

The Mediation Effects of Purchasing Strategy and Supplier Integration on the Relations Between Purchasing Skills and Corporate Performance

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ABSTRACT

The objectives of this study are to: 1) test the influence of *purchasing skills* on corporate performance; 2) test mediation effect of strategic purchasing on the relationship between purchasing *skills* and corporate performance; and 3) test the mediation effect of supplier integration on the relationship between purchasing skills and corporate performance. This research carried out in 105 restaurants as micro and small enterprises (MSEs) in Dili, and questionnaires were used to collect data. SMART-PLS 3.0 was used to test hypothesis. The findings revealed that purchasing skills had no significant impacts on corporate performance, while supplier integration fully mediated the relationship between purchasing strategy and corporate performance. By contrast, strategic purchasing has no significant impact on the relationship between purchasing skills and corporate performance. This research extends the empirical works of Carr and Smeltzer (2000), Carr and Pearson (2002) and Cho *et al.* (2019) by using a combined strategic purchasing and supplier integration as mediation variables to enhance the relations between purchasing skills and corporate performance. This study also contributes to the debate on firm's resources and capabilities and their impacts on competitive advantages and firm performance in emerging countries. The study practically contributes to the restaurant regulators and managers which aim to enhance corporate performance by using supplier integration and strategic purchasing.

Keywords: Purchasing skills, supplier integration, strategic purchasing, and corporate performance.

1. Introduction

The application of purchasing skills is an important activity which affects corporate performance. Corporates are required to diligently obtain products and services which will reinforce their capabilities to fulfill rapid customer demands (Carr and Pearson, 2002). Therefore, corporates will seek to develop strategic fitness to ensure purchasing skills will adequately support overall corporate activities, ultimately enhancing corporate competitive position and performance. This is particularly true in dealing with rapid changes of customer demands (Cho, Bonn, Giunipero and Divers, 2019). Conversely, corporate performance is closely related to technical knowledge, interpersonal skills and managerial skills (Carr and Smeltzer, 2000; Cho *et al.*, 2019; Schütz, 2019).

Purchasing skills contribute to developing effective and innovative strategies which help companies to ensure cost saving (Schütz, 2019) and achieve high returns. Effective and innovative purchasing strategies mean that companies have various effective purchasing methods to undertake purchasing activities to get high quality, speedy delivery, and cost savings (Carr and Pearson, 2002).

In order to undertake effective product and service provision, corporates can undertake innovative purchasing methods such as supplier integration (Fawcett *et al.*, 2010), leading to enhanced corporate purchasing performance (Wei and Lau, 2010; Schiele, 2010; Kleinschmidt, De Brentani and Salomo, 2007), as buyers and suppliers are strategic partners working together as the main driving forces for enhancing

their industrial competitive position (Barney, 1991; Carr and Pearson, 2002).

A number of empirical studies confirm that supplier integration significantly positively affects corporate performance (Flynn, Huo and Zhao, 2010; Perols, 2013; Prajogo and Olhager, 2012; Feyissa, Sharma and Lai, 2019). Nevertheless, supplier integration can adversely influence the purchasing process, leading to reduced corporate profitability as a result of distance from buyers (Demeter, 2013). Heterogeneous results of empirical studies require continuous study to develop strategic fitness and contingency approaches to retain a competitive corporate position. A dynamic industry environment, company size, type, as well as geographical difference and technological advancement has different impacts on corporate performance, and so impact the efforts to develop such strategies.

This study aims to test the mediation effects of strategic purchasing and supplier integration on the relationship between purchasing skills and corporate performance. This can help restaurants which are mainly categorized as micro and small enterprises (MSEs) to develop appropriate strategies for sustaining their high competitive position and performance. The restaurants were chosen due to restaurants are facing significant growing numbers which contribute to generate incomes to the transition economic countries, and create significant job opportunities for local people. However, the increasing number of restaurants also leading to pushing the intense competitions which might threaten industry competitiveness and sustainable financial

performance. Restaurants need to develop strategic purchasing and supplier integration as restaurant's possible strategy to secure their competitive advantages and sustainable financial and non-financial performance. Unfortunately, there are limited and inconsistency empirical studies on purchasing skills, strategic purchasing, supplier integration and corporate performance in restaurant industry.

2. Theoretical Frameworks

2.1 Purchasing skills

Firms are required to obtain materials and services which will reinforce their ability to fulfill customer's demands (Carr and Pearson, 2002). Purchasing skills play an important role for a company to acquire goods and services. Purchasing skills are closely related to good knowledge of products, buyers, suppliers and markets. Multi-dimensional knowledge and skills such as technical knowledge, interpersonal, analytical and managerial skills in good purchasing are considered key capabilities to obtain quick, cheap, quality products and services (Cho *et al.*, 2019). Therefore, purchasing skills enable firms to establish product and service supply strategies and management to enhance their overall company strategies (Carr and Pearson, 2002; Feisel, Hartmann and Schober, 2008) leading to enhancing firm competitive position and sustainable performance (Carr and Smeltzer, 2000).

According to the resource-based view (RBV), firms with great resources and capabilities will have good knowledge and skills to buy products and services, which ultimately leads them to achieve a strong, competitive position and performance compared to their rivals (Barney (1991). Firms can sustain their competitive positions, if they can precisely develop, retain and utilize their resources and capabilities such as with new equipment, new methods, technology, qualified human resources and well-established integrative suppliers to undertake purchasing functions and strategy (Carr and Smeltzer, 2000). However, with the recent high intensity of competitiveness, dramatic environment changes, and rapid technological innovation and progress, companies are required to establish collaborative networks between buying and supplying companies to share their resources in order to undertake efficient purchasing strategy and execution, to get mutual benefits, extend market share and retain sustainable performances (Lawson *et al.*, 2009).

In line with resource-based theory, purchasing skills are considered as firm intangible resources which have great impacts on firm performance (Karttunen, 2018). Therefore, companies are required to develop distinctive resources and capabilities with high value, which are unique, inimitable, rare and well-organized to undertake purchasing goods and services, in order to sustain high competitive advantages and reach sustainable performances (Barney, 1991; Carr and Pearson, 2002).

2.2 Supplier integration

Supplier integration is part of the supply chain, through which firms build partnerships to work to offer goods and services based on customer demands through integrated structures, strategies, and collaborative practices and processes (Zhiqiang Wang *et al.*, 2016; Yang *et al.*, 2017). Supplier integration is a collaboration between purchasing companies and supplier companies in order to mutually exchange information, data, inventory plans, logistics, new product development, and specific product investment (Cho *et al.*, 2019) based on openness and trust (Abrahamsen and Håkansson, 2015; Zhiqiang Wang *et al.*, 2016).

Supplier integration helps to enhance the performance of purchasing companies as they can mutually share systems in order to get mutual benefits such as price reduction, inventory management, increased orders, quality control, customer satisfaction and profitability (Danese, 2013). This leads to efficient resource use, which improves capacity to offer high value products to customers (Lockström and Lei, 2013), targeted inventory planning and estimation, and minimizes uncertainty (Li *et al.*, 2016). Therefore, supplier integration is a unique relationship between companies to gain new ideas, products and services with high value, which are inimitable and rare, and which are organized, as a source of competitive advantage (Barney, 1991; Zhiqiang Wang *et al.*, 2016). Supplier integration combines internal resources and capabilities of the buying and supplying corporates to undertake joint activities to gain mutual benefits in their business processes (Wagner 2003; Monczka *et al.*, 2016).

2.3 Strategic Purchasing

Organizational strategy is generally divided into strategic formulation, strategic implementation, and strategic evaluation (Ateş, van Raaij and Wynstra, 2018). Strategic purchasing is an integrated part of a company's plan to reach its objectives. Strategic purchasing is a good corporate strategy to effectively buy products and services with a focus on quality, timely delivery, and a minimized price in order to help the company reach its objectives (Carr and Pearson, 2002). Purchasing managers are required to know the purchasing objectives, which then lead them to develop purchasing strategies based on costs, quality, delivery, and flexibility (Ateş, van Raaij and Wynstra, 2018).

Strategic purchasing involves developing a formal purchasing plan, reviewing and adjusting the plan to ensure the corporate entity reaches its goals (Carr and Pearson, 2002). So, purchasing strategy is also seen as a cycle of activities from planning, implementing, controlling and evaluating strategic purchasing and the operation of the corporate entity, aiming to ensure it successfully meets its objectives (Feisel, Hartmann and Schober, 2008). To this, the corporate can build long-term partnerships to get contracts, with attention paid to competency, standards, and supply chain value change analysis and costs. This includes

considering supply consistency, the supplier's financial stability and financial position, cost capability, and techniques as foundational for decision making in order to secure the corporate's competitive position (Thrulogachantar and Zailani, 2011).

There are two types of strategic purchasing namely (1) tendering processes, which could help to obtain cheap, quality, quick and reliable product delivery; and (2) focusing company procurement from suppliers with whom the corporate has good partner relationships (Ahola *et al.*, 2008). Yoon and Moon (2019) state that purchasing companies need to increase the number of supplying companies to simulate competition among them, which helps to obtain cheap and quality products (type 1). Type 2 is done through establishing long term mutual partnerships with a supplying company in order to reduce transaction costs, and enhance synergetic work via long term collaboration. Nonetheless, neither purchasing strategy has a great advantage over the other. It purely depends upon the company's contextual demand, resources and capabilities.

2.4 Corporate Performance

Corporate performance is a key parameter to measure its success in meeting its objectives, and test the effectiveness of their developed strategy. To reach organization objectives, corporates need to develop the best strategy (Salehzadeh *et al.*, 2017). Therefore, investors and managers need to know corporate performance measurements in order to adjust corporate strategy to meet sustainable performance outcomes (Lee *et al.*, 2015).

To achieve a better competitive position and sustainable performance, corporates continuously measure key financial parameters such as return on investment (ROI), return on assets (ROA), return on equity (ROE), and profitability. However, some authors also criticize the measurement of corporate performance only based on financial performance as this only covers a short-term basis, and is unable to respond to the strategic issue and performance (Kaplan and Norton, 1992; Hilman and Kaliappen, 2015). Therefore, Kaplan and Norton (1992) recommend an integrated corporate performance measurement such as learning and growth, internal process, customer satisfaction and finance into corporate performance measurement. Therefore, recent empirical studies have sought to incorporate financial and non-financial performance measures into corporate performance monitoring (Zhining Wang *et al.*, 2016; Al-Surmi *et al.*, 2019; Saldanha *et al.*, 2019; Seifzadeh and Rowe, 2019).

In this study, we used financial and nonfinancial performance to measure corporate performance. The financial performance was measured by using return on investment (ROI), total income growth, net profit growth (Saldanha *et al.*, 2018; Cho *et al.*, 2019), and return on assets (ROA), while nonfinancial performance was measured by

sale growth, market share, and customer satisfaction (Saldanha *et al.*, 2019).

3. Hypothesis Development

3.1. Purchasing skills and Corporate Performance

Knowledge of food purchasing process is a determinate factor contributing to firm performance. An organization which has adequate knowledge of good purchasing will obtain cheap, quality, and easily acquired goods in the short term. Nonetheless, the impact of good purchasing is not similarly felt across all firms. Firms with better resources and capabilities to invest in personnel professional development will have better purchasing performance, ultimately improving firm performance in a positively reinforcing cycle (Schütz *et al.*, 2019). Numerous empirical studies reveal that purchasing skills have significant impacts on firm performance (Carr and Smeltzer, 2000; Cho *et al.*, 2019). Therefore, procurement managers are required to have project execution skills and cost analysis in order to hold an holistic project view and control cost and time inputs, and therefore performance (Karttunen, 2018). Hence the following hypothesis was developed:

H_1 : Purchasing skills positively and significantly influence corporate performance.

3.2. Purchasing skills and Strategic Purchasing

Purchasing skills influence on corporate purchasing strategy, ultimately driving corporate performance. Purchasing skills consist of technical knowledge, managerial skills and interpersonal skills which are valuable resources and capabilities for developing innovative, unique, value-added purchasing strategies which lead to enhanced corporate competitive advantages. According to *resource-based view* theory (RBV), corporates with better resources and capabilities will overcome their rivals in intense industrial competition (Barney, 1991). This view is confirmed by an empirical study of Cho, Bonn and Terrell (2019) which revealed that purchasing skills reflected by technical knowledge, managerial skills and interpersonal skills have significant effects on strategic purchasing. Henceforth, it is proposed that:

H_2 : Purchasing skills positively and significantly influence on strategic purchasing.

3.3. Purchasing skills and Supplier Integration

Purchasing skills have three dimensions namely; technical knowledge, interpersonal skills and managerial skills. Firms that have these three skills will be able to develop better purchasing strategy. According to RBV, firms with better resources and capabilities will be able to develop

unique, high-value, inimitable, organized products and services based on customer needs, leading to enhanced competitive position compared to their rivals (Barney, 1991). Corporate relationships, networking, connection and collaborative works, which offer opportunities for new products and services, are considered a firm's intangible resources. Therefore, profit and non-profit organizations seek to develop these intangible resources to sustain their competitive position and performance. Coordination and functional integration help to enhance purchasing performance, ultimately contributing to increasing corporate performance (Foerstl *et al.*, 2013). Several empirical studies revealed that purchasing skills positively and significantly influence supplier integration (Danese, 2013; Abrahamsen and Håkansson, 2015; Cho *et al.*, 2019). Therefore, this research proposes the following hypothesis:

H₃ :Strategic purchasing positively and significantly influences supplier integration.

3.4. Strategic Purchasing and Corporate Performance

Today, strategic purchasing is an important activity for both profit and non-profit organizations. Strategic purchasing is focused on how companies can work together in order to obtain good quality, cheap and quick products, leading to mutual benefits (Lawson *et al.*, 2009) and enhancing performance (Carr and Smeltzer, 2000). Companies with extensive working cooperation will be enabled to obtain external resources and capabilities, which contribute to enhanced performance compared to rivals (Barney, 1991). Several empirical studies confirm that strategic purchasing positively and significantly influences corporate performance (Carr and Pearson, 2002; Thruogachantar and Zailani, 2011; Cho *et al.*, 2019). Henceforth, it is proposed that:

H₄ :Strategic purchasing positively and significantly influences corporate performance.

3.5. Supplier Integration and Corporate Performance

Supplier integration has a significant impact on corporate performance. Therefore, companies try to establish strategic alliances in order to purchase and supply products in high concentrations (Fawcett *et al.*, 2010). When suppliers are geographically far from buying companies, both companies will establish an easy and quick communication (Narasimhan and Das, 2001; Haartman *et al.*, 2015) in order to obtain quick, and cheap product procurement and delivery (Kleinschmidt *et al.*, 2007; Demeter, 2013). Flexible suppliers are able to easily adjust their purchasing supply chains and provide feedback to product design, process, and procedural quality in order to help purchasing performance which ultimately contributes to sustainable performance (Lawson *et al.*, 2009). Numerous empirical studies show that

supplier integration has a positive and significant impact on corporate financial performance (Lawson *et al.*, 2009; Huo *et al.*, 2013; Li *et al.*, 2016; Huang and Huang, 2019). Therefore, we propose the following hypothesis:

H₅: Supplier integration has a positive and significant effect on corporate performance.

3.6. Purchasing Skills, Strategic Purchasing and Corporate Performance

Purchasing skills normally manifested by technical knowledge, managerial skills, interpersonal skills, and analytical skills have a positive impact on strategic purchasing (Carr and Pearson, 2002; Cho *et al.*, 2019). A company which has good resources and capability will be able to develop good strategic purchasing which then leads to enhanced purchasing performance and corporate performance (Barney, 1991). These resources and capabilities are not necessarily available within the company, but can be accessed externally from partner organizations. These resources, namely human resources, enhance a corporate's competitive position and performance compared to its rivals (Barney, 1991; Jia *et al.*, 2014). Various empirical studies show that strategic purchasing has a positive and significant impact on corporate performance (Carr and Smeltzer, 2000; Lawson *et al.*, 2009; Ateş, van Raaij and Wynstra, 2018; Cho *et al.*, 2019). Therefore, strategic purchasing can enhance corporate performance through the application of knowledge and skills. Buyer companies try to achieve purchasing performance in cost, quality, and timely product delivery through their networks and good relationships with other companies (Yoon and Moon, 2019). Hence we propose the following hypothesis:

H₆ :Strategic purchasing plays a significant role in mediating the relationship between purchasing skills and corporate performance.

3.7. Purchasing Skills, Supplier Integration and Corporate Performance

Supplier integration has great impacts on corporate performance. Integrating their resources and capabilities helps corporates to enhance their competitive position and reach sustainable performance (Danese, 2013; He *et al.*, 2014; Abrahamsen and Håkansson, 2015; Yang *et al.*, 2017; Feyissa, Sharma and Lai, 2019). Therefore, supplier integration has significant roles to influence corporate financial performance (Lawson *et al.*, 2009; Huo *et al.*, 2013; Li *et al.*, 2016; Huang and Huang, 2019).

H₇ : Supplier integration has significant impact on the relationship between purchasing skills and corporate performance.

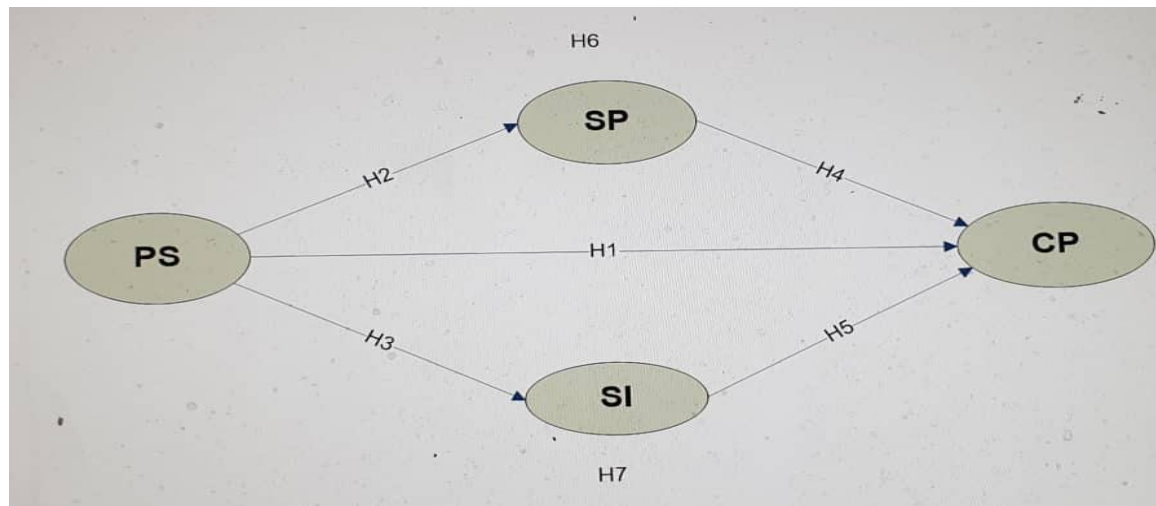


Figure 2.1. Research model

(PS = Purchasing skills, SP = Strategic purchasing, SI = Supplier integration, CP = Corporate)

4. Research Methods

This research was carried out in 105 restaurants in Dili from October to December 2019. The sample size of 105 above the minimum required by the SMART-PLS 3.0 rule of thumb of ten times the largest number of inner model paths directed at a particular construct in the inner model (Hair *et al.*, 2014; Andrei *et al.*, 2017).

Five Scale Likert of survey questionnaire was used to collect the data. The survey instrument was developed from previous studies using a scale from 1 (strongly disagree) to 5 (strongly agree) for respondents. All items of purchasing skills adopted from Cho *et al.* (2019), purchasing strategy from Carr and Pearson (2002) and Cho *et al.* (2019). Corporate performance divided into financial and nonfinancial performance. The financial performance was measured by return on investment (ROI), total income growth, net profit growth (Saldanha *et al.*, 2018; Cho *et al.*, 2019), and return on assets (ROA), while nonfinancial performance was measured by sale growth, market share, and customer satisfaction.

SMART-PLS 3.0 was used to test reliability, validity and hypotheses. This statistical computer package is widely used for small sample sizes (of up to 30 participants), formative/reflective indicators, multi-variable analysis, data normality required, and collinearity testing (Hair *et al.*, 2014; Saldanha *et al.*, 2018, 2019). Cronbach's Alpha (CA) and composite reliability (CR) were used to test reliability (Hair *et al.*, 2014; Saldanha *et al.*, 2018). The convergent validity was tested using indicator loading or outer loading (OL) and average variance extracted (AVE) (Hair *et al.*, 2017). Discriminant validity testing used Fornell-Larcker criterion (Hair *et al.*, 2014) and heterotrait-monotrait (HTMT) (Henseler *et al.*, 2015). Hypothesis test was carried out by

using path coefficient (T and P values) observing direct and indirect effects from bootstrapping calculation (Hair *et al.*, 2014; Hair *et al.*, 2017; Saldanha *et al.*, 2018).

5. Research Methods

5.1. Reliability and Validity

Outer models are measured using the following parameters: indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Abd Razak, Ab Rahman and Borhan, 2016). To test the reliability of the measurement model, composite reliability (CR) and *Cronbach's Alpha* (CA) values are used to ensure the reliability of the measurement model using Algorithm SMART-PLS 3.0. Table I shows that the CR and CA values of all items exceed the threshold point of 0.7 (Hair *et al.*, 2017; Hair *et al.*, 2018; Cepeda-Carrion *et al.*, 2019), therefore, all items are reliable to be used in this model.

In general, there are two validity tests, namely convergent validity and discriminant validity. Convergent validity is measured by outer loading (OL) or indicator loading, and average variance extracted (AVE). AVE and OL values of all items should be above the threshold values of 0.5 and 0.7 respectively to demonstrate an acceptable degree of convergent validity (Hair *et al.*, 2017). Figure 4.1 shows the OL values of all items exceed the threshold values of 0.7, and AVE values as shown in Table I exceed the threshold values of 0.5. Therefore, all items are valid to use in this model based on convergent validity test.

Table I. Reliability and Validity using SMART-PLS 3.0

Item	CA	CR	AVE
CP1	0,858	0,903	0,700
CP2	0,804	0,886	0,722
IS	0,872	0,908	0,665
MS	0,838	0,883	0,603
SI	0,883	0,915	0,686
SP	0,847	0,896	0,683
TK	0,917	0,938	0,752

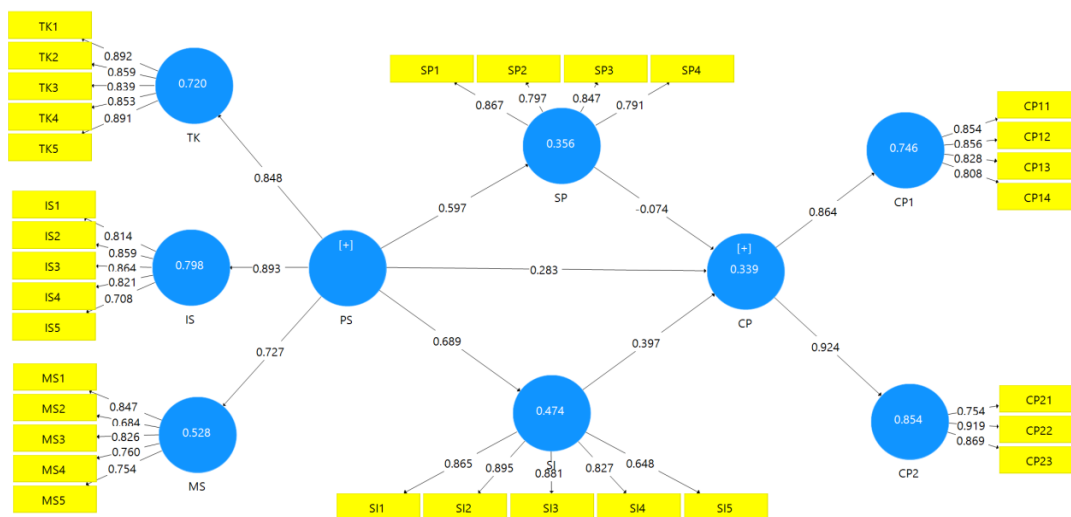


Figure 4.1. Outer loading for convergent validity derived from Algorithm SMART-PLS 3.0

To assess the discriminant validity between constructs, we used Fornell-Larcker criterion. This method

states that the construct shares more variance with its indicators than with any other construct.

Table II. Discriminant validity Test based on Fornell-Larcker Criterion

	CP1	CP2	IS	MS	PS	SI	SP	TK
CP1	0,837							
CP2	0,622	0,850						
IS	0,339	0,417	0,815					
MS	0,178	0,351	0,537	0,777				
PS	0,340	0,510	0,893	0,727	0,700			
SI	0,368	0,547	0,659	0,366	0,689	0,828		
SP	0,086	0,419	0,437	0,475	0,597	0,574	0,826	
TK	0,244	0,382	0,679	0,445	0,848	0,561	0,500	0,867

To test this requirement, the AVE of each construct should be higher than the highest squared correlation with any other construct (Hair *et al.*, 2014). Table II shows that

the values of AVE of each construct represented by bold numbers is higher than the highest squared correlation with any other construct as recommended by Hair *et al.* (2014),

therefore, all constructs are valid measured based on the Fornell-Larcker criterion.

Discriminant validity was also measured by using *heterotrait-monotrait* (HTMT) with the threshold values of all items below the threshold point of 0.85 (Henseler *et al.*,

2015). Table III shows that HTMT values of all items are below the maximum point of 0.85, therefore, this model is valid based on discriminant validity (HTMT).

Table III. Values of heterotrait-monotrait (HTMT)

	CP1	CP2	IS	MS	SI	SP
CP1						
CP2	0,739					
IS	0,385	0,487				
MS	0,194	0,392	0,617			
SI	0,411	0,626	0,756	0,393		
SP	0,114	0,506	0,487	0,512	0,643	
TK	0,270	0,431	0,750	0,466	0,607	0,540

5.2. Hypothesis Test

Table IV presents the results of path coefficient test for the overall sample to examine hypotheses H₁, H₂, H₃, H₄ and H₅ using SMART-PLS 3.0. Accordingly, the relationship

between purchasing skills (PS) and corporate performance (CP), the T value (1.527) and P value (0.127), in which the T value is below the minimum threshold value of 1.96, and the P value is higher than the maximum allowable value of 0.05 (Table IV) as recommended by Hair *et al.* (2014) and Hair *et al.* (2017). Therefore, hypothesis one (H₁) is rejected.

Table IV. Direct effects of relationship between variables

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Hypothesis
PS -> CP	0,283	0,352	0,185	1,527	0,127	Rejected
PS -> SP	0,597	0,626	0,071	8,402	0,000	Supported
PS -> SI	0,689	0,714	0,054	12,855	0,000	Supported
SP -> CP	0,074	0,089	0,108	0,688	0,492	Rejected
SI -> CP	0,397	0,366	0,183	2,171	0,030	Supported

The relationship between purchasing skills (PS) and strategic purchasing (SP), using the T value (8.402) and P value (0.000) is shown below (Table IV). This shows that the T value beyond the minimum threshold value of 1.96 and the P value below the maximum threshold value of 0.05, means that purchasing skills (PS) has a positive and significant effect on strategic purchasing (SP). Therefore, hypothesis two (H₂) is supported. The result also indicates that the T value (12.855) and P value (0.000) of the relationship between purchasing skills (PS) and supplier integration (SI) has a positive and significant effect. Therefore, hypothesis three (H₃) is supported.

Table IV also indicates the T value (0.688) and P value (0.492) of the relationship between strategic purchasing (SP) and corporate performance (CP), which means both variables have a positive and significant effect. Therefore, hypothesis four (H₄) is not supported. In regard to the relationship between supplier integration (SI) and corporate performance (CP), the T value (2.771) and P value (0.030), means that supplier integration (SI) positively and significantly impacts on corporate performance (CP). Therefore, Hypothesis five (H₅) is supported.

Table V presents the results of the specific indirect effect test using bootstrapping SMART-PLS 3.0 for testing hypothesis H₆ and H₇. The result indicates that T value

(0.618) and P value (0.537) for mediation effect of strategic purchasing (SP) on the relationship between strategic

purchasing (SP) and corporate performance has an insignificant effect.

Table V. Specific Indirect Effects (mediation effects)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Hypothesis
PS -> SP -> CP	0,044	0,057	0,072	0,618	0,537	Rejected
PS -> SI -> CP	0,274	0,259	0,128	2,132	0,033	Supported

Therefore, Hypothesis six (H_6) is not supported. Conversely, the supplier integration (SI) fully mediates the relationship between purchasing skills (PS) and corporate performance (CP). This can be seen from the T value (2.132) and P value (0.033) according to the threshold values recommended by Hair et al. (2014) and Hair et al. (2017).

6. Discussion

One objective of this research is to test the influence of purchasing skills on corporate performance. The results show that purchasing skills had no significant influence on corporate performance. This is partly due to many restaurants being categorized as micro and small enterprises (MSEs) which have limited knowledge and skills in this area. Conversely, adequate knowledge and skills lead to enhanced corporate competitive advantages and secure sustainable corporate performance in recent dynamic industrial competitive environment (Barney, 1991, Gabrielsson et al., 2016; Saldanha, 2019). The result of this research is in line with the resource-based theory which states that corporates with better resources and capabilities have better competitive advantages and performance compared to those with limited resources and capabilities (Barney, 1991). Restaurants in this study having limited technical knowledge, interpersonal and managerial skills to undertake purchasing processes and functions, may have contributed to an insignificant effect on corporate performance. In addition, Karttunen (2018) stated that communication, technical and managerial skills as part of purchasing skills enable restaurants to ensure their purchasing efficiency. However, the result of this study is asymmetrical and relates to the previous studies from Carr and Smeltzer (2000), Schütz et al. (2019), and Cho et al. (2019) which revealed that purchasing skills, as reflected by technical knowledge, interpersonal, and managerial skills, have significant effects on corporate performance. The different results of empirical studies may be partly due to different sample sizes, different industry types, sizes, and environments (Saldanha et al., 2019) and heterogeneous resources and capabilities, face different strengths and weaknesses leading to different performances (Chun, 2016).

The second objective of this research is to test the influence of purchasing skills on strategic purchasing. The results show that purchasing skills have positive and significant effect on strategic purchasing. This means that technical knowledge, interpersonal skills and managerial skills make significant contributions to purchasing functions, and therefore, purchasing plans need to be regularly aligned with strategic plans, and have purchasing of items and quantities of materials/services included in strategic plans, along with the types of relationships with suppliers. Specific purchasing strategies need be developed in order to support corporate strategy, and formal business-planning processes. Good purchasing skills help corporates to develop better purchasing strategies. The results of this study also confirmed the findings of Cho et al. (2019) that interpersonal and managerial skills have a positive and significant effect on strategic purchasing. Therefore, interpersonal skills such as maintaining good relationships with suppliers, communication skills, good listening, and the ability to solve conflict, make significant contributions to enhanced strategic purchasing.

The third objective of this research is to test the mediation effect of strategic purchasing on the relationship between purchasing skills and corporate performance. The results revealed that strategic purchasing plays an insignificant role to in enhancing the relationship between purchasing skills and corporate performance. This is because most restaurants are categorized as micro and small enterprises (MSEs) (Cho et al., 2019), which have limited resources and capabilities to: (1) develop good purchasing strategy, (2) tend to use interpersonal skills in establishing collaborative work with suppliers, aiming to get good, cheap, quick, and continuous materials, (3) have poor strategic plan, limited managerial skills, and poor purchasing execution based on the plan, (4) mix corporate and family incomes and expenditures, and (5) poor report writing based on good corporate management (Hamzani and Achmad, 2016; Mandhachitara and Allapach, 2017; Xiang et al., 2019). The results of the study confirm the findings of Carr and Smeltzer (2000) that strategic purchasing had no significant effect on the relationship between purchasing skills and corporate performance in the context of SME restaurants. This also

confirms that strategic purchasing has no significant effect on SME corporate performance, which is in line with the limited resources and capabilities of the restaurants to develop good strategic purchasing, leads to poor purchasing and corporate performance. In this situation, corporates try to develop institutional collaboration to enhance competitive position, and ultimately enhance financial and nonfinancial performance (Lo *et al.*, 2018; Chen, Tang and Jia, 2019; Cho *et al.*, 2019).

This research also found that supplier integration has a significant effect on the relationship between purchasing skills and corporate performance. This means that collaborative work through supplier integration between buyers and suppliers enhances the relation between corporate's technical knowledge, interpersonal skills and managerial skills, and leads to improved ROI, ROA, net profit, total income, market share, sales volume and customer satisfaction. Through supplier integration, restaurants such as MSEs can join their resources, such as technical knowledge, managerial and interpersonal skills, to share production schedules, human resource capacity, inventory, planning, and product demand forecasts in order to secure sustainable financial and nonfinancial performance (Abrahamsen and Håkansson, 2015). Supplier integration can help corporates to obtain cheap supplies, shorten time delivery, and increase quality of products (Fliess and Becker, 2006). This leads to enhanced purchasing knowledge and skills to undertake purchasing functions, ultimately enhancing corporate performance (Chen, Tang and Jia, 2019). In the restaurant industry context, supplier integration can provide flexibility to respond to quick-changing customer demands, which help enhance competitiveness and menu diversification (Cho *et al.*, 2019), leading to enhanced corporate performance (He *et al.*, 2014; Nakos, Dimitratos and Elbanna, 2019).

7. Conclusions and Implications

Purchasing skills, strategic purchasing, and supplier integration are determinant factors that influence purchasing performance and overall corporate performance. Numerous empirical studies have recently utilized the mentioned variables in order to enhance corporate performance in competitive industry environments. The ultimate objectives of these studies are joint efforts to develop appropriate strategies in order to help corporates in obtaining cheap, quality, quick and continuous supply of products, aiming to reach cost efficiency, affordable prices, extend better market share and achieve high corporate performance compared to their rivals. To this end, corporates are willing to share their resources (technical knowledge, analytical, interpersonal and managerial skills) to develop strategic purchasing and supplier integration in order to improve purchasing performance, leading to achievement of high corporate performance.

The results of this study show that from direct effects, purchasing skills have positive but no significant impact on corporate performance. This insignificant effect could have occurred due to the limited knowledge and skills held by restaurants in the study which were generally characterized as micro and small enterprises (MSEs). As noted by several authors, MSEs are generally managed by the company owners, and utilize family as staff with limited professional knowledge and skills, poor financial management, and limited financial accessibility (Cho *et al.*, 2019). Accordingly, MSEs have limited resources and capabilities to develop good and fit corporate strategies in order to retain high competitive advantages and secure sustainable performance. That is why it is not surprising to find that strategic purchasing has no significant effect on their corporate performance. Conversely, purchasing skills has a positive and significant effect on strategic purchasing and supplier integration. In addition, strategic purchasing has a positive but not significant effect on corporate performance, while supplier integration has a positive and significant effect on corporate performance.

The results of this study also show that based on the indirect effect test, strategic purchasing has no significant effect on the relationship between purchasing skills and corporate performance, while supplier integration fully mediates the relationship between purchasing skills and corporate performance.

From a theoretical perspective, this study contributes to extend the existing literature on purchasing skills, strategic purchasing, supplier integration and corporate performance in the restaurant industry by using combined strategic purchasing and supplier integration as mediation variables in an integrative model for enhancing the relationship between purchasing skills and corporate performance. This approach differs from previous studies, although it found heterogeneous results. Supplier integration positively and significantly influences the relationship between purchasing skills and corporate performance, while strategic purchasing is insignificant. Another theoretical contribution is that this study uses combined financial (i.e. ROI, ROA, net profit, and total income) and nonfinancial (i.e. market share, sale volume, customer satisfaction) indicators to measure corporate performance which had limited adoption by the previous studies, particularly in the restaurant sector. From a practical perspective, this study contributes evidence for managers and restaurant owners to consider supplier integration as an important factor to enhance financial and nonfinancial performance within the existing restaurants' technical knowledge, interpersonal and managerial skills. Sharing knowledge, skills, needs, products, and supply processes as mutual resources and capabilities between restaurants and suppliers in purchasing processes will enable restaurants to get quick, cheap, continuous supplies and

quality products, leading to cost savings, enhanced purchasing performance and overall corporate performance.

8. Limitation and Future Research

This research has numerous limitations. First, this study only used questionnaires for data collection which rely entirely on the response of restaurant managers and owners, who may misrepresent data in order to protect their reputation and image. Therefore, for future research, we recommend to also unseen-depth interviews, focus group discussions and direct observation to validate responses from restaurant managers and owners to minimize the data bias. Second, this research was only carried out in the restaurant industry which may be difficult to generalize to other types of industries. Therefore, future research needs to be undertaken in other types of industries such as the construction industry, banking, commercial industries, and the manufacturing industry in Timor-Leste and other countries to allow better generalization across industries. Third, this study found that purchasing skills had an insignificant effect on corporate financial and nonfinancial performances, therefore, the authors used strategic purchasing and supplier integration as mediation factors to enhance corporate performance within the existing corporate's technical knowledge, interpersonal and managerial skills. For future research, we recommend to use a differentiation of strategy, such as cost leadership strategy, perceived innovation, entrepreneurship orientation and market orientation as mediating factors to enhance the relationship between purchasing skills and corporate performance. Fourth, this research is firstly carried out in Timor-Leste with cross-sectional data. For future research, we recommend to undertake longitudinal data in order to get better observation and conclusion for better generalization.

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APPENDIX A. DATA COLLECTION INSTRUMENTS

I. PURCHASING SKILLS (PS)

1.1. Technical knowledge (TK)

TK1: I am very knowledgeable about products in our market

TK2: I am very knowledgeable about product price levels in our market

TK3: I am very knowledgeable about the major suppliers of our products

TK4: I am familiar with quality requirements of our products

TK5: I have a good understanding of every product that should be purchased

TK6: I fully understand the role of purchasing in our business

TK7: I am very knowledgeable about our marketing programs

TK8: I am very knowledgeable about financial management

1.2. Interpersonal skills (IS)

IS1: I work well with our suppliers

IS2: I have good communication skills with our suppliers

IS3: I am a good listener with our suppliers

IS4: I am able to maintain a positive relationship with our suppliers

IS5: I can handle any conflicts with our suppliers IS6: I am persuasive with our suppliers

1.3. Managerial Skills (SM)

MS1: I develop and implement purchasing plans

MS2: I am able to re-organize our work schedule for effective purchasing

MS3: I am able to adjust our business activities to meet purchasing plans

MS4: I develop purchasing objectives and strategies that meet our company goals

MS5: I am able to control purchasing plans for new product/ service development

MS6: I am a purchasing leader in our restaurant industry

MS7: I communicate well with our suppliers about products needed

by our employees Factor

II. STRATEGIC PURCHASING (SP)

- SP1: Our purchasing function has a formal strategic plan
- SP2: Our strategic plan is reviewed and adjusted to match changes in our restaurant strategic plans on a regular basis
- SP3: Our strategic plan includes both the items and quantities of materials or services to be purchased
- SP4: Our strategic plan includes various types of relationships to be established with suppliers
- SP5: Specific purchasing strategies have been developed to support our restaurant's strategies
- SP6: Our restaurant has a formal business-planning process

III. SUPPLIER INTEGRATION (SI)

- SI1: Our major supplier shares their production schedule with us
- SI2: Our major supplier shares their production capacity with us
- SI3: Our major supplier shares available inventory with us
- SI4: We share our production plan with our major suppliers
- SI5: We share our demand forecasts with our major suppliers

IV. CORPORATE PERFORMANCE (CP)

- CP1: Financial Performance
- CP11: Our return on investment (ROI) increase in the last three years
- CP12: Our return on assets (ROA) increase in the last three years
- CP13: Our net profit increase in the last three years.
- CP14: Our total incomes increase in the last three years
- CP2: Non-Financial Performance
- CP21: Our market share increase in the last three years
- CP22: Our sale volume increase in the last three years.
- CP23: Our customer's satisfaction on our products increase in the last three years.