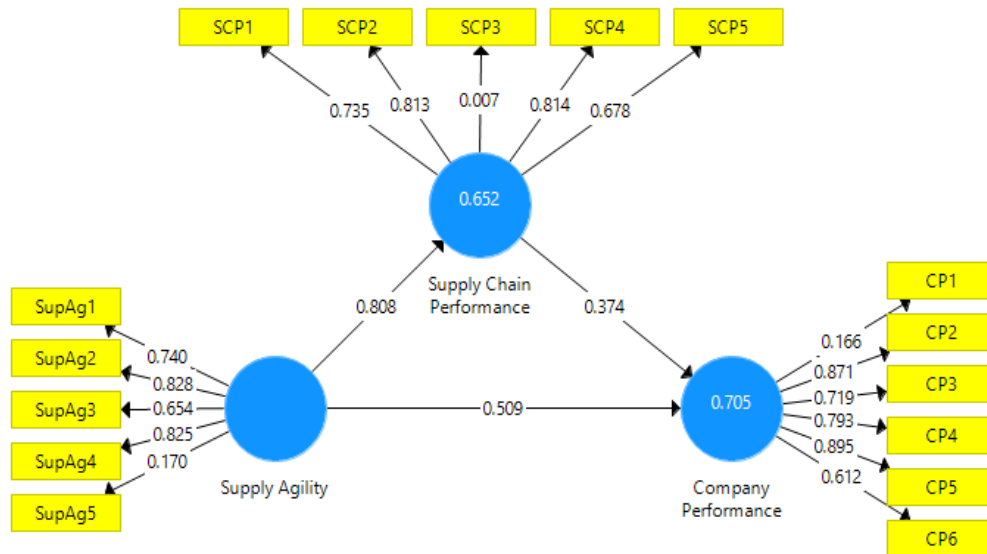
4.1.2 Data analysis

4.1.2.1 Assess the Outer Model (Measurement Model)

The measurement of the model is conducted to test the

relationship (loading value) between the indicator and the construct (latent variable). Data quality testing in SmartPLS is performed by evaluating the Outer Model.

GENERAL MANAGEMENT



Model for Measurement Output in Figure 2.

The total correlation of each variable, including the effects of external, intervening, and endogenous variables, is shown in Figure 2.

Matrix	Company Performance	Supply Chain Performance	Supply Agility
SCP1		0,735	
SCP2		0,813	
SCP3		0,007	
SCP4		0,814	
SCP5		0,678	
CP1	0,166		
CP2	0,871		
CP3	0,719		
CP4	0,793		
CP5	0,895		
CP6	0,612		
SupAg1			0,740
SuAg2			0,828
SupAg3			0,654
SupAg4			0,825
SupAg5			0,170

Table 3 :Outer Loading Indicator Value

The range of outer loading values for the three variables research supply agility (0.170-0.828), firm performance (0.166-0.895), and supply chain performance is known from figure 2 above (0.007-0.814). The external results of the model demonstrate that some indicators are labeled invalid in

accordance with the conditions of the assumption of convergent validity. SupAg3 (0.654), SupAg5 (0,170), SCP3 (0,007), SCP5 (0,678), CP1 (0,166), and CP6 are some of these indications (0,612).

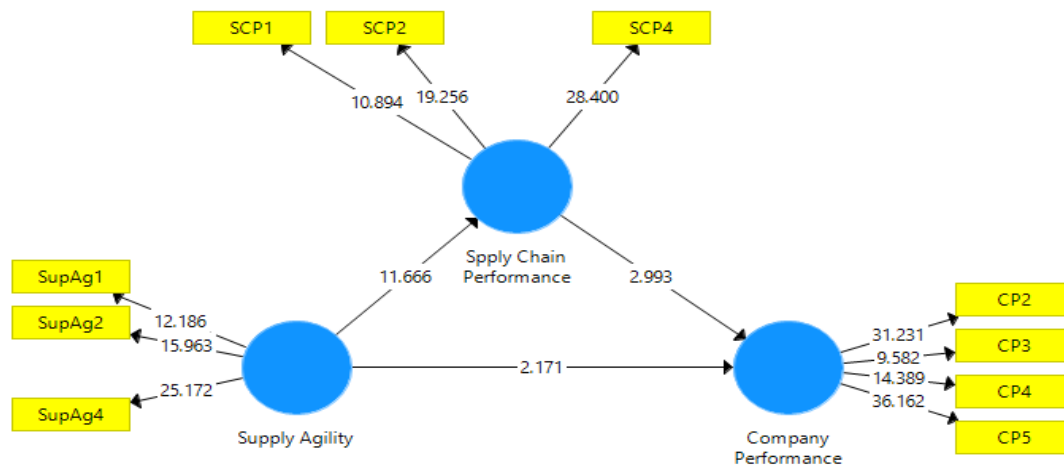


Figure 3: Final Results of the Second Measuring Model

4.1.2.2 Hypothesis testing through the Inner Model

To determine the degree of correlation between the variables represented in the hypothesis, the extent of the influence of exogenous variables on endogenous variables,

and the dependency variables specified in the hypothesis, structural model testing (inner model) is conducted. Examining the relationships between variables, the significant value and R-square of the research model, and direct and indirect effects are the first steps in evaluating the structural or inner model with PLS. The following is the study's internal model:

Path Coefficient						
Construct	Original Sample	Sample Mean	Standard Deviation	T_Statistic	P_Values	Result
Supply Chain performance → Company Performance	0.482	0.490	0.161	2,993	0.003	Accepted
Supply Agility → Supply Chain Performance	0.365	0.363	0.168	2,171	0.030	Accepted
Supply Agility → Company Performance	0.736	0.742	0.063	11,666	0.000	Accepted

Table 4 :Result for Inner Weight

An explanation can be drawn from table 4 above:

The supply agility to business performance gaining path coefficient is 0.376, which indicates that supply agility influences company performance by 0.376 units. A positive route coefficient indicates that corporate performance will increase as supply agility improves.

A positive sign in the path coefficient means that the more agile the supply, the more the performance of the supply chain will increase. The relationship between supply agility and supply chain performance gains a path coefficient of 0.365, which means supply agility affects supply chain performance by 0.365 units.

A positive sign in the path coefficient means that the better

the supply chain performance, the more increased company performance. The relationship between supply chain performance and company performance gains path coefficient of 0.482, which means supply chain performance affects 0.482 unit with company performance.

Additionally, the R-square for dependent constructs, the Stone-Geisser Q-square test for predictive relevance, the test of the t, and the significance of the coefficient of structural route parameters are used to assess structural models. Regarding the strength of the correlation between concurrent exogenous variables and endogenous variables in the research model, the following R-Square values can be used to make this determination:

R-Square Adjusted					
Construct	Original Sample	Sample Mean	Standard Deviation	T Statistic	P Values
Company Performance	0.617	0.643	0.065	9,464	0.000
Supply Chain Performance	0.536	0.551	0.094	5,706	0.000

Table 5 :R-Square

The performance of the corporation has an R-square of 0.617. Thus, 61.7% of supply agility is explained by the variable relating to firm performance. The remaining factors are explained by factors outside the research model. The R-square

for supply chain performance is 0.536. This indicates that the performance of the supply chain accounts for 53.6% of supply agility.

4.2 Discussion

From Table 3 above, the findings of the bootstrapping tests

4.2.1 Supply agility to Supply Chain Performance

According to the table above, the relationship between supply chain performance and supply chain agility produced a statistic of 2,171 and a p value of 0.003. These findings demonstrate the beneficial impact of supply agility on supply chain performance, which is further supported by t statistics (2,171 > t tables (1.96) and p values (0.030). (0.05). According to the findings of the study Fayezi et al. (2017), despite being

using SmartPLS 3.0 can be summarized as follows:

influenced by a number of factors, supply agility directly improves supply chain performance. According to Brusset (2016), supply agility can coordinate supply and demand, making it more fundamentally market-oriented. Integration between internal firm activities, as well as between suppliers and customers, is necessary to achieve synchronization. Supply agility is thought to be a functional skill that results from controlling all demand activities as well as supply-side systems, processes, and routines. Tan et al. (2017) found that supply agility has a favorable impact on supply chain management.

4.2.2 The Impact of Supply Agility on Company Performance

Supply Agility -> Company Performance) table, a statistic of (11,666) with a p value of was obtained (0.000). Due to t statistics (11,666 > t tables (1.96) and p value (0.000), these

results demonstrate that supply agility has a favorable impact and is relevant to corporate performance (0.05). These findings are consistent with those made by Degroote& Marx (2013) and Chan et al. (2017), who claimed that supply agility greatly improves business performance and has a beneficial impact on all metrics used to gauge it.

4.2.3 How the performance of the supply chain affects business results

As seen in the above table, the relationship between supply chain performance and company performance produced a statistic of 2,993 and a p value of (0.003). Due to t statistics (2,993) > t tables (1.96) and p value (0.003), these data demonstrate that supply chain performance has a favorable

impact and is Significant to Company Performance (0.05). According to the findings of al Humdan et al (2020), the supply chain has a favorable impact on business performance. In this study, competitive advantage interferes with the influence of supply chain performance. Al Humdan et al. (2020) also looked at how the supply chain affects business performance and competitive advantage.

4.3 Influence Analysis

The mediation effect demonstrates how a mediating variable connects exogenous and endogenous variables. When it is believed that a third factor exists between

exogenous and endogenous factors, the mediation effect is examined. As illustrated in Table 6 below, this means that the interaction between exogenous and endogenous factors does not happen directly but rather through a transformation process represented by the mediating variable.

Indirect Effects					
Construct	Original Sample	Sample Mean	Standard Deviation	T Statistic	P Values
Supply Agility → Company Performance	0.354	0.365	0.128	2,775	0.006

Table 6 :Direct, Indirect Effects

The t statistic for the table above (Supply Agility -> Supply Chain Performance -> Company Performance) was 9,464. With a statistical t value of 9,464 > t table of 1,96 and p value of 0.000, these data demonstrate that Supply Chain Success mediates the effect of supply agility on corporate performance (0.05). The performance of the supply chain has a favorable

5. Conclusion

Supply agility and supply chain performance can both be increased to improve corporate success, which in turn is influenced by these two factors. Both elements can raise the performance of the business. Additionally, supply agility and firm performance can actually be mediated by the psokan

indirect impact on corporate performance. This indicates that excellent firm performance is necessary before supply agility may have a significant impact on supply chain performance. In other words, if the supply chain performance level is adequate or high, the company's performance level will also increase. Good supply agility will boost the company's performance chain's performance. Supply agility and business performance can both be improved with strong supply chain performance. Based on the findings of the research and discussions previously discussed, it can be said that there is a positive and significant influence on supply agility and significant on company performance. The better the supply agility, the better the company's performance. There is a positive influence on supply agility and significantly on supply chain performance.

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