The Moderating Effect of Perceived Effectiveness of Marketing Function on the Network Ties – Strategic Adaptiveness Relationship

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Abstract

This study examines the critical role of the SME’s marketing function (SME’s MF) perceived effectiveness in leveraging entrepreneurial (SME) network ties to improve strategic adaptiveness (SA). The study tests whether a marketing function perceived as effective by SMEs’ managers/owners moderates the relationship between SMEs network ties and SA required for improved performance. Findings of a moderated regression analysis on a sample of 263 Croatian SMEs indicate that network ties contribute significantly to SMEs’ SA, and that a marketing function perceived as effective only moderates the impact of customer and competitor ties on SMEs’ SA. Research and practical implications are discussed.

Key Words: SME Network ties, Perceived marketing function effectiveness, SME performance, Strategic adaptiveness.

Introduction

It is generally argued that small and medium sized enterprises (SMEs) have limitations that make it difficult for them to plan, develop, and implement effective marketing functions (MF) involving the traditional marketing mix variables of Product, Price, Promotion, and Place (4Ps), like established and large firms (Bettiol, Di Maria, and Finotto 2012; Coviello, Brodie, and Munro 2000; Gilmore, Carson, and Rocks 2006). Their inability to plan and integrate the 4Ps concept into their marketing activities is attributed to key constraints such as limited resources in the form of lack of finance, time, and good market information (Gilmore, Carson, and Rocks 2006). To survive and succeed in the competitive, complex, and uncertain business environment,
SMEs are therefore said to heavily rely on building both business and political ties with stakeholders as an important marketing strategy (Sheng, Zhou, and Li 2011; Wu 2011).

The underlying assumption is that ties with stakeholders enable SMEs to overcome their disadvantages through the access and use of external resources, which would not otherwise have been available to them (Havnes and Senneseth 2001; Jorgensen and Ulhoi 2010; Peng and Luo 2000). A number of empirical studies have indeed established that SMEs actively network (Carson, Gilmore, and Rocks 2004), and that network ties have a positive impact on SMEs’ strategic choices and performance (Bruderl and Priesendorf 1998). Consequently, much of the studies on network ties tend to bypass the role of the marketing function, suggesting that network ties per se may be good enough for superior SME performance.

Recent research into entrepreneurial marketing has, however, shown that SMEs do engage in developing marketing strategies (Bettiol, Di Maria, and Finotto 2012; O’Dwyer, Gilmore, and Carson 2009; Lado, Duque, and Bassi 2013). Varadarajan (2010) defined marketing strategies as the integrated pattern of decisions, choices, and activities that are associated with the boundary spanning role of the marketing function in organizations. Varadarajan (2010) further observed that the marketing function and marketing strategies are sometimes used interchangeably in the literature and refer to firms’ market behaviours in terms of the 4Ps. Accordingly, SMEs use the information and experience gathered from their networks to develop marketing strategies that enable them to enhance performance (Gilmore, Carson, and Rocks 2006; Polo Peña, Frías Jamilena, and Rodríguez Molina 2011; Wu 2011). This strand of research thus suggests
that SMEs marketing strategies have indeed been playing a central role in strategically adapting their products or services in answering to changes in demand (Grünhagen and Mishra 2008; Miles and Arnold 1991). Peng and Luo (2000) therefore note that network ties alone are necessary but insufficient for good performance, and that developing effective marketing functions by SMEs is required to maximise the impact of network ties on their performance. This suggests that both networking ties and effective marketing functions are important in contributing to SMEs’ ability to strategically adapt and enhance their performance, rather than network ties alone (Miles and Arnold 1991). Gilmore, Carson, and Grant (2001) propose that when SMEs finally develop an effective marketing function their confidence levels in terms of not relying on ties may increase.

Yet, we know much less about the impact of network ties on SMEs’ strategic adaptiveness (SA) in respect to MF effectiveness level perceived. SA is a core entrepreneurial philosophy and refers to the ability of SMEs to strategically respond to challenges or crises caused by environmental turbulence (Miles and Arnold 1991). It is surprising that given the substantial literature on network ties, marketing functions, and firms’ performance (Acquaah 2007; Kemper, Engelen, and Brettel 2011), no research has been devoted to integrating these perspectives in examining the relationship between SME's network ties and SA when SMEs' MF is perceived to be effective. Further research is therefore required that integrates both perspectives and examines whether the perceived effectiveness of SME’s MF moderates the impact of network ties on SMEs’ strategic adaptiveness (SA). Ruekert, Walker, and Roering (1985)
conceptualised SA as an important element of performance. In this article, we empirically investigate these issues and address these gaps in the context of a transition economy.

The empirical setting is considered appropriate given that scant attention has been given to the issue in developing and transition economies considering cultures and dynamics in these business environments are different (Miller, Besser, and Malshe 2007). Scholars have therefore made calls for further research in transition and developing countries to improve our understanding of how networks impact on SMEs’ SA, and hence their performance (Peng and Luo 2000). Specifically, our main objectives in this study are to examine (1) the relationship between network ties and SMEs’ SA, and (2) the impact of SMEs owners/managers’ perceived effectiveness of MF on the ‘stakeholder ties’ – SMEs’ SA relationship in the context of a transition economy.

Theory and Hypotheses

Stakeholder theory is linked to business and political networks since it specifies the extent to which a corporation treats its stakeholders appropriately (Driver and Thompson 2002). Mitchell, Agle, and Wood (1997) argue that stakeholders are those groups that are necessary for corporate survival. In the case of SMEs, findings in the literature indicate that the relevant stakeholders managers/owners should engage with include customers, suppliers, competitors, and governments (Peng and Luo 2000; Sheng, Zhou, and Li 2011; Wu 2011; Zhang and Li 2009). This paper adopts this stakeholder theoretical perspective in examining the critical role of a perceived effective MF in
leveraging SMEs’ network ties with different stakeholders to improve SA.

The concept of SMEs network ties has gained recognition and importance in academic enquiry (Miller, Besser, and Malshe 2007; Scott, Dolan, Johnstone-Louis, Sugden, and Wu 2012). The entrepreneurial marketing literature reveals that networks enable entrepreneurs to proactively and strategically posture themselves for survival and enhance performance (Moreno and Casilas 2008). While studies exist that have examined diverse stakeholder ties (Zhang and Li 2009), the two main ties identified in the literature are business ties and political ties (Peng and Luo 2000; Sheng, Zhou, and Li 2011; Wu 2011). Business ties refer to those that SMEs build with key business stakeholders, notably customers, suppliers, and competitors (Hoang and Antoncic 2003; Peng and Luo 2000; Wu 2011). Political ties on the other hand refer to SMEs – government officials’ relationships (Sheng, Zhou, and Li 2011; Wu 2011). The institutional based view suggests that in transition economies, where market-supporting institutions are underdeveloped, firms heavily rely on both political ties and business ties (Peng and Luo 2000).

Studies in marketing strategy (Gilmore and Carson 1999), entrepreneurship (Havnes and Senneseth 2001; Hoang and Antoncic 2003; Scott, Dolan, Johnstone-Louis, Sugden, and Wu 2012), innovation, and international business (Xu, Lin, and Lin 2008), all concur that networking improves the performance of SMEs. Accordingly, networking does not only enhance the marketing activities of SMEs (Carson, Gilmore, and Rocks 2004), but also increases their innovation rate, competitive advantage, internationalization, and in the long run, their survival and profitability (Havnes and
The issue of strategic adaptiveness is extremely important in the dynamic and contemporary globalised business environment (Krohmer, Homburg, and Workman 2002; Miles and Arnold 1991). Markets are more global and technologically sophisticated, competition is more intense, and consumers are more demanding (Coviello, Brodie, and Munro 2000). Firms are therefore facing increasingly turbulent, complex, and threatening environments (Miles and Arnold 1991). All these underscore the importance of a firm’s ability to strategically adapt to this changing business environment. We argue that through network ties, SME entrepreneurs acquire vital information, knowledge, and experience that enable them to develop marketing functions. The extent to which SMEs’ managers/owners perceive their resulting marketing functions to be effective, will influence their level of reliance on network ties, which would perhaps impact the contribution of these ties to their SA. Thus, the core of our argument is that the effectiveness of the MF perceived by SMEs moderates the relationship between their network ties and strategic adaptiveness.

**Network Ties with Customers**

The importance of building and maintaining relationships with customers has been underscored by Peng and Luo (2000) who note that such ties tend to spur customer loyalty, sales volume, and reliable payment. Gilmore, Carson, and Grant (2001) also emphasise that building relationships with customers is vital to SMEs success. Arguably, ties with customers enable SMEs to know customers’ needs and demands, and respond
appropriately in order to satisfy them (Wu 2011). Recent studies offer further evidence that customer ties enable SMEs to derive important insight into more timely information, and customer changing needs. Moreover, such ties reduce SMEs’ vulnerability to environmental threats, and also help them strategically adapt to meet customers’ demands (Kemper, Engelen, and Brettel 2011; Sheng, Zhou, and Li 2011). As such, relevant knowledge about customers, necessary for developing effective marketing strategies better, is acquired through interaction with customers and maintaining those relationships (Acquaah 2007). Thus:

**H1-1:** *Relationships (ties) with customers are positively associated with SME strategic adaptiveness.*

Arguably, customer ties are necessary but not sufficient for survival and superior performance of SMEs without an effective MF. Carson and Gilmore (2000) therefore suggest that from the onset, SMEs’ marketing decisions are usually uncontrollable, haphazard, informal, loose, unstructured, spontaneous, reactive and less effective because of their constraints and heavy reliance on network ties. At this stage, network ties have a dominant impact on SME’s SA, as they mainly react to customer inquiries and market changes (Gilmore and Carson 1999). Yet as a business develops and becomes more established, alongside an entrepreneur gaining more experience and knowledge, SMEs are able to develop their own marketing style that is competitive, efficient, and controlled (Gilmore and Carson 1999).
An SME marketing model developed by Gilmore, Carson, and Rocks (2006) underscores this argument. The model suggests that when an SME finally develops and implements marketing activities perceived effective, then the impact of network ties on its performance will diminish. At this point, SMEs confidence levels in terms of not relying only on its network ties increase and the impact of ties on the firms’ SA is reduced (Rocks, Gilmore, and Carson 2005). However, SME managers may prematurely or wrongly perceive their MFs to be effective at one point and lessen their reliance on network ties. This will also reduce the positive impact of the network ties on their SA. This discussion leads to the following hypothesis:

**H1- 2:** The more effective the marketing function is perceived to be, the lower the impact of customer ties on SME strategic adaptiveness.

**Network Ties with Suppliers**

Ties with suppliers help a firm acquire quality materials, good services, and timely delivery (Luo and Chen 1997; Peng and Luo 2000). They are also essential in developing trust and belief in the reliability of others, in terms of fulfilment of their obligations (Hoang and Antoncic 2003). This results in actions that are predictable and mutually acceptable to both parties, which in turn enhance the quality of resource flows, as well as reduce bureaucratic mechanisms and transaction costs (Das and Teng 1998; Hoang and Antoncic 2003). Ties with suppliers are also observed to be influential in SMEs’ internationalization strategies and subsequent performance (Zain and Ng 2006).
Wu (2011) further notes that ties with suppliers can contribute to product innovation, by offering more knowledge pool, more choices to solve problems, as well as finding new combinations among different elements. Havnes and Senneseth (2001) thus argue that network ties with suppliers enable SMEs easy access to resources that would not have been readily available to them, and would have been more costly to access them. The argument is that network ties with suppliers help reduce the cost of transaction, as well as improve reliability, efficiency, quality, and SME performance. Thus we hypothesize that:

**H2 -1:** Relationships (ties) with suppliers have a positive impact on SME strategic adaptiveness.

Carson and Gilmore (2000), however, suggest that in the absence of a structured and successful MF, SMEs rely heavily on network ties, including ties with suppliers, to strategically adapt and compete. This particularly holds true at the onset of the business operation (Gilmore and Carson 1999), when SMEs’ mainly react to suppliers’ activities, such as promotion activities (Gilmore, Carson, and Rocks 2006). But when SMEs’ are eventually able to develop sophisticated MF that is perceived as effective (Gilmore, Carson, and Rocks 2006), then the need to rely on ties with suppliers may diminish. A sophisticated MF will allow an SME to strategically adapt by seeking to gain value added options beyond those gained by cultivating ties with suppliers alone (Rocks, Gilmore, and Carson 2005). For instance, a sophisticated MF may help SMEs plan and
make informed marketing decisions regarding issues such as quality inputs for product innovations and supply chain considerations. This will allow SMEs’ strategic adaptiveness to be mainly driven by marketing competencies, as opposed to supplier input. Based on this line of argument, we hypothesize that:

**H2- 2:** *The more effective the marketing function is perceived to be, the lower the impact of supplier ties on SME strategic adaptiveness.*

**Network Ties with Competitors**

Developing good relationships with competitors has been considered as a common component in SMEs network structure (Xu, Lin, and Lin 2008). Others go further to note that such ties facilitate efficient information flow, which in turn leads to emerging innovative ideas and opportunities (Xu, Lin, and Lin 2008). Gilmore, Carson, and Grant (2001) highlight another reason for SMEs collaborations with competitors, is to ensure clients do not take work out of the domestic market to a different company. Miller, Besser, and Malshe (2007) also discovered SMEs willingness to network and collectively share efforts towards influencing policy formulation. A number of studies support the view that network ties with competitors broaden SMEs’ opportunities for knowledge sharing, deemed necessary for sustainable innovation (Havnes and Senneseth 2001; Jorgensen and Ulhoi 2010). It is therefore widely established that SMEs make substantial efforts to developing and maintaining ties with their competitors for their collective gain. Accordingly, we hypothesise that:
**H3-1:** Relationships (ties) with competitors have a positive impact on SME strategic adaptiveness.

We argue that relying heavily on networks alone, including ties with competitors, leads to SMEs making limited marketing decisions that are haphazard and reactive to competitor activities (Gilmore, Carson, and Rocks 2006). Such ties at this point have a dominant impact on SME’s SA (Gilmore and Carson 1999). However, SMEs may be able to use vital information and experience obtained from their competitor ties to develop a sophisticated and effective MF. This leads to better strategic positioning, innovation, new products/service development, and hence, strategic adaptiveness (Krohmer, Homburg, and Workman 2002). We therefore further argue that the more effective the MF is perceived to be, the weaker will be the impact of competitor ties on SA. In this sense, the relationship between ties with competitors and SA will be weaker for higher levels of perceived MF effectiveness. Based on these arguments, we hypothesise that:

**H3-2:** The more effective the marketing function is perceived to be, the lower the impact of competitor ties on SME strategic adaptiveness.

**Network Ties with Government Officials**

The impact of ties with government officials on SMEs performance has been
keenly disputed. For instance, while Wu (2011) suggests that ties with government officials may lead to good performance, Rocks, Gilmore, and Carson (2005) found limited or no effort in Irish SMEs for developing ties with government officials with the aim of improving their performance. Peng and Luo (2000) explain that in transition economies, SMEs tend to rely on network ties with government officials in order to succeed. In such environments, (the) states’ regulatory regimes tend to be complex, unpredictable, and influential in firms’ performance (Hillman and Hitt 1999). Political ties can help firms gain more information on government regulations and emerging policies, which can help reduce policy uncertainty surrounding important issues, as well as improve firms’ policy influence (Wu 2011). Ties with government officials can also help firms to source valuable resources, such as finance, subsidies, tax rebates, and research funding from government, all of which are critical to innovation and SMEs survival (Hillman and Hitt 1999). Given the need to strategically adapt and protect the business against uncertainty in transition economies business environments, SMEs naturally maintain a “disproportionately greater contact” with government officials (Luo and Chen 1997). This argument gives rise to the next hypothesis:

**H4-1:** Relationships (ties) with government (political ties) have a positive impact on SME strategic adaptiveness in transition economies.

SMEs survival and success are found to be dependent on their overall marketing efficiency, since lack of it has been cited as a key cause of company failure (Blankson
and Stokes 2002). Planning and implementing a strategic marketing programme are considered as key activities for good performance and strategic adaptiveness (Miles and Arnold 1991). It is thus worth arguing that the more sophisticated and efficient the MF of SMEs is perceived to be, the less they rely on political ties, and hence the lower the impact of political ties on their SA. In the absence of a competitive MF, political ties, particularly in transition and developing economies, are seen as an equivalent and economical replacement. However, meeting customer needs with the help of an effective MF will lower the need to rely on government ties for strategic adaptation. Thus, with a MF perceived as effective, the reliance on political ties reduces, and its impact on SA weakens.

**H4-2:** The more effective the marketing function is perceived to be, the lower the impact of government ties on SME strategic adaptiveness in transition economies.

**SME’s Marketing Function**

Extant literature suggests that SMEs find it difficult to develop an effective MF involving the four variables of the marketing mix (Coviello, Brodie, and Munro 2000). Consequently, SME’s MFs are observed to be simplistic, haphazard, ineffective, often responsive and reactive to competitor activity. Hisrich (1992), for instance, notes that SME managers/owners are often poor planners with limited understanding of marketing, and as a result, their marketing practices are typically non-traditional, non-strategic, and non-comprehensive. Coviello, Brodie, and Munro (2000) therefore suggest that SMEs
tend to use network ties in their marketing activities for survival and performance. Gilmore, Carson, and Rocks (2006), however, found that even though some SMEs marketing activities are selective or limited because of these constraints, others are able to develop sophisticated marketing in order to compete. It may therefore be misleading to maintain the view that in the absence of the traditional or formal marketing strategies, SMEs do not engage in marketing. Recent streams of literature in entrepreneurial marketing have shown that SMEs do engage in marketing, but that their marketing strategies differ from the conventional MF observed in large organisations (Bettiol, Di Maria, and Finotto 2012; Hills, Hultman, and Miles 2008). Such studies suggest that SMEs’ MFs are more product- and price-oriented (Coviello, Brodie, and Munro 2000). O’Dwyer, Gilmore, and Carson (2009) reveal that relative to larger firms, SMEs place more emphasis on the product/service offering and pricing issues in their market planning activities, and that their marketing activities are driven by product innovation. Miles and Darroch (2006) also suggest that SMEs/entrepreneurs tend to concentrate on incremental innovations in their marketing practices.

Grünhagen and Mishra (2008) emphasise that marketing strategies in SMEs have indeed been playing a central role in their understanding of the complex business environment and strategically adapting their products or services in answering to changes in demand. We argue that SME’s MF has an impact on its strategic adaptiveness. We are also of the view that different levels of its perceived MF effectiveness allow for different levels of SA. This leads us to the next hypothesis:
**H5:** SME marketing function perceived to be effective will have a positive impact on its strategic adaptiveness.

[Insert Figure 1]

Based on the extensive literature review in SME networking, a conceptual model containing the hypotheses is developed as depicted in Figure I. In line with the model, we first test the impact of network ties and MF perceived as effective on SMEs’ strategic adaptiveness. Furthermore, we test whether SMEs’ MF perceived as effective of moderates the relationship between ties and strategic adaptiveness.

**Methodology**

**Sample**

Our sample was randomly drawn from a pool of SME companies in Croatia. We focus on Croatia in response to calls for further studies in transition economies on network ties to improve our understanding of the impact of network ties on SMEs performance (Peng and Luo 2000). The SMEs in the sample (with names and contact details of owners/managers) were identified through a database of the official Croatian Finance agency known as ‘Business Croatia’. The database used was the 2009 edition, specifically, the Poslovna Hrvatska 2009’. The researchers used the database to identify a total of 11,989 SMEs operating in the country. Out of this population, a decision was made to randomly select 1/5 of the entire population of SMEs in Croatia (11,989x.20=2,398). The decision was based on the assumption that a very conservative
response rate of 10 percent in Croatia would produce a return of approximately 240 replies. A sample of this size is considered appropriate for the purpose of this study. The study uses a survey design, as in many network ties studies (Coviello, Brodie, and Munro 2000; Peng and Luo 2000; Sheng, Zhou, and Li 2011). Thus, a questionnaire (with a self-addressed envelope) was subsequently sent via post to the randomly selected 2,398 companies at the beginning of April 2009. To ensure confidentiality and to encourage participants to be candid in their responses, each respondent was asked to enclose and seal their survey in the envelope provided together with the questionnaire before mailing it back to one of the researchers.

The data collection took place from the beginning of April until the end of July 2009. A total of 313 questionnaires were returned, 263 of which were complete, amounting to a 10.97 percent response rate. The participating firms in our sample were geographically dispersed. A broad spectrum of firms was represented in the final sample of 263 respondents, including construction (21 percent), tourism (15 percent), manufacturing industries (15 percent), wholesale (9 percent) and miscellaneous (40) percent. Also, 7 percent of the companies were micro businesses with no more than 10 employees, 28 percent were small sized firms employing a maximum of 49 employees, and 65 percent were medium companies with more than 50 employees. Sixty-seven (67) percent of firms were privately owned, 16 percent government owned, 8 percent mixed with foreign and domestic ownership, and 6 percent mixed with government and private ownership. Thirty-one (31) percent of individual respondents were the directors of the
firm, 24 percent owners of the firm, 10 percent were sales managers, and 35 percent reported their position as “other.”

**Conceptualisation and Operationalisation of the Constructs**

The questionnaires completed by respondents contained measures designed to elicit information about network ties, strategic adaptiveness, and marketing function (price and product quality). Operationalisations of the constructs are provided below.

*Firm Size (FS):* We controlled for firm size since prior studies show that firm size may influence networking ability (Coviello, Brodie, and Munro 2000; Peng and Luo 2000). Firm size was equated with the total number of employees in a firm (Peng and Luo 2000).

*Ownership Status (OS):* Extant literature also shows that firms’ ownership status may influence networking ability. The ownership status involves non-state-owned and state-owned enterprises (SOEs). In transition economies where non-SOEs tend to lack formal institutional support, managers in these firms may be strongly motivated to search for ways to compensate for such lack of support and improve performance by socially investing in both business and political ties (Xin and Pearce 1996).

*Strategic Adaptiveness (SA):* The dependent variable was measured using a four-item scale developed by Krohmer, Homburg, and Workman (2002). Respondents indicated on a seven-point scale (1 = strongly disagree to 7 = strongly agree) how accurately each statement described the adaptive ability of the firm (see Table 1 for the items of the construct).
Ties with Customers (TCu): Ties with customers were measured using six-items borrowed from the scales developed by Peng and Luo (2000) and Narver, Slater, and MacLachlan (2004), and adjusted accordingly to fit the purpose of this study. First, an item was taken from Peng and Luo’s (2000) study pertaining to managerial ties and performance in a transition economy, and then five items were taken from Narver, Slater, and MacLachlan (2004) scale measuring proactive customer orientation (see Table 1 for the items of the construct).

Ties with Suppliers (TSu): The five-item scale measuring network ties with suppliers was adapted from two scales. This consisted of an item taken from Peng and Luo’s (2000) study and four items taken from Wuyts and Geyskens (2007) scale on supplier (partner) role formalization.

Ties with Competitors (TCo): To develop the scale for measuring TCo, six items were borrowed from three scales. One item was taken from Peng and Luo (2000), another from Porter (1980), and four items were borrowed from Narver and Slater (1990) and adjusted accordingly for this study. The adjusted scale measured the extent to which SMEs utilized network connections with competitors.

Ties with Government Officials (TGO): The four-item scale for measuring TGO was adapted from Rindfleisch and Moorman (2001) scale on relational embeddedness. This scale lends itself for measuring SME networking with government officials because relational embeddedness cancels out power asymmetries that can be found in such relationships (Uzzi 1997).
SME’s Marketing Function (MF): To develop a scale for measuring SME’s MF, SMEs’ owner/managers were interviewed. A total of 20 interviews were conducted with SME managers (8 micro, 6 small, and 6 medium), operating in different sectors (4 construction, 6 tourism, 8 production sector, 2 trade). The rationale for the interview was based on the general argument that SMEs’ MF differ significantly from the traditional marketing mix paradigm (Coviello, Brodie, and Munro 2000; Gilmore and Carson 1999). From the interviews we found that product quality and pricing issues were the most dominant in a sophisticated SME’s marketing activities. This is supported by extant literature that suggests that SME MF is more product- and price-oriented (Coviello, Brodie, and Munro 2000), and that SMEs place more emphasis on product/service offering and pricing issues in their market activities relative to larger firms (Gilmore, Carson, and Rocks 2006; Miles and Darroch 2006; O’Dwyer, Gilmore, and Carson 2009). As a result, a two-item scale covering product innovation and price differentiation issues was developed.

The items for each of the ties (TCu, TSu, TCo & TGo) and MF were measured using a seven-point scale ranging from 1 = strongly disagree to 7 = strongly agree. Respondents indicated on this 7-point scale how accurately the statements described their firms’ TCu, TSu, TCo, TGo and MF (see the table 1 for the items of all constructs).

Data Analysis

Measurement Scale Development
Initially, exploratory factor analysis (EFA) was used to assess the extent to which the measurement variables represented their underlying factors. The sample size (N=263) was considered to be appropriate (Hair, Anderson, Tatham, and Black 2006) for EFA. In survey research common method variance (CMV) may lead to erroneous conclusions about relationships between variables by inflating or deflating findings. To test for CMV, Harman's single factor test was used. The presence of a substantial amount of CMV is indicated by either a single factor emerging from factor analysis or by one general factor that accounts for the majority of covariance in the dependent or criterion variables (Huang, Chen, and Stewart 2010: 293; Podsakoff and Organ 1986).

EFA was first used with all 25 variables and the results indicated a six-factor solution. Furthermore, constraining the number of factors extracted in the EFA to one, the resulting single factor only accounted for 28.52 percent of the variance in the model. The above findings indicate that common method variance is not an issue of concern in this study. The factor loadings of all 25 variables on the six-factor solution extracted (using a VARIMAX orthogonal rotation) appear in Table 1.

[Insert Table 1 here]

In addition to EFA, confirmatory factor analysis (CFA) of all constructs was performed and the results indicated that the model provided a good fit to the data. The CFA resulted in a $CMIN/DF = 1.428$ and the other measures of the fit indexes exceeded the critical levels suggested by Bentler and Bonnet (1980); comparative fit index
CFI=0.971; goodness-of-fit index GFI=0.923; incremental fit index IFI=0.971 and root mean square error of approximation RMSEA=0.040. Each scale was also subjected to a reliability and validity analysis. Reliability was assessed using Cronbach’s alpha and construct reliability (CR), while the convergent validity was evaluated using the average variance extracted (AVE) statistic. The results of the four-item strategic adaptiveness scale have shown acceptable levels of reliability (Cronbach’s α=0.793; CR=0.77), whereas the convergence validity (AVE=0.47) was found to be marginally below the cut-off point of .50. The remaining scales, that is, the five-item ties with customers (Cronbach’s α=0.867; CR=0.79; AVE=0.75), four-item ties with suppliers (Cronbach’s α=0.90; CR=0.89; AVE=0.67), five-item ties with competitors (Cronbach’s α=0.919; CR=0.91; AVE=0.68), and the five-item ties with government officials (Cronbach’s α=0.881; CR=0.92; AVE=0.56) have all met the acceptable levels of 0.7 reliability for the alpha values (Nunally 1978). In addition, they have all met the recommended levels for construct reliability (Hair, Anderson, Tatham, and Black 2006) and 0.5 validity (Chin 1998). Furthermore, no confidence interval of the phi values contained a value of one (p<.01) indicating that the constructs possessed discriminant validity (Bagozzi and Phillips 1982).

RESULTS

To test the research hypotheses, the data analyses were completed using correlation and moderated hierarchical multiple regression. The correlation amongst the constructs indicated that TCu, TSu, TCo TGO and MF are positively correlated with the strategic
adaptiveness (SA) construct, with Pearson correlation r values ranging from .076 to .412. All correlations except the ones between SA and TGO, and MF and TGO were statistically significant (see Table 2). The results of the correlation analysis provided the basis for undertaking the moderated hierarchical regression analysis.

[Hypotheses H1-1, H2-1, H3-1 and H4-1]

A hierarchical regression analysis was used to examine the relationship between TCu, TSu, TCo, TGo and SA. This method allows a sequential entry of variables with each independent variable being assessed in terms of what it adds to the prediction of the dependent variable, after the previous variables have been controlled for (Pallant, 2007). The results are presented in hierarchical fashion in Table 3 to better examine and depict the variance explained by the different constructs. Model 1 contains only the control variables (CVs) and reveals that the CVs explain 2.4 percent of the variance in the SA of SMEs. The coefficient for firm size is not significant while that of ownership status is significant and positive. Model 2 depicts that TCu is positively and significantly (β=0.415, p < 0.001) related to SA. The model with the TCu included explains 19.7 percent of the variance in SA ($R^2=0.197$, Adjusted $R^2=0.187$, $F$ change=53.569). This finding supports our H1-1. Examination of the CV reveals that only ownership status is significantly associated with SA (β=0.153, p<0.05).
In model 3 (Table 3) the coefficient of TSu is positive and significant ($\beta = 0.323, p < 0.001$), and the model explains 12.8 percent of the variance in SA ($R^2 = 0.128$, Adjusted $R^2 = 0.117$, $F$ change = 29.629). This outcome also supports hypothesis H2-1. None of the CVs in this model are significant. As presented in model 4 (Table 3), TCo is positively and significantly ($\beta = 0.270, p < 0.001$) related to SA and the model explains 9.7 percent of the variance in SA ($R^2 = 0.097$, Adjusted $R^2 = 0.086$, $F$ change = 20.064). The coefficients of the CVs in the model also reveal that only ownership status is significantly related to SA ($\beta = 0.145, p < 0.05$). The results support H3-1 as TCo has a significant positive effect on SA after controlling for the effects of the other variables in the equation.

Similarly, model 5 depicts a positive and significant ($\beta = 0.146, p < 0.05$) relationship between TGo and SA, with the model explaining 4.3 percent of the variance in SA ($R^2 = 0.043$, Adjusted $R^2 = 0.031$, $F$ change = 4.750). Thus, model 5 results confirm H4-1. Again, the coefficients of the CVs reveal that only ownership status is significantly related to SA ($\beta = 0.179, p < 0.05$). Finally, the results in model 6 reveal that MF has an impact on SA. The coefficient is positive and significant ($\beta = 0.386, p < 0.001$) with the model explaining 17.1 percent of the variance in SA ($R^2 = 0.171$, Adjusted $R^2 = 0.161$, $F$ change = 44.260). H5 is thus supported. None of the CVs are significant in this model. The results so far have provided support for H1-1, H2-1, H3-1, H4-1, and H5, that TCu, TSu, TCo, TGo, and MF significantly influence SMEs’ SA.
TCu has the most significant impact on SA followed by MF. The relatively strong influence of MF on SA gives further evidence that it would moderate the effect of TCu, TSu, TCo, and TGo on SA, which is the focus of the rest of our hypotheses.

**Hypotheses H1-2, H2-2, H3-2 and H4-2**

To examine the moderating effects of MF on the relationship between TCu, TSu, TCo, TGo and SA, a moderated regression analysis was conducted. This method was adopted because of its wide usage and consideration as the most straightforward method for testing hypotheses in which an interaction is implied (Huang, Chen, and Stewart 2010; Mohr, Fisher, and Nevin 1996). In H1-2, H2-2, H3-2 and H4-2 we implied that MF will influence the relationship between the independent variables (that is TCu, TSu, TCo, TGo) and SA. The results of the moderated regression models are presented in Table 4.

[Insert Table 4 here]

Model 3 shows that the interaction effect of MF with the IVs is significant at the \( p < 0.01 \) level \( (R^2 = 0.337, \text{ Adjusted } R^2 = 0.307, F \text{ change} = 4.665) \). The results therefore reveal that the inclusion of the interaction terms significantly improves the variance explained \( (R^2 \text{ value}) \) in model 3 than the variance explained in model 2, which excludes them. Specifically, model 3 explains 33.7 percent of the variance in SA, while model 2 explains 28.6 percent. A change in the \( R^2 \) value of 0.02 due to the inclusion of the
interaction effects is considered to be an acceptable cut-off point (Huang, Chen, and Stewart 2010). The change of the $R^2$ value (that is 0.051 increase) in this study is, however, higher than the threshold figure, demonstrating a reasonable interaction effect and the importance of the moderating effects of MF on the IVs - SA relationship.

[Insert Figure 2 here]

Specifically, the results reveal a significant moderating effect of MF on the association between TCu and SA ($\beta = -0.120$, $p < 0.05$). A plot of this interaction in Figure 2(a) confirms that the perceived effectiveness of an SME’s marketing function significantly influences the impact of ties with customers on SMEs’ strategic adaptiveness, thus supporting H1-2. The negative coefficient indicates that for a more efficient MF, TCu has a smaller effect on SA. The interaction between TSu and MF is not significant ($\beta = -0.122$, $p > .05$), thus rejecting H2-2 that when the MF is perceived as effective the influence of TSu on SA diminishes. The results further reveal a positive and significant ($\beta = 0.142$, $p < 0.05$) moderating effect of MF on the relation between TCo and SA. The results do not provide support for H3-2, and the graphical depiction of this relationship in Figure 2(b) reveals that TCo has a stronger effect on SA when SMEs perceive their MF to be effective. Finally, H4-2 does not receive statistical support as the moderating effect of MF on the relationship between TGo and SA is not significant ($\beta = 0.104$, $p > 0.05$). Also, the CVs in both models 2 and 3 are not significantly related to SA.
**Discussion and Implications**

Building on the network ties literature, the results have endorsed that TCu, TSu, TCo, TGo, and MF contribute to SMEs’ SA as hypothesised. The study further established that perceived effectiveness of SMEs MF impacts the effect of TCu and TCo on SA. Moreover, the interactions between TSu and MF, as well as between TGo and MF were not significant; depicting that MF does not moderate the relationships between TSu and SA or between TGo and MF. These findings have several theoretical and managerial implications.

**Theoretical Implication**

Theoretically, the study has made a number of contributions to the SMEs’ literature. First, this research extends the network literature and builds bridges between the traditional marketing and the relational marketing theoretical perspectives. It does this by integrating network ties, MF and SA in a single model to examine the moderating effects of perceived effectiveness of MF on the relationship between network ties and SMEs’ SA. By proposing and testing a set of interconnected relationships, the present study adds and extends previous research that examined these issues separately. The integrative nature of this study also underscores that research on SME’s marketing can bring together both MF and networks perspectives to examine important SMEs issues, instead of the usual narrow focus on these perspectives ordinarily adopted in the marketing literature. Accordingly, this study also provides a basis for scholars to further
evolve and develop an even more integrative perspective of these issues.

Second, the introduction of SA as an important concept in the SMEs’ and general marketing literature has important theoretical relevance. Though SA has been mentioned in few previous studies (Krohmer, Homburg, and Workman 2002; Miles and Arnold 1991; Ruekert, Walker, and Roering 1985), its conceptualisation and examination has not been systematic and detailed. The study therefore provides a basis for scholars to further examine and develop an even more robust perspective on SMEs’ SA.

Third, the finding that TGo makes the least contribution to SMEs’ SA is unexpected and presents a contrary view to the general institutional theoretical argument. This finding reveals that not across all developing or transition economies should more emphasis be placed on developing and sustaining political ties than business ties, as suggested by Peng and Luo (2000). This might be the case in Croatia as well, but when restricted specifically to SA, its impact is not as strong as other ties. However, it is possible that Eastern European countries are much better regulated and their regulations are less complex than other transition economies including China. Our result however confirms Rocks, Gilmore, and Carson (2005) finding that TGo plays the least important role among UK SMEs. Theoretically therefore, the dominance of TGo’s influence on SMEs’ performance is context specific and should not be generalised to all developing and transition economies.

The findings further suggest that at high levels of perceived MF effectiveness the importance of TCu on SA will be diminished, while the importance of TCo on SA will
be increased. This finding is also novel and significantly contributes to our understanding of the impact of SMEs network ties and marketing activities on SA. Especially, the finding that developing TCo is indispensable to SMEs SA, even when they have an effective MF is an important contribution to the literature. The relevance of continuously developing TCo is because collaboration among competitors tends to enhance their innovation capabilities and their ability to compete against the large players in the same industry (Gnyawali and Park 2009). In transition economies, particularly with institutional inefficiencies and high risk levels, ties with TCos will enable SMEs to better mitigate risks by combining their complementary strengths (Morris, Kocak, and Özer 2007).

Finally, we further show that developing both networking ties and MFs are vital to the survival and performance of SMEs. A number of researchers have previously highlighted that developing MFs are undertaken mainly by large companies, with limited empirical studies commenting that marketing activities could also be developed by SMEs. The findings from this study underscore the view that SMEs can and should develop MFs in addition to their network ties to enable them effectively adjust to the fast changing business environment. In this sense, this finding contradicts and extends the previous research claims that networks may be more important to SME performance than MFs (Coviello, Brodie, and Munro 2000).

**Practical Implications**

The findings from this study also have a number of practical implications. First, the
level of impact that each of the network ties have on SMEs’ SA is different. TCu is observed to contribute more to SMEs’ SA followed by MF, TSu, TCo and TGo, respectively. The dominant contribution of TCu is in line with the study by Narver, Slater, and MacLachlan (2004), which found that network ties with customers are most important to companies. The finding, however, contradicts the argument by O'Donnell (2004) that all stakeholders are equally important for SME networks. Our study therefore suggests that TCu is very critical in helping SMEs derive important insight into their external environment, and SME managers/owners should pay attention to ties with their customers.

Second, the findings underscore that with a MF perceived as effective, TCo’s impact on SME’s SA increases. Developing and maintaining TCo still remains significantly important to SMEs’ efforts to strategically adapt and compete. This is in line with the strategic alliance literature, which places emphasis on close networking and collaboration even among competing firms in order to succeed in the global business environment (Das and Teng 1998). It practically implies that a perceived effective MF would lead to an increase in the impact of TCo on SMEs’ SA, and would not deter SMEs from continuing to develop and maintain TCo as it is still quite important in their efforts to understand the competitive landscape for strategic adaptation.

Third, developing an effective MF will enhance the SA capability of SMEs. However, they need to have an efficient mechanism in place that adequately measures the effectiveness of their MF rather than merely relying on the perceptions upheld by
the owner/manager in determining the effectiveness of the MF. This will enable SME owner/managers accurately determine when to rely more on their network ties or MF. In this sense, their reliance on network ties will not be wrongly reduced based on a wrong perception that the MF is effective enough to ensure their SA capability when it is not.

Finally, the findings further imply that for SMEs, continual effort in developing network ties (particularly with competitors) is critical to their SA. The study further underscores that SMEs’ managers/owners should direct more efforts towards developing customer ties and less efforts towards developing ties with government officials in Croatia, and perhaps in other transition economies in Eastern Europe. In addition, developing an efficient MF is relevant for their SA. However, such a MF that focuses more on product quality and pricing issues, rather than all the traditional marketing mix elements, could still be effective enough to enable them understand the business environment and make appropriate decisions to adjust and compete effectively. With a MF, much effort should be made in sustaining and augmenting ties with competitors, as the MF will increase the effect of these ties on the SMEs SA.

**Limitations and Areas for Future Research**

This study is not without limitations. First, we borrowed items from different scales in this study to measure the constructs. Although these items have been subjected to validity and reliability tests, they have not been subjected to rigorous psychometric testing. Additionally, borrowed items are mainly from studies focusing on US/Western (developed) countries. Using them in the context of a transition economy (Croatia)
without establishing construct equivalence is thus a limitation and should be addressed adequately by future studies. Second, the study used only two dimensions (product and price) to measure the MF. In the traditional marketing literature, the 4Ps are usually employed in measuring the MF of organisations. Despite the justification provided in this study regarding the use of the two dimensions, it limits the generalizability of the findings. It would be useful for future studies to again investigate the factors that determine SMEs’ MF and ensure a more comprehensive measurement of SMEs’ MF.

Third, it is possible that network ties and MF are not the only factors that determine SMEs’ SA and researchers could explore the other factors that could affect SMEs’ SA. Previous research suggests that factors such as network centrality, density, flexibility, size, level of formality, and stability are also relevant to SMEs’ performance (Provan, Fish, and Sydow 2008; Soda, Usai, and Zaheer 2004). Thus, issues pertaining to these factors could play a significant role on SME’s SA and excluding these factors is another limitation of the study. Further studies could examine these factors separately with each stakeholder group and the moderating effect of actual SMEs’ MF that is effective on the network – SA relation, since this study only focused on the MF perceived as effectiveness.

Finally, we collected our data from a single transition country in Eastern Europe (Croatia). Variations in the business environments of different transition and emerging countries, which may require different SA response, may limit the generalizability of the findings in this study. To enhance the generalizability of findings future studies should be based on samples from different transition and emerging countries from different
Conclusion

This study suggests that network ties contribute significantly to SME’s SA, and that an SME’s MF perceived as effective moderates TCu’s and TCo’s impact on SMEs’ SA, but not with other ties (suppliers and government). Specifically, SME’s MF perceived as effective significantly reduces TCu impact, and enhances TCo impact on SME’s SA. For SME’s attempting to become more entrepreneurial, however, the value-added contribution of this paper lies in providing a sharper picture of exactly how network ties and marketing effectiveness influence SMEs SA. This type of finely tuned information is of practical use to managers and researchers for better understanding the interplay of marketing and networking activities, and their impact on SA. The contention that SMEs do develop both network ties and marketing programmes calls upon an integration of network ties in the marketing programme in a way that maximizes the beneficial outcomes of both activities.

References


Figure 1
Moderating Effect of SME’s MF on Ties – SA Relationship Proposed Model

SME’s Marketing Function (SME’s MF)

- Ties with Customers (TCu)
  - H1-1
- Ties with Suppliers (TSu)
  - H2-1
- Ties with Competitors (TCo)
  - H3-1
- Ties with Government (TGo)
  - H4-1

H1-2
H2-2
H3-2
H4-2
H5

Strategic Adaptiveness (SA)
<table>
<thead>
<tr>
<th>Construct Code: factor</th>
<th>Reference</th>
<th>Measurement Variable</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic adaptiveness (SA)</td>
<td>SA1</td>
<td>We adapt our marketing strategy adequately to changes in the business environment</td>
<td>.814</td>
</tr>
<tr>
<td></td>
<td>SA2</td>
<td>We adapt our marketing strategy adequately to changes in competitors’ marketing strategies</td>
<td>.833</td>
</tr>
<tr>
<td></td>
<td>SA3</td>
<td>We adapt our products quickly to the changing needs of customers</td>
<td>.632</td>
</tr>
<tr>
<td></td>
<td>SA4</td>
<td>We react quickly to market threats</td>
<td>.569</td>
</tr>
<tr>
<td>Ties with customers (TCu)</td>
<td>TCu1</td>
<td>We network with customers to continuously try to discover their needs</td>
<td>.815</td>
</tr>
<tr>
<td></td>
<td>TCu2</td>
<td>We network with customers to provide solutions to their needs</td>
<td>.864</td>
</tr>
<tr>
<td></td>
<td>TCu3</td>
<td>We network with customers to identify how they use our products and services</td>
<td>.745</td>
</tr>
<tr>
<td></td>
<td>TCu4</td>
<td>We network with customers to find areas of product/service innovation even at the risk of making our current products obsolete</td>
<td>.730</td>
</tr>
<tr>
<td></td>
<td>TCu5</td>
<td>We network with customers and work closely with lead users who try to recognize customer needs months or even years before the majority of the market may recognize them</td>
<td>.687</td>
</tr>
<tr>
<td>Ties with suppliers (TSu)</td>
<td>TSu1</td>
<td>We network with suppliers and in this network both parties believe they should cooperate well because we share the same interests</td>
<td>.797</td>
</tr>
<tr>
<td></td>
<td>TSu2</td>
<td>Networking with suppliers precisely defines the roles of each partner</td>
<td>.852</td>
</tr>
<tr>
<td></td>
<td>TSu3</td>
<td>Networking with suppliers is related to the profitability of our firm</td>
<td>.860</td>
</tr>
<tr>
<td></td>
<td>TSu4</td>
<td>Networking with suppliers is related to product quality, technical skills, and financial strength</td>
<td>.824</td>
</tr>
<tr>
<td>Ties with competitors (TCo)</td>
<td>TCo1</td>
<td>We network with a selective group of competitors in an attempt to rapidly respond to their actions that threaten us</td>
<td>.805</td>
</tr>
<tr>
<td></td>
<td>TCo2</td>
<td>We network with a selective group of competitors in an attempt to regularly collect information concerning their activities</td>
<td>.862</td>
</tr>
<tr>
<td></td>
<td>TCo3</td>
<td>We network with a selective group of competitors in an attempt to diagnose their goals</td>
<td>.884</td>
</tr>
<tr>
<td></td>
<td>TCo4</td>
<td>We network with a selective group of competitors in an attempt to identify areas where they have succeeded or failed</td>
<td>.867</td>
</tr>
<tr>
<td></td>
<td>TCo5</td>
<td>We network with a selective group of competitors and look for market opportunities that do not threaten us</td>
<td>.750</td>
</tr>
<tr>
<td>Ties with government officials (TGO)</td>
<td>TGO1</td>
<td>We feel indebted to government officials for what they have done for us</td>
<td>.713</td>
</tr>
<tr>
<td></td>
<td>TGO2</td>
<td>Our interactions with government officials can be defined as “mutually gratifying”</td>
<td>.837</td>
</tr>
<tr>
<td></td>
<td>TGO3</td>
<td>Maintaining a long-term network with government officials is important to us</td>
<td>.834</td>
</tr>
<tr>
<td></td>
<td>TGO4</td>
<td>Our business network with government officials could be described as “cooperative” rather than an “arm’s-length” network</td>
<td>.827</td>
</tr>
<tr>
<td></td>
<td>TGO5</td>
<td>We expect to be interacting with government officials far into the future</td>
<td>.839</td>
</tr>
<tr>
<td>SME’s Marketing Function</td>
<td>MF1</td>
<td>We think we have maximum expertise in our product/service portfolio (that is, quality, reliability and innovativeness) to meet customer needs and make necessary adjustments when required.</td>
<td>.777</td>
</tr>
</tbody>
</table>
Effectiveness (SME’s MF)

We always monitor the appropriateness of our pricing policy and make necessary adjustments when required.

Table 2
Means, Standard Deviations, and Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strategic Adaptiveness (SA)</td>
<td>4.91</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Ties with customers (TCu)</td>
<td>4.92</td>
<td>1.14</td>
<td>.412***</td>
<td>.402***</td>
<td>.399***</td>
<td>.343***</td>
<td>.261***</td>
</tr>
<tr>
<td>3. Ties with suppliers (TSu)</td>
<td>5.61</td>
<td>1.10</td>
<td>.337***</td>
<td>.363***</td>
<td>.363***</td>
<td>.384***</td>
<td>.384***</td>
</tr>
<tr>
<td>4. Ties with competitors (TCo)</td>
<td>4.40</td>
<td>1.31</td>
<td>.267***</td>
<td>.363***</td>
<td>.384***</td>
<td>.384***</td>
<td>.384***</td>
</tr>
<tr>
<td>5. Ties with Government (TGo)</td>
<td>3.90</td>
<td>1.40</td>
<td>.106</td>
<td>.131*</td>
<td>.155*</td>
<td>.266***</td>
<td>.266***</td>
</tr>
<tr>
<td>6. Marketing Function</td>
<td>5.41</td>
<td>.99</td>
<td>.399***</td>
<td>.343***</td>
<td>.261***</td>
<td>.200***</td>
<td>.076</td>
</tr>
</tbody>
</table>
effectiveness (MF)

*N=263; *p<.05; ** p<.01; ***p<.001

Table 3
Main effects of TCu, TSu, TCo and TGO on SA (Standardized Coefficients)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control variables</td>
<td>H1-1</td>
<td>H2-1</td>
<td>H3-1</td>
<td>H4-1</td>
<td>H5</td>
<td></td>
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<tr>
<td>Hypothesis</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>.105</td>
<td>.098</td>
<td>.082</td>
<td>.095</td>
<td>.076</td>
<td>.083</td>
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<tr>
<td>Ownership status</td>
<td>.137*</td>
<td>.153*</td>
<td>.107</td>
<td>.145*</td>
<td>.179*</td>
<td>.088</td>
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<td>Main effects</td>
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<td></td>
<td></td>
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<td></td>
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<td>Ties with customers (TCu)</td>
<td>.415***</td>
<td></td>
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<tr>
<td>Ties with suppliers (TSu)</td>
<td>.323***</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ties with competitors (TCo)</td>
<td>.270***</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Ties with Government (TGo)</td>
<td>.146*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Marketing Functions (MF)</td>
<td></td>
<td></td>
<td></td>
<td>.386***</td>
<td></td>
<td></td>
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<tr>
<td>R²</td>
<td>.024</td>
<td>197</td>
<td>.128</td>
<td>.097</td>
<td>.043</td>
<td>.171</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.017</td>
<td>.187</td>
<td>.117</td>
<td>.086</td>
<td>.031</td>
<td>.161</td>
</tr>
<tr>
<td>F Change</td>
<td>3.147</td>
<td>53.569***</td>
<td>29.629***</td>
<td>20.064***</td>
<td>4.750*</td>
<td>44.260***</td>
</tr>
<tr>
<td>Durbin Watson</td>
<td>1.521</td>
<td>1.700</td>
<td>1.537</td>
<td>1.522</td>
<td>1.544</td>
<td>1.598</td>
</tr>
</tbody>
</table>

*p<.05; ** p<.01; ***p<.001
Table 4
Moderating Effect of MF on TCu, TSu, TCo and TGO with SA (Standardized Coefficients)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>H1-2, H2-2, H3-2 and H4-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step 1: Control variables**

Firm size      | .105     | .068     | .051     |
Type of ownership | .137*    | .117     | .106     |

**Step 2: Independent (IV) and Moderator Variable (MV)**

Ties with customers (TCu) | .248***  | .235***  |
Ties with suppliers (TSu) | .125*    | .100     |
Ties with competitors (TCo) | .071     | .052     |
Ties with government (TGO) | .039     | .047     |
Marketing Function (MF)   | .248***  | .290***  |

**Step 3 Interaction terms**

TCu x MF      | -.120*   |
TSu x MF      | -.122    |
TCo x MF      | .142*    |
TGo x MF      | .104     |

R²             | .024     | .286     | .337     |
Adjusted R²    | .017     | .265     | .307     |
ΔR²            | -        | .261***  | .051**   |
F Change       | 3.147    | 18.000***| 4.665**  |
Durbin-Watson  |         |          | 1.673    |

* p<.05; ** p<.01; *** p<.001.
Figure 2
Ties With Stakeholders and Perceived Marketing Function Effectiveness Interactions

(a)

(b)