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Does purchasing recognition help or hinder purchasing quality performance in developing market SMEs? Effects of resource conditions

Abstract

Prior studies contend that top managers' ability to harness purchasing recognition to enhance purchasing quality performance is crucial for boosting competitive advantage. However, there are doubts about the universal benefits of purchasing recognition, particularly in developing market small and medium enterprises (SMEs). This research uses upper echelons theory (UET) to move the literature forward by suggesting that the purchasing recognition-purchasing quality performance link depends on varying conditions of financial resource and environmental munificence. Consistent with the study hypotheses, survey data from one hundred and thirty-eight SMEs in Ghana indicates that financial resource and environmental munificence positively moderate the relationship between purchasing recognition and purchasing quality performance. In particular, the study results show that, under low and high conditions of financial resource and environmental munificence, the link between purchasing recognition and purchasing quality performance is significantly negative and positive, respectively. Theoretical and practical implications alongside the limitations of the results are discussed.

Keywords: purchasing recognition, quality performance, financial resource, environmental munificence, upper echelons theory, developing market SMEs

1. Introduction

Research demonstrates that purchasing, if managed effectively, offers competitive advantage (Cho et al., 2019; Montgomery et al., 2017; Pressey et al., 2009). Beyond the fact that purchasing consumes a significant proportion of a firm's budget (Semuel et al., 2018; Knoppen and Sáenz, 2015), firms have to “buy right to sell right” to be profitable (Carr and Pearson, 2002; Reynolds, 1966). Accordingly, strategic purchasing research (Knoppen and Sáenz, 2015; Carr and Smeltzer, 1997) and supply chain quality management literature (Phan et al., 2019) urge top managers to harness purchasing recognition to improve purchasing quality performance. Purchasing recognition captures the extent to which top managers recognize that purchasing is of strategic importance and demonstrate commitment toward developing it (Brandon-Jones and Knoppen, 2018; Knoppen and Sáenz, 2015), while purchasing quality performance refers to the extent to which procured items conform to need specifications and internal customer expectations (Yeung et al., 2015; Devaraj et al., 2012).

However, as argued in extant literature (Yeung et al., 2015) and suggested by prior research findings (see Table 1), the universal benefit of purchasing recognition is uncertain. Particularly, not only is the question of whether purchasing recognition always enhances purchasing quality performance an ongoing debate (Yeung et al., 2015; Nair et al., 2015; Rossetti and Choi, 2005), but also there are controversies about the desirability of purchasing recognition in SMEs (Coy et al., 2020; Pressey et al., 2009). Moreover, while emerging literature suggests that relevant boundary condition factors are necessary for clarifying the purchasing recognition-performance relationship (Arora et al., 2020; Kim and Chai, 2017; Brandon-Jones and Knoppen, 2018), past studies generally say little about the circumstances under which purchasing recognition enhances or lowers purchasing quality performance in developing market SMEs (see Table 1). A key implication of these shortcomings in the

literature is that there is little guidance for developing market SMEs on when emphasis on purchasing recognition matters. Research addressing this concern is necessary as developing market SMEs play critical roles in fostering socio-economic development, and yet operate in a unique environment (OECD, 2019; International Trade Centre, 2019).

Proceeding on the premise that financial resource constraints and other growth-limiting forces in the macroeconomic, institutional, and task environments are major concerns for top managers in developing market SMEs (Wang, 2016; International Trade Centre, 2019), this research draws on upper echelons theory (UET) to examine whether and how financial resource and environmental munificence moderate the purchasing recognition-purchasing quality performance relationship in such firms. Financial resource refers to the extent to which a firm has access to financial assets to fund its strategic and operational activities (Cooper et al., 1994; Wiklund and Shepherd, 2005), while environmental munificence reflects the degree to which a firm's operating environment supports sustained growth (Dess and Beard, 1984; Aldrich, 1979). Upper echelons literature suggests that financial resource and environmental munificence increase top manager discretion and thus may interact with purchasing recognition to affect purchasing quality performance (Hambrick and Quigley, 2014; Hambrick, 2007). Accordingly, we develop and test the argument that the relationship between purchasing recognition and purchasing quality performance is a function of varying conditions of financial resource and environmental munificence in developing market SMEs. To this end, this research responds to calls on scholars to deepen understanding of the role of purchasing recognition in SMEs (Coy et al., 2020) and developing markets (Chinomona, 2013), and the contingencies that characterize the performance consequences of purchasing recognition (Brandon-Jones and Knoppen, 2018).

We discuss pertinent literature and present the study's theoretical framework and hypotheses in the next sections. The research design and data for testing the hypotheses are

presented next, after which the study results are presented. Following this, we discuss the study contributions and implications alongside limitations and avenues for future research.

2. Literature Review

2.1. Purchasing quality performance

Purchasing quality performance, also referred to as buyer quality performance (Yeung et al., 2015) and quality conformance (Batenburg and Versendaal, 2008), is a core component of the purchasing performance construct (see Pressey et al., 2007; Batenburg and Versendaal, 2008; Devaraj et al., 2012; Knoppen and Sáenz, 2015; Patrucco et al., 2016). In the past, firms fundamentally focused on the cost-savings/efficiency aspect of purchasing performance (Pereira et al., 2014). Lately, there has been a growing concern for firms to prioritize other dimensions of purchasing performance such as quality performance, innovation performance, delivery performance, flexibility performance, and sustainability performance (Batenburg and Versendaal, 2008; Knoppen and Sáenz, 2015; Nair et al., 2015; Patrucco et al., 2016). Purchasing quality performance, on which this study focuses, plays a critical role in enhancing competitive advantage through improved product/service quality, internal and external customer satisfaction, and enhanced worker productivity (Ahire et al., 1996; Yeung et al., 2015; Phan et al., 2019).

2.2. Purchasing recognition

Following scholarly recognition of purchasing as a source of competitive advantage (Montgomery et al., 2017; Lawson et al., 2009), the purchasing function has transitioned from being a tactical, passive, independent, and support activity to a strategic, proactive, and integrative one (Knoppen and Sáenz, 2015; Ellram and Carr, 1994). This view of purchasing has frequently been referred to as strategic purchasing (Ellram and Carr, 1994; Sánchez-

Rodríguez, 2009), strategic sourcing (Su, 2013; Su et al., 2009), strategic procurement (White et al., 2016), or strategic purchasing participation (Nair et al., 2015). What is fundamental to these terminologies is the notion of purchasing recognition (Knoppen and Sáenz, 2015), which suggests that, whereas purchasing should be considered as a strategic function and integrated into corporate strategy, top management ought to recognize this and demonstrate the necessary support through involvement and resource commitment (Brandon-Jones and Knoppen, 2018; Knoppen and Sáenz, 2015). In essence, purchasing recognition explains the degree to which top managers emphasize the strategic role of purchasing and are committed to improving this function (Brandon-Jones and Knoppen, 2018; Knoppen and Sáenz, 2015). The purchasing recognition construct is particularly critical and useful in SMEs as, in such contexts, top managers tend to be more involved in purchasing decisions (Coy et al., 2020; Pressey et al., 2009; Ellegaard, 2009; Quayle, 2002).

2.3. SMEs and purchasing issues

The importance of SMEs cannot be overstated: they represent about 90% of businesses globally, create more than 70% of employment worldwide, contribute more than 30% to GDP (OECD, 2017), and help fulfill about 60% of each of the United Nations Sustainable Development Goals' targets (International Trade Centre, 2019). SMEs actively promote industrialization, drive innovative technologies/products/services, and accelerate competition and structural change in the private sector (International Finance Corporation, 2017; OECD, 2017).

Some scholars note that, as in large firms, purchasing has a key role to play in fostering SME success (Pressey et al., 2009; Paik et al., 2009; Coy et al., 2020). However, SMEs generally face several challenges: Lack of relevant resources (e.g., finance, technology, managerial competences) for operationalizing purchasing recognition, an

informal approach to purchasing, low bargaining power when it comes to dealing with larger suppliers, etc. (Coy et al., 2020; Adams et al., 2016; Ellegaard, 2009; Quayle, 2002). While such issues could obfuscate the merit of the purchasing recognition idea in such firms, extant literature mostly treats SMEs as homogeneous firms. In particular, the contention in past research (Coy et al., 2020; Chinomona, 2013) seems to ignore the point that purchasing recognition may be heterogeneous among SMEs. Related studies (e.g., Coy et al., 2020; Chinomona, 2013) demonstrate that such heterogeneity could explain performance variance in SMEs. What is under-considered in the literature is whether the differing organizational circumstances under which SMEs operate condition the performance effects of purchasing recognition.

2.4. Related past studies

As shown in Table 1, a substantial body of empirical work has investigated the consequences of strategic purchasing (or related concepts). While some studies find that strategic purchasing directly enhances purchasing performance (e.g., Pressey et al., 2007; Su, 2013; Sánchez-Rodríguez, 2009), others report the contrary (e.g., Lawson et al., 2009; Yeung et al., 2015). Of interest, while Pressey et al. (2007) and Yeung et al. (2015) find that strategic purchasing does not affect purchasing quality performance, Nair et al. (2015) find a significant direct link between these variables. A key conclusion that can be drawn from past research is that strategic purchasing itself might be insufficient for performance improvement: Some studies show that theoretically-relevant intervening variables (Sánchez-Rodríguez, 2009; Lawson et al., 2009; Yeung et al., 2015; Brandon-Jones and Knoppen, 2018) or boundary condition factors (Brandon-Jones and Knoppen, 2018; Kim and Chai, 2017; Arora et al., 2020) are required to translate strategic purchasing into superior performance.

Again, as Table 1 indicates, this body of empirical research has heavily used data from large firms and developed markets. While more research on the purchasing recognition-performance link in developing market SMEs is needed (Coy et al., 2020), and given that contingency models are useful in linking these variables (Brandon-Jones and Knoppen, 2018), we contend that richer insights may emerge if the peculiar conditions characterizing developing market SMEs' activities are taken into account.

Insert Table 1 about here

3. Theoretical Framework

UET contends that top managers' characteristics such as attitudes, beliefs, and behaviors influence organizational decisions and outcomes (Hambrick and Mason, 1984; Hambrick, 2007). UET further suggests that, since top managers' decisions and actions are shaped by internal and external environment factors, the extent of their influence on organizational outcomes depends on the amount of discretion that such factors grant them (Hambrick, 2007). Top executive discretion exists in situations where "...there is an absence of constraint and when there is a great deal of means-ends ambiguity" (Hambrick, 2007, p. 335).

According to UET literature, internal and external organizational conditions (e.g., top management team/board size, resources, environmental munificence) that grant greater top management discretion promote multiple plausible alternative courses of action (Hambrick, 2007).

Top managers in SMEs are essentially owner-managers, who tend to have greater managerial discretion, and are more involved in functional-level issues. Largely, in SMEs, such individuals have more control over purchasing decisions (Ellegaard, 2009; Pressey et al., 2009). Therefore, consistent with UET logic, purchasing recognition could have

significant effects on purchasing outcomes in SMEs. Notwithstanding, in developing market SMEs, financial resource and environmental munificence are critical sources of top executive discretion. Thus, combining greater levels of these factors with purchasing recognition might exert a greater influence on purchasing quality performance, over and above the influence of purchasing recognition alone (Hambrick and Quigley, 2014; Hambrick, 2007).

4. Hypothesis Development

Researchers may choose a moderation or mediation perspective to clarify the relationship between predictor and outcome variables (Aguinis et al., 2017; Hayes, 2018). A moderation perspective, which this study follows, suggests that the effect of the predictor on the outcome, in terms of direction or magnitude, would depend on contextual factors. In contrast, a mediation perspective suggests that an intervening factor is required to transmit the effect of the predictor on the outcome (Aguinis et al., 2017). Consistent with UET, we use this section to argue how financial resource and environmental munificence act as contextual factors that moderate the relationship between purchasing recognition and purchasing quality performance.

4.1. Moderating effect of financial resource

As putting purchasing recognition into action can be an expensive activity, and because financial resource is a difficult-to-acquire, costly-to-build, and heterogeneous firm resource in developing market SMEs (Wang, 2016; International Financial Corporation, 2017), and that firms vary in their cost structures and strategic investment decisions (Story et al., 2015), we expect financial resource to be a relevant moderator of the purchasing recognition-purchasing quality performance link. Financial resource facilitates strategy implementation (Story et al., 2015), and a greater level of it could enable purchasing orientation to function effectively

(Quayle, 2002; Pressey et al., 2009). Specifically, under conditions of high financial resource, top managers can be more successful in operationalizing purchasing recognition through building purchasing capabilities (e.g., recruiting qualified personnel, acquiring the right information technologies) and long-term relationships with suppliers to enhance purchasing quality performance (Sánchez-Rodríguez, 2009; Yeung et al., 2015; Knoppen and Sáenz, 2015).

Difficulty in accessing finance is a top concern for top managers in developing market SMEs (Wang 2016). Thus, given the critical roles that financial resource plays, low financial resource conditions could be interpreted as a worrying situation that may not only lead to financial resource conservation, but also reduce top management discretion in pursuing strategic options available to them (Tushman and Anderson, 1986). In this respect, we expect that top managers in SMEs with even greater purchasing recognition would face greater difficulties in improving the purchasing function in a way that is consistent with the firms' strategic direction, and benefit accordingly. Moreover, decreasing financial resource conditions might compel owner-managers to direct purchasing recognition into pursuing cost-cutting objectives in the sourcing process at the expense of quality (Knoppen and Sáenz, 2015; Rossetti and Choi, 2005). Therefore, under decreasing financial resource situations, increasing purchasing recognition could be counterproductive, lowering purchasing quality performance. Formally, we hypothesize that:

H1. In developing market SMEs, financial resource positively moderates the relationship between purchasing recognition and purchasing quality performance, such that under high financial resource conditions, the relationship is more positive.

4.2. Moderating effect of environmental munificence

The literature identifies three distinct facets of environmental munificence: Capacity, growth/decline, and opportunity/threat. Capacity depicts the level of resources available to the organization, growth/decline refers to the change in capacity, and opportunity/threat represents the extent of unexploited capacity (Castrogiovanni, 1991; Goll and Rasheed, 2004).

Top executives in munificent environments can leverage abundant resources (e.g., institutional support) to convert strategic actions into organizational outcomes (Jambulingam et al., 2005; Goll and Rasheed, 2004). Particularly, munificent environments enable organizations to access external resources to build more slack resources, which increases top executive discretion (Hambrick and Finkelstein, 1987; Jambulingam et al., 2005). Under such conditions, top managers with strong purchasing recognition can engage more in quality-enhancing initiatives within the supply market.

On the other hand, as low munificent environments reduce the degrees of freedom of top executives (Baum and Wally, 2003), top managers' attention could be diverted from strategic purchasing issues to other initiatives that could quickly improve their chances of survival. Further, low levels of munificent environment can force top managers to conserve and limit the resources needed for addressing strategic purchasing issues. Additionally, low munificent environment conditions are threatening and present greater uncertainty for top executives (Shepherd et al., 2020). This might promote adversarial tendencies in buyer-seller relationships (Amankwah-Amoah et al., 2018). As Staw and Swajkowski (1975) assert, organizations operating in non-munificent environments are more likely to commit illegal acts. Thus, while purchasing recognition functions through long-term buyer-seller relationships to improve performance (Chen et al., 2004; Lawson et al., 2009; Yeung et al., 2015), low munificence situations could undermine the contribution of purchasing

recognition to purchasing quality performance. The foregoing arguments suggest the following hypothesis:

H2. In developing market SMEs, environmental munificence positively moderates the relationship between purchasing recognition and purchasing quality performance, such that under high environmental munificence conditions, the relationship is more positive.

5. Methodology

5.1. Measures and questionnaire development

To obtain reliable and valid data, several measures were taken in the study. We began our questionnaire development process by surveying existing literature to identify items that tap into the conceptual domains of the constructs in the study. To ensure face validity and contextual relevance of the items, we asked three academics with relevant experience to assess each set of items in light of the definitions of the constructs they intend to measure. We used feedback from this exercise to refine the items and their scale anchors. We again took into consideration recommended procedural remedies to minimize common method bias (Podsakoff et al., 2003): We ensured item clarity and conciseness; we utilized varied scale formats; the items for the predictor variable and those for the outcome variable were set wide apart in the questionnaire; our cover letter explained the research motivation and relevance, and assured the respondents of confidentiality and anonymity; we administered the questionnaire to competent respondents; we allowed the respondents enough time (i.e., up to four weeks) to fill in the questionnaire at their own convenient time; we reduced the questionnaire length; words/phrases/sentences that might offer clues about the hypotheses in

the study were not included in the questionnaire. Table 2 provides a full description of the items for constructs and their reliability and validity results.

Drawing on Devaraj et al. (2012) and Patrucco et al. (2016), we developed three items, anchored on a seven-point scale that ranged from “very poor (=1)” to “very good (=7)”, to measure purchasing quality performance. Five items were adapted from prior research (Paulraj et al., 2006; Yeung et al., 2015; Brandon-Jones and Knoppen, 2018) to measure purchasing recognition using a seven-point scale that ranged from “not at all (=1)” to “to the largest extent (=7)”. A four-item scale was adopted from Story et al. (2015) to measure financial resource. Each item was rated on a seven-point scale that ranged from “strongly disagree (=1)” to “strongly agree (=7)”. Lastly, four items were adapted from Jambulingam et al. (2005) to measure environmental munificence on a seven-point Likert scale with anchors “strongly disagree (=1)” and “strongly agree (=7)”.

In addition, we included firm size, firm age, and industry type as control variables since purchasing recognition and its performance consequences may be influenced by these firm characteristics (Pressey et al., 2007; Su, 2013; Nair et al., 2015; Brandon-Jones and Knoppen, 2018). Firm size and firm age were operationalized as the natural logarithm of the number of full-time employees and the number of years a firm has been in operation, respectively. A dummy variable was created for industry type: Service firms = 1, other firms = 0.

Table 2 about here

5.2. Research setting and data

Data for the study comes from Ghana, a developing sub-Saharan African nation. Like in most developing economies, the business environment in Ghana poses several constraints for SME activities. For example, the FM Global Resilience Index Report (2019) rates Ghana’s supply

chain infrastructure (e.g., ability to track and trace consignments, quality and extension of transport infrastructure, utility infrastructure, control of corruption) as 35.8 out of 100.0. Further, a recent survey on ease of doing business across one hundred and ninety countries by the World Bank Group (2020) ranks the business environment in Ghana 116th, 79th, 80th, and 104th on ease of starting a business, getting electricity, getting credit, and dealing with construction permits, respectively. Moreover, recent policy reforms and regulatory changes in the country's financial sector (e.g., increasing minimum capital requirements, downgrading undercapitalized banks), orchestrated by the Bank of Ghana (African Development Bank Group, 2018), threaten the liquidity of SMEs. As the World Bank (2017) reports, low access to credit facilities is one of the major factors that make the business environment in Ghana less competitive. The high levels of public debt stock and the increasing public sector borrowing from local banks in Ghana largely crowd-out business enterprises from accessing enough financial assistance from local banks (World Bank, 2017). These issues generally undermine financial resource availability in SMEs and further weaken SME confidence in the business environment (World Bank, 2017), making data from Ghana appropriate for examining our research hypotheses.

There are two primary commercial and industrial hubs in Ghana: Greater Accra region and Ashanti region (Ghana Statistical Service, 2016). We studied SMEs in the Ashanti region as the business environment in this setting is more under-resourced in terms of supply chain infrastructure and institutional support for trade and industry, etc. Our effective sample comprises one hundred and thirty-eight autonomous business enterprises in the region with at least three years of operational experience and workforce size (i.e., number of full-time employees) ranging from five to one hundred. Due to the lack of credible databases about firms in the region and the need to focus on SMEs that have senior managers whose education level is sufficient to self-respond to the research instrument, we used purposive and

quota sampling techniques. A face-to-face approach involving questionnaire delivery and collection at a later date was used to collect data as business executives in Ghana are more receptive to this approach, which helps minimize non-response issues. A team of field agents was trained and supervised by the authors of this paper to administer the questionnaire.

Following prior research, we administered the questionnaire to top- and middle-level managers (e.g., CEOs, general managers, supply chain and procurement managers) (Table 3) (Kim and Chai, 2017; Lawson et al., 2009; Pressey et al., 2007). In all, two hundred and fourteen firms participated in the study. We were able to retrieve one hundred and forty-seven questionnaires over a period of fifty days of fieldwork, nine of which were dropped due to data incompleteness, leaving us with one hundred and thirty-eight questionnaires (i.e., 64.49% effective response rate). An average respondent had held his/her current position for about nine years. The majority of the firms (48.6%) operate in the service industry. The average firm size (i.e., full-time employees) and firm age (i.e., number of years of operation) were 15 approx. (standard deviation = 13) and 12.86 (standard deviation = 8.90), respectively. Table 3 presents the details of the respondents and their firms.

Table 3 about here

5.3. Survey bias assessment

A t-test revealed that the firm characteristics (i.e., size and age) do not differ significantly between early respondents (i.e., questionnaire received within the first two weeks) and late respondents (i.e., questionnaire received within the third and fourth weeks), suggesting that non-response bias is unlikely to describe the data.

Research indicates that, in SMEs, the purchasing function may be performed by a team of senior managers (Pressey et al., 2009). Accordingly, and in line with previous studies (e.g., Pressey et al., 2009), our key respondents included individuals holding different

managerial positions (see Section 4.2). However, it is likely that people at different managerial levels may interpret organizational issues differently. Thus, we examined whether respondent level of management biased our data using a t-test. Results show that the data is not statistically different between respondents holding top management and middle-level positions: Purchasing recognition (mean difference = -.221; $t = -1.294$, $p = .117$), purchasing performance (mean difference = -.210, $t = -1.108$, $p = .691$), financial resource (mean difference = -.253, $t = -.927$, $p = .618$), environmental munificence (mean difference = .275, $t = 1.191$, $p = .711$). We further assessed the competence of the respondents using a four-item scale that was adapted from Boso et al. (2013). The items were anchored on a seven-point scale ranging from “strongly disagree” to “strongly agree”. The mean scores were above 5 (Table 3), suggesting an adequate level of respondent competence (Boso et al., 2013).

To assess whether common method bias is likely to inflate or deflate results from the study, we first compared our theoretically specified four-factor measurement model with a method-only model (Podsakoff et al., 2003), which had all items in the study specified to load onto a single latent construct: $\chi^2 = 1132.44$, $df = 104$, $p = .00$, normed $\chi^2 = 10.88$, RMSEA = .27, NNFI = .39, CFI = .47, SRMR = .22. Results show that a common factor does not adequately explain the variances in the study items. We investigated common method bias further using Lindell and Whitney's (2001) marker variable technique. The smallest positive correlation between the substantive constructs in the study ($r = .08$) was used as a marker variable proxy to calculate adjusted marker variable correlations (Malhotra et al., 2006). Results shown in Table 2 indicate no major differences between the zero-order correlations and the adjusted marker variable correlations in terms of direction, strength, and significance level, which additionally indicates that the odds that common method bias will provide an alternate explanation in the study are very low (Podsakoff et al., 2012). Per these results, and in line with prior research evidence that models involving interaction effects, as this study

hypothesizes, are unlikely to be threatened by common method bias (Podsakoff et al., 2012), we contend that common method bias is not a major concern in the study.

Table 4 about here

5.4. Measure validation

We evaluated the validity and reliability of the measures using covariance-based confirmatory factor analysis with maximum likelihood estimator (LISREL). Our four-factor measurement model has a good fit to the data: $\chi^2 = 121.60$, $df = 98$, $p = .05$, normed $\chi^2 = 1.24$, RMSEA = .04, NNFI = .97, CFI = .98, SRMR = .05 (Hair et al., 2014). As displayed in Table 1, all factor loadings are greater than .60 and significant at 1%. Cronbach's alpha, composite reliability, and average variance extracted values for each set of measures are larger than the recommended thresholds of .70, .60, and .50, respectively. These results demonstrate reliability, unidimensionality, and convergent validity (Hair et al., 2014). Moreover, the average variance extracted values were larger than the squared correlations between the constructs, demonstrating discriminant validity (Hair et al., 2014).

6. Results

6.1. Hypothesis testing

The relationships between the study variables are shown in Table 4. Of importance, the results show that each main effect variable (i.e., purchasing recognition, financial resource, and environmental munificence) has a significant positive association with purchasing quality performance. To test the study hypotheses, we used PROCESS for SPSS (version 3.5) as it allows researchers to quantify and explore moderating effects with ease (Hayes, 2018). The interaction terms (i.e., purchasing recognition \times financial resource, purchasing recognition \times

environmental munificence) were estimated in turn using the “Model 1” option to evaluate the hypotheses, allowing us to quantify their unique explanatory effects. Each of the two analyses (Model 1a & Model 1b) included the other moderating variable as well as firm size, firm age, and firm industry as covariates. In addition, the “Model 2” option in PROCESS was utilized to explore the relative effects of the two interaction terms. This model included firm size, firm age, and firm industry as covariates. In all cases, the raw interaction terms were used instead of the mean-centered ones as the study does not hypothesize for the main effect variables. Accordingly, only the interaction effects are reported (Hayes, 2018; Aguinis et al., 2017).

Model 1a significantly explains 20.86% additional variance in purchasing quality performance, given $F = 43.72$, $p < .01$, and reveals that purchasing recognition interacts with financial resource to affect purchasing quality performance positively ($\beta = .33$, $t = 6.61$, $p < .01$), in support of *H1*. Model 1b significantly accounts for 9.49% additional variance in purchasing quality performance ($F = 16.80$, $p < .01$), and shows that the interaction between purchasing recognition and environmental munificence positively affects purchasing quality performance ($\beta = .26$, $t = 4.10$, $p < .01$), in support of *H2*. Model 2 explains 21.73% additional variance in purchasing quality performance ($F = 22.91$, $p < .01$), and indicates that the interaction between purchasing recognition and financial resource has a stronger positive effect ($\beta = .29$, $t = 5.08$, $p < .01$) than the interaction between purchasing recognition and environmental munificence ($\beta = .10$, $t = 1.43$, $p < .01$).

6.2. Additional analysis

The results in Section 6.1 do not reveal whether and how the relationship between purchasing recognition and purchasing quality performance changes at differing levels of financial resource and environmental munificence (Hayes, 2018). To investigate this, we relied on

Johnson-Neyman (JN) and percentile techniques (in PROCESS) for probing interaction effects (Hayes, 2018). In using the JN technique, we aimed at (1) identifying the range of values of the moderators where the relationship between purchasing recognition and purchasing quality performance is (not) significant; (2) exploring whether, under varying values of the moderators, the relationship between purchasing recognition and purchasing quality performance changes in magnitude and direction (Hayes, 2018). The percentile technique was used to identify specific levels of the moderators where the relationship is significant or changes in direction, and also to visualize the effects (Hayes, 2018).

The results reported in Table 5 and Figure 1 and Figure 2 show that the relationship between purchasing recognition and purchasing quality performance can be both positive and negative, depending on the levels of financial resource and environmental munificence. Specifically, the JN technique reveals that, for levels of financial resource ≤ 3.05 (corresponding to 30.43% of the sample) and levels of environmental munificence ≤ 3.04 (corresponding to 14.49% of the sample), purchasing recognition and purchasing quality performance have a significant negative relationship. On the other hand, the relationship between purchasing recognition and purchasing quality performance is positive and significant for levels of financial resource ≥ 4.14 (corresponding to 54.35% of the sample) and levels of environmental munificence ≥ 4.96 (corresponding to 62.32% of the sample).

Additional results from the percentile technique, reported in Table 6, indicate that, given a low level of financial resource (16th percentile) and low-to-moderate levels of environmental munificence (16th and 50th percentiles), purchasing recognition has a significant negative effect on purchasing quality performance. Moreover, the results show that, given moderate-to-high levels of financial resource (50th and 84th percentiles) and low-to-high levels of environmental munificence (16th, 50th, and 84th percentiles), purchasing recognition has a significant positive effect on purchasing quality performance. Overall, the

results show that, given low levels of both financial resource and environmental munificence and high levels of these moderators, purchasing recognition has negative and positive effects on purchasing quality performance, respectively.

Insert Table 5 and Table 6 about here

7. Discussion

7.1. Theoretical implications and contributions

This research develops and tests a model of when developing market SMEs benefit differently from purchasing recognition. Overall, the study results indicate that a greater purchasing quality performance accrues from a greater purchasing recognition. This finding corroborates prior research that reports that strategic purchasing variables enhance purchasing-level performance outcomes (Sánchez-Rodríguez, 2009; Su, 2013) as well as firm-level performance outcomes (Cho et al., 2019; Su et al., 2009; Carr and Pearson, 2002), but contradicts studies that find that such variables alone do not affect purchasing quality performance (Pressey et al., 2007; Yeung et al., 2015). Additionally, the results support the school of thought that, as in large firms, SMEs could benefit from strategic purchasing (Coy et al., 2020). Nonetheless, additional results clarify that the relationship between purchasing recognition and purchasing quality performance varies with changing conditions of financial resource and environmental munificence. This finding reinforces the emerging contention and findings that the performance benefits of strategic purchasing variables are context-dependent (Arora et al., 2020; Brandon-Jones and Knoppen, 2018; Kim and Chai, 2017).

In extending the existing contingency-based approach to analyze the effects of strategic purchasing variables, we utilized the JN and percentile techniques to demonstrate that financial resource and environmental munificence do not only interact with purchasing

recognition to boost purchasing quality performance, but also differential levels of these moderators either undermine or enhance the purchasing recognition-purchasing quality performance link. The JN analysis enriches our understanding of the range of values of the moderators under which the relationship between purchasing recognition and purchasing quality performance is significant and also changes in direction and magnitude. The percentile analysis sheds additional light on specific levels of the moderators where the purchasing recognition-purchasing quality performance link becomes significant and changes in strength and direction. More broadly, the results from these analyses imply that specificity in the theorization and empirical assessment of the conditions underlying the strategic purchasing variables-performance link is critical to advancing theory and providing clearer managerial recommendations.

The study's analyses further assess the assertion that resource availability is a necessary condition for strategic purchasing, in general, to thrive (Quayle, 2002; Pressey et al., 2007). Specifically, we offer insights on whether both firm-level resource (financial resource) and resources within the external environment (environmental munificence) moderate the purchasing recognition-purchasing quality performance relationship. The study results indicate that, while both financial resource and environmental munificence change the purchasing recognition-purchasing quality performance link, the effect of financial resource, which is more firm-specific and could be controlled by top managers, has a greater influence.

Additionally, this article contributes to the emerging literature that questions the desirability of strategic purchasing in all contexts (Yeung et al., 2015). We theorize and show that, in the context of developing market SMEs, the question of whether purchasing recognition is desirable or beneficial could better be answered when theoretically relevant internal and external environment contingencies are taken into consideration.

Lastly, our use of UET extends the limited theoretical bases for linking strategic purchasing variables to performance (see Table 1). UET permits us to explicitly examine and isolate the performance implication of the top management characterization of the strategic purchasing idea, which the extant literature deems crucial (Yeung et al., 2015; Knoppen and Sáenz, 2015), and particularly useful in the SME context (Coy et al., 2020; Pressey et al., 2009).

7.2. Managerial and policy implications

Theory and results from this study suggest that purchasing recognition itself might not always benefit developing market SMEs and that executives in these firms need to match purchasing recognition with appropriate organizational conditions to derive superior purchasing quality performance levels. Top managers in developing market SMEs should understand that liquid assets within an organization and an external environment that supports sustained growth are crucial contingencies for fostering purchasing recognition to derive enhanced purchasing quality performance. The study results suggest that increasing purchasing recognition under low levels of these circumstances might lower purchasing quality performance. Therefore, top managers in developing market SMEs ought to critically evaluate their firms' financial resource situations and the enabling/inhibiting conditions in the external environment while nurturing purchasing orientation.

It is important to acknowledge that, unlike financial resource, environmental munificence cannot be easily manipulated by top executives in SMEs. Accordingly, as the results show, financial resource, compared to environmental munificence, better augments the contribution of purchasing recognition to purchasing quality performance. This makes it more imperative for top executives in developing economy SMEs to focus more on enlarging their firms' financial resource base. SMEs in developing economies, where financial markets

are underdeveloped, should explore alternative sources of finance while utilizing social networking to minimize difficulties associated with accessing external finance.

Again, the notion that environmental munificence is an equally vital contingency for amplifying the purchasing quality performance benefit of purchasing recognition has a macro-level policy implication. Policymakers at the macro-level in developing markets ought to design and ensure the implementation of policies that improve the buoyancy of the business environment. This generally helps reduce challenges that SMEs face in orchestrating growth-based strategies and organizational capabilities to achieve improved performance. Lack of modern logistics and supply chain infrastructure (e.g., transportation, information system infrastructure) and inadequate institutional support (e.g., obtaining trade and commerce information from government agencies, obtaining bank loans), for example, can undermine the operationalization of purchasing recognition, rendering it untenable and less beneficial.

7.3. Limitations and avenues for further research

This study has some limitations, which provide opportunities for advancing the strategic purchasing literature. Insights from the study suggest that differences in financial resource and environmental munificence situations matter in understanding the nuances associated with the purchasing quality performance consequences of purchasing recognition in developing market SMEs. Thus, while more research on purchasing performance issues in developing market SMEs is necessary (Coy et al., 2020), researchers should explore additional context-specific moderators of the performance effects of purchasing recognition. Along this direction, future research could consider other purchasing performance outcomes such as efficiency, delivery, flexibility, innovation, and sustainability performance (see

Knoppen and Sáenz, 2015; Nair et al., 2015; Patrucco et al., 2016), as the mechanisms connecting purchasing recognition to any of these outcomes might be different.

Moreover, the arguments for the moderating roles of financial resource and environmental munificence were largely built around managerial discretion, a concept that was not explicitly analyzed or controlled for in the study. In addressing this gap, future research could investigate how managerial discretion interacts with financial resource and environmental munificence to determine when purchasing recognition affects performance.

Lastly, the relatively small sample size in the study restricts a broad generalization of our findings. Thus, it is directional for researchers to replicate our study, not only in the developing market SMEs but also in large organizations and advanced economies.

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Table 1. Empirical studies on the consequences of strategic purchasing related variables.

<i>Author(s) (year)</i>	<i>Strategic purchasing: (construct label & dimension(s))</i>	<i>Empirical treatment of SP</i>	<i>Moderators of SP</i>	<i>Outcome(s) of SP</i>	<i>Empirical setting & data</i>	<i>Relevant findings</i>
Arora et al. (2020)	Strategic purchasing	Unidimensional	Supply base strategy	Environmental collaboration	317 multi-industry firms Survey data	SP has a stronger positive effect of environmental collaboration under low conditions of supply base strategy than high conditions of supply base strategy.
Brandon-Jones and Knoppen (2018)	Strategic purchasing: <i>purchasing recognition</i> <i>purchasing involvement</i>	Multi-dimensional	Industry (manufacturing vs service)	<ul style="list-style-type: none"> • Purchasing performance: • Cost • Performance • Innovation performance 	309 manufacturing and service firms Survey data	<ul style="list-style-type: none"> • Purchasing recognition positively affects purchasing involvement, purchasing involvement positively affects knowledge scanning, knowledge scanning positively affects cost and innovation performance. • These effects are stronger in service-based firms than manufacturing-based firms.
Cho et al. (2019)	Strategic purchasing	Unidimensional		Firm performance	795 restaurants in the US Survey data	Strategic purchasing positively affects firm performance.
Kim and Chai (2017)	Strategic sourcing	Unidimensional	Global vs domestic sourcing	Supply chain agility	272 manufacturing firms in Korea Survey data	<ul style="list-style-type: none"> • Strategic sourcing positively affects supply chain agility. • This effect is greater under conditions of domestic sourcing than conditions of global sourcing.
Yeung et al. (2015)	Strategic purchasing	Unidimensional		<ul style="list-style-type: none"> • Buyer quality performance • Supplier quality performance 	175 firms in the Hong Kong electronics industry Survey data	<ul style="list-style-type: none"> • Strategic purchasing has a direct and indirect positive effect, via buyer-supplier relationship on buyer quality performance. • Strategic purchasing does not directly affect supplier quality performance. • Strategic purchasing has a positive indirect effect, via buyer-supplier relationship, on supplier quality performance.

Table 1. Continued.

<i>Author(s) (year)</i>	<i>Strategic purchasing (SP): (construct label & dimension(s))</i>	<i>Empirical treatment of SP</i>	<i>Moderators of SP</i>	<i>Outcome(s) of SP</i>	<i>Empirical setting & data</i>	<i>Relevant findings</i>
Nair et al. (2015)	Strategic purchasing participation	Unidimensional		Strategic supplier selection, operational supplier selection, supplier's strategic performance evaluation, supplier's operational performance evaluation, purchasing performance (cost, quality, delivery, flexibility, innovation)	244 US Survey data	<ul style="list-style-type: none"> • SP participation positively affects operational supplier selection criteria, strategic supplier selection criteria, purchasing quality performance, purchasing innovation performance. • SP participation does not affect purchasing cost performance and purchasing flexibility performance.
Su (2013)	Strategic sourcing	Unidimensional		<ul style="list-style-type: none"> • Buyer-supplier relationship • Supplier evaluation • Sourcing performance 	181 US textile and apparel firms Survey data	Strategic sourcing positively affects buyer-supplier relationship, supplier evaluation, and sourcing performance.
Chinomona (2013)	Strategic purchasing	Unidimensional		<ul style="list-style-type: none"> • Logistics integration • Business performance 	162 SMEs in Zimbabwe Survey data	Strategic purchasing positively affects logistics integration, and accordingly business performance
Chiang et al. (2012)	Strategic sourcing: <i>strategic purchasing, internal integration, information sharing, supplier development</i>	Unidimensional		<ul style="list-style-type: none"> • Strategic flexibility • Supply chain agility 	144 US manufacturing firms Cross-sectional survey data	<ul style="list-style-type: none"> • Strategic sourcing positively relates to strategic flexibility. • SP is positively related to supply chain agility. • Strategic flexibility positively mediates the SP-supply chain agility link.
Sánchez-Rodríguez (2009)	Strategic purchasing	Unidimensional		<ul style="list-style-type: none"> • Supplier development • Purchasing performance 	306 manufacturing companies in Spain Survey data	<ul style="list-style-type: none"> • Strategic purchasing positively affects supplier development and purchasing performance. • Supplier development mediates the link between strategic purchasing and purchasing performance.

Table 1. Continued.

<i>Author(s) (year)</i>	<i>Strategic purchasing: (construct label & dimension(s))</i>	<i>Empirical treatment of SP</i>	<i>Moderators of SP</i>	<i>Outcome(s) of SP</i>	<i>Empirical setting & data</i>	<i>Relevant findings</i>
Lawson et al. (2009)	Strategic purchasing	Unidimensional		<ul style="list-style-type: none"> Supply management practices: socialization mechanisms, supplier integration, supplier responsiveness Buyer performance improvement 	111 UK multi-industry firms Survey data	<ul style="list-style-type: none"> Strategic purchasing does not have a significant direct effect on buyer performance improvement. Strategic purchasing has a significant positive effect on the use of socialization mechanisms, but not on supplier responsiveness. Strategic purchasing has a significant positive indirect effect on buyer performance via supplier integration.
Su et al. (2009)	Strategic sourcing	Unidimensional		<ul style="list-style-type: none"> Competitive advantage Business performance 	181 US textile and apparel firms Survey data	<ul style="list-style-type: none"> Strategic sourcing positively business performance. Strategic sourcing does not affect competitive advantage
Khan and Pillania (2008)	Strategic sourcing: <i>strategic supplier partnership, supply flexibility, supplier evaluation, trust</i>	Multi-dimensional		<ul style="list-style-type: none"> Supply chain agility Organizational performance 	128 manufacturing companies in India Survey data	Each dimension of strategic sourcing is positively related to supply chain agility and organizational performance.
Chen et al. (2004)	Strategic purchasing	Unidimensional		<ul style="list-style-type: none"> Buyer-supplier communication Limited number of suppliers Long-term orientation Customer responsiveness Financial performance 	221 US manufacturing companies Survey data	<ul style="list-style-type: none"> SP positively affects buyer-seller communication, limited number of suppliers, and long-term orientation. SP has positive indirect effects on long-term orientation and buyer-supplier communication via limited number of suppliers. Long-term orientation and buyer-seller communication positively affect customer responsiveness, which in turn positively affects financial performance.
Carr and Pearson (2002)	Strategic purchasing	Unidimensional		Financial performance	175 multi-industry US firms Survey data	SP positively affects financial performance.

Table 2. Details of measures and validity & reliability results.

Constructs and measures (Cronbach's alpha/composite reliability/ average variance extracted)	Loading (t-value)
Purchasing recognition* (.85/.86/.54). <i>Our top management...</i>	
are supportive of our efforts to improve the procurement function	.78(fixed)
consider procurement to be a vital part of our corporate strategy	.71(8.15)
view procurement issues as important	.74(8.58)
emphasize the procurement function's strategic role	.68(7.81)
show commitment toward releasing funds for improving procurement functions	.77(8.85)
Financial resource** (.96/.96/.85).	
Our company has easy access to financial capital to support its business operations	.93(fixed)
If we need more financial assistance for our business operations, we could easily get it	.91(18.63)
We have substantial financial resources at the discretion of managers for funding business initiatives	.92(19.39)
We are able to obtain financial resources at short notice to support business operations	.93(19.91)
Environmental munificence** (.93/.93/.77).	
There are abundant opportunities for growth in our industry	.90(fixed)
Our business environment will support continued growth for our company's products	.88(15.00)
Prospects for growth in our industry are good	.88(14.91)
Our business environment is rich with opportunities for growth	.84(13.44)
Purchasing quality performance*** (.79/.81/.59). <i>In relation to your company's procurement goals, how well has your company performed over the past 12 months in terms of...?</i>	
buying the right goods/materials to work with	.61(fixed)
procuring goods/materials/services that meet end-user needs	.86(6.80)
receiving goods/materials/services that meet specifications	.81(6.84)

Note: *scale anchor: "not at all (=1)" to "to the largest extent (=7)", ** scale anchor: "strongly disagree (=1)" to "strongly agree (=7)", *** scale anchor: "very poor (=1)" to "very good (=7)".

Table 3. Firm and respondent characteristics.

Characteristics	Descriptive statistics	
	<i>Frequency</i>	<i>Percentage</i>
<i>Industry:</i>		
Service	67	48.6
Manufacturing	14	10.1
Agribusiness	27	19.6
Others (e.g., mining/extraction)	30	21.7
<i>Respondent position:</i>		
CEO/managing director/general manager	67	48.60
Procurement manager	17	12.30
Supply chain manager	13	9.40
Operations manager	25	18.10
Marketing manager	16	11.60
	<i>Mean</i>	<i>Standard deviation</i>
Firm size: number of employees	15.49	12.62
Firm age (number of years of operation)	12.86	8.88
Respondent experience (number of years held current position)	9.17	6.94
<i>Respondent competence:</i>		
I have adequate knowledge on the issues I responded to	5.43	1.13
I clearly understood all the items I responded to	5.24	1.19
I am very confident in the responses I provided	5.30	1.24
I am sure that the responses I provided represent the situation in my company	5.27	1.12

Table 4. Correlations, average variance extracted values, and descriptive statistics.

Variables	1	2	3	4	5	6	7
1. Purchasing quality performance	(.59)	.20*	.23**	.20*	-	-	-
2. Purchasing recognition	.26**	(.54)	.00	.07	-	-	-
3. Financial resource	.29**	.08	(.85)	.34**	-	-	-
4. Environmental munificence	.26**	.14	.39**	(.77)	-	-	-
5. Firm size (log)	.10	.09	.16	.06	(-)	-	-
6. Firm age (log)	-.09	-.02	-.03	-.03	.14	(-)	-
7. Firm industry (service =1)	-.03	-.01	.03	.01	-.13	-.07	(-)
Mean	5.10	5.41	4.20	5.05	2.51	2.30	.49
Standard deviation	1.11	1.00	1.60	1.36	.65	.74	.50

Notes: Values reported along the principal diagonal are average variance extracted. Zero-order correlations and marker-variable adjusted correlations are reported below and above the principal diagonal respectively. *p < .05 (2-tailed). **p < .01 (2-tailed).

Table 5. Model 1a-b results: Johnson-Neyman and Percentile techniques.

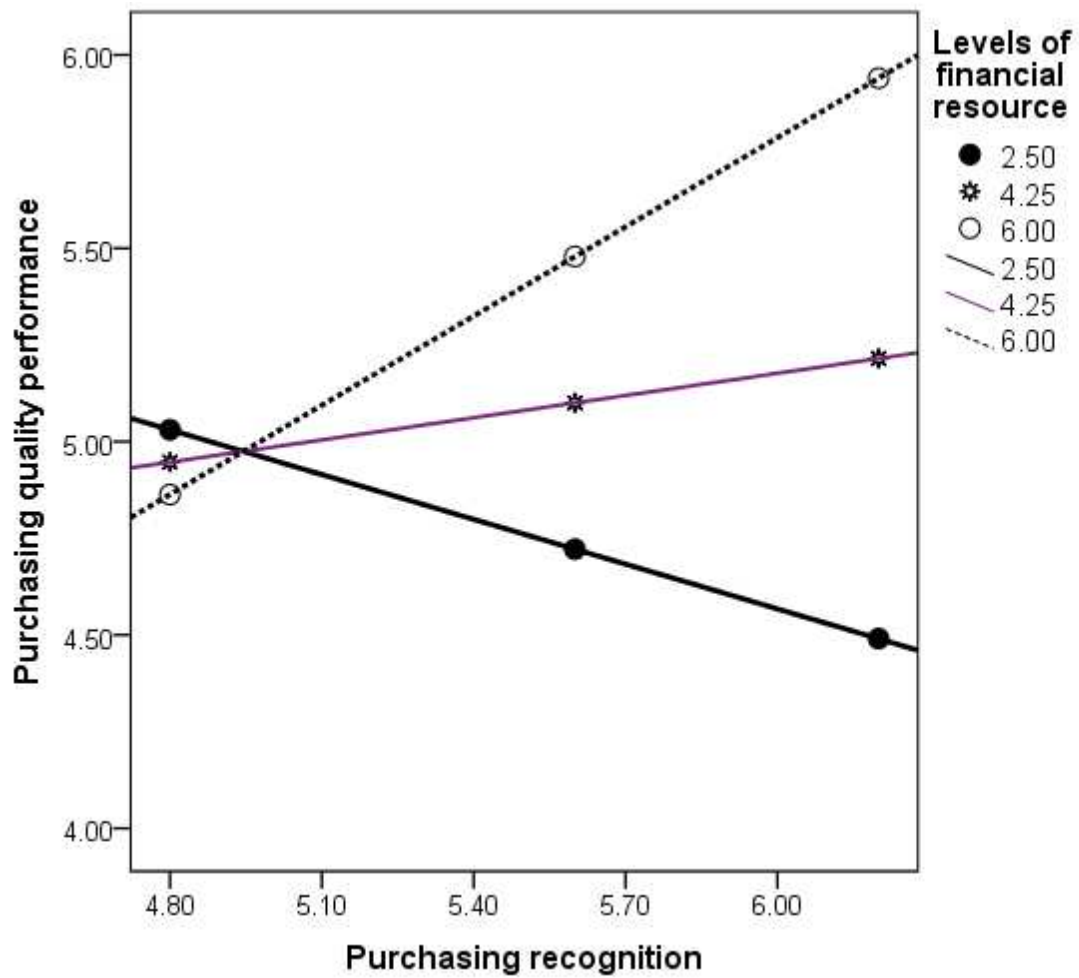
Technique	Financial resource			Environmental munificence			
	Level of moderator	β	t	Level of moderator	β	t	
Johnson-Neyman	<i>1.00</i>	-.88	-4.71	<i>1.00</i>	-.84	-3.03	
	<i>1.30</i>	-.78	-4.50	<i>1.30</i>	-.77	-2.94	
	<i>1.60</i>	-.68	-4.26	<i>1.60</i>	-.69	-2.84	
	<i>1.90</i>	-.58	-3.96	<i>1.90</i>	-.61	-2.72	
	<i>2.20</i>	-.48	-3.59	<i>2.20</i>	-.54	-2.57	
	<i>2.50</i>	-.39	-3.14	<i>2.50</i>	-.46	-2.40	
	<i>2.80</i>	-.29	-2.56	<i>2.80</i>	-.38	-2.19	
	<i>3.05</i>	-.20	-1.98	<i>3.04</i>	-.32	-1.98	
	<i>3.10</i>	-.19	-1.85	<i>3.10</i>	-.31	-1.92	
	<i>3.40</i>	-.09	-.96	<i>3.40</i>	-.23	-1.59	
	<i>3.70</i>	.01	.12	<i>3.70</i>	-.15	-1.18	
	<i>4.00</i>	.11	1.35	<i>4.00</i>	-.07	-.65	
	<i>4.14</i>	.16	1.98	<i>4.30</i>	.00	.03	
	<i>4.30</i>	.21	2.67	<i>4.60</i>	.08	.85	
	<i>4.60</i>	.31	3.92	<i>4.90</i>	.16	1.79	
	<i>4.90</i>	.41	4.98	<i>4.96</i>	.17	1.98	
	<i>5.20</i>	.50	5.79	<i>5.20</i>	.23	2.76	
	<i>5.50</i>	.60	6.36	<i>5.50</i>	.31	3.60	
	<i>5.80</i>	.70	6.75	<i>5.80</i>	.39	4.23	
<i>6.10</i>	.80	6.99	<i>6.10</i>	.46	4.63		
<i>6.40</i>	.90	7.14	<i>6.40</i>	.54	4.86		
<i>6.70</i>	1.00	7.23	<i>6.70</i>	.62	4.97		
<i>7.00</i>	1.10	7.29	<i>7.00</i>	.69	5.01		
Percentile	16 th	<i>2.50</i>	-.39	-3.14	3.50	-.20	-1.47
	50 th	4.25	.19	2.45	5.52	.25	2.91
	84 th	6.00	.77	6.92	6.25	.50	4.76

Note: Values in italic represent the levels of the moderators in which purchasing recognition either affects purchasing quality performance positively or negatively.

Table 6. Model 2 results: Percentile technique.

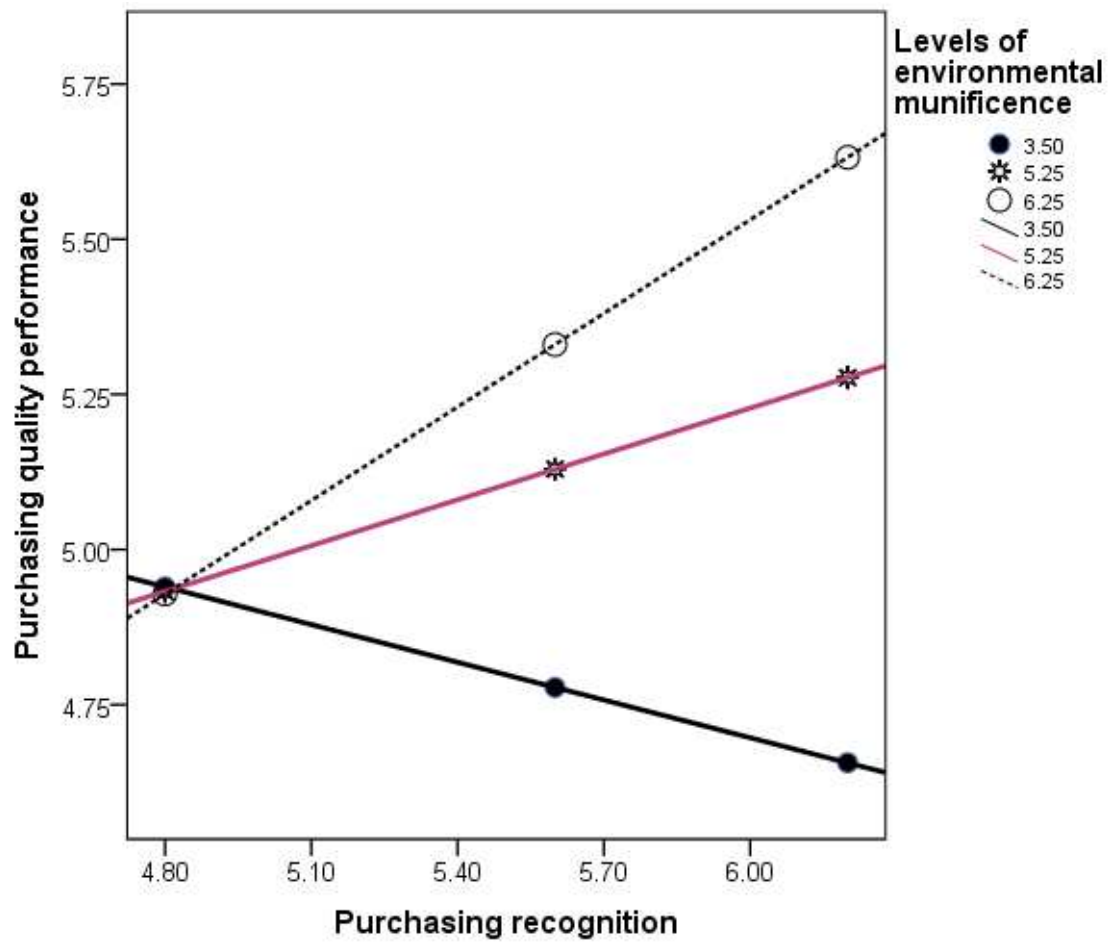
Level of moderator		β	t
Financial resource ^a	Environmental munificence ^a		
<i>2.50</i>	<i>3.50</i>	<i>-.47</i>	<i>-3.41</i>
<i>2.50</i>	<i>5.25</i>	<i>-.31</i>	<i>-2.32</i>
<i>2.50</i>	<i>6.25</i>	<i>-.22</i>	<i>-1.29</i>
<i>4.25</i>	<i>3.50</i>	<i>.04</i>	<i>.31</i>
<i>4.25</i>	<i>5.25</i>	<i>.20</i>	<i>2.54</i>
<i>4.25</i>	<i>6.25</i>	<i>.29</i>	<i>2.72</i>
<i>6.00</i>	<i>3.50</i>	<i>.55</i>	<i>2.83</i>
<i>6.00</i>	<i>5.25</i>	<i>.71</i>	<i>5.92</i>
<i>6.00</i>	<i>6.25</i>	<i>.80</i>	<i>7.07</i>

Note: ^a Levels of moderator are the 16th, 50th, and 84th percentiles. Values in italic represent the levels of the moderators in which purchasing recognition either affects purchasing quality performance positively or negatively.



Note: Levels of moderator are the 16th, 50th, and 84th percentiles.

Figure 1. Surface of the effect of the interaction between purchasing recognition and financial resource.



Note: Levels of moderator are the 16th, 50th, and 84th percentiles.

Figure 2. Surface of the effect of the interaction between purchasing recognition and environmental munificence.