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Firm survival through a crisis: The influence of market orientation, marketing innovation and business strategy☆

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ABSTRACT

As an outcome of the economic crisis, the global manufacturing sector is collapsing. Focusing on Chinese manufacturing small and medium enterprises (SMEs), this study investigates whether marketing innovation, defined as improvements in the marketing mix, can assist in withstanding the challenges of operating under the current economic conditions. A conceptual model linking market orientation, marketing innovation, competitive advantage and firm survival is tested using structural equation modelling. Three key findings are derived. First, the examined Chinese manufacturing SMEs had a greater perceived likelihood of survival had they developed and sustained a competitive advantage. Second, marketing innovation assisted in developing and sustaining competitive advantages based on differentiation and cost leadership strategies. Third, marketing innovation capabilities improved when the examined manufacturing SMEs were competitor oriented and had good inter-functional capabilities.

1. Introduction

Between late 2007 and the second quarter of 2009, the global economy slid deeper and deeper in the midst of an economic crisis with a sluggish recovery in the third quarter of 2009. Worldwide, this slide has led to a collapse of the manufacturing sector. From redundancies, to restructuring for optimization and efficiencies, to bankruptcy, the popular business press is full of accounts of how manufacturing firms worldwide are grappling with the challenges of operating under recessionary conditions. The result is an industrial crisis adding to the economic crisis. The lack of global demand – not just for manufacturing outputs, but for everything – is largely to be blamed for the current state of affairs (The Economist, 2009a).

Amidst this doom and gloom picture, the frailty of manufacturers is, however, not universal. There are some companies which are faring much better than their manufacturing counterparts (The Economist, 2009b). There is no doubt that these companies are also suffering from the challenges of the current economic landscape, but their turmoil tend to be more transient, having a greater ability to withstand the global economic crisis.

The literature on economic crises highlights the need for better management (e.g. Champion, 1999; Goad, 1999) as a survival mechanism. From a resource-based perspective, such better management represents organizational resources and capabilities that firms can use to manage economic conditions and perform (Barney, 1991; Day, 1994; Dickson, 1992; Grewal & Tansuhaj, 2001). The ability to innovate has recently gained in prominence as one such dynamic capability that distinguishes firms which outperform their counterparts (Danneels, 2002; Hamel, 2000; O'Connor & Rice, 2001). The broad premise of this literature suggests that the ability to innovate is a "key mechanism for organizational growth and renewal" (Lawson & Samson, 2001: 379). In times of environmental turbulences such as during an economic crisis, the need for innovation has been recognized to withstand the gales of creative destruction (Danneels, 2002; Schumpeter, 1950).

This study, focusing specifically on manufacturing small and medium enterprises (SMEs), seeks to examine a possible model of marketing innovation, defined as improvements in product design, placement, promotion or pricing (Deshpandé, Farley, & Webster, 1993; Hurley & Hult, 1998; OECD, 2005), as a possible contributing factor to firm survival in an economic crisis. Marketing innovation often provides quick fix innovative solutions emphasising low-risk product modifications, extensions and design changes (Bennett & Cooper, 1979; 1981). For cash-strapped manufacturers[1] operating in the grips of the current economic crisis (often, but not always, SMEs), marketing innovation can present an attractive strategy (given its relative affordability) to attempt reversing the flow of declining sales. The logic of marketing innovation emphasises sales growth by shifting consumer demand from elastic to more inelastic market segments through the delivery of better value (actual or

☆ The views expressed in this paper are those of the author and do not reflect the official position of the Australian Federal Government or Deakin University.

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[1] Emphasis is placed on cash-strapped manufacturers to control for financial resources being a determinant of firm survival.

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perceived) to the consumer (Bennett & Cooper, 1979, 1981; Hurley & Hult, 1998). In theory, such logic holds weight in a business environment where global demand for manufactured goods has rapidly declined and manufacturers need to hastily reinvent the demand functions of their products if they are to ensure their short to medium-term survival in the current economic landscape. Such an argument has been postulated by many business commentators in the popular business press (e.g. The Economist, 2009b). In practice, however, there is a dearth of empirical evidence which proves the influence of marketing innovation on firm survival during an economic crisis. This study attempts to bridge this gap by providing up-to-date empirical evidence.

This article begins with an overview of the current literature and then develops the conceptual framework and hypotheses. A discussion of research methodology follows. Using data from 184 export-oriented Chinese SMEs, this study uses confirmatory factor analysis and structural equation modelling to test the conceptual model empirically. The article concludes with a discussion of the observed findings.

2. Literature review

Innovation, at an aggregate level, represents the successful exploitation of ideas that are new to an adopting organization, into profitable products, processes and/or services (Damanpour, 1992; Johannessen, Olsen, & Lumpkin, 2001). Therefore, given the focus on newness, innovation incorporates a certain degree of uncertainty and risk-taking. With this degree of uncertainty and risk-taking not the same across different innovative activities, scholars have developed taxonomies in their study of organizational innovation. From architectural, modular, improving and evolutionary innovations, to radical, incremental, really new, discontinuous and imitative innovations, the list of innovation taxonomies is broad (Garcia & Calantone, 2002). Of these taxonomies, the dual categorisation of innovation as either radical or incremental is among the most embedded in the literature (Chandy & Tellis, 2000; Henderson & Clark, 1990; Myers & Tucker, 1989).

Radical innovation refers to major changes in technology/knowledge that stem from the discovery of something new. Incremental innovations, on the other hand, are major advances to an established technology/knowledge (Garcia & Calantone, 2002). In the marketing literature, marketing innovation has been positioned as a type of incremental innovation (Grewal & Tansuhaj, 2001).

In the academic business literature, marketing innovation has been the subject of sparse scrutiny (Augusto & Coelho, 2009). It is, however, closely aligned to the better researched construct of market orientation[2] although the relationship between market orientation and innovation is not yet fully explained (Augusto & Coelho, 2009, Lukas & Ferrell, 2000). Market orientation is a central focus of modern marketing concepts and has received wide attention from both academic scholars and practitioners (Augusto & Coelho, 2009; Beverland & Lindgreen, 2007; Kaynak & Kara, 2004; Sanzo, Santos, Vazquez, & Alvarez, 2003). It is, however, still subject to varying definition and requires further investigation, especially in international contexts (Dalgic, 1994; Deshpandé & Farley, 2004; Racela, Chaikittisilpa, & Thoumrungroje, 2007). Generally, market orientation is defined as understanding and satisfying customers and other relevant stakeholders (Day, 1994; Narver & Slater, 1990). It is, in other words, "the implementation of the marketing concept" (Kohli & Jaworski, 1990:1). Market orientation, therefore, focuses the organization's ability to be responsive to customers and other relevant stakeholders (e.g. competitors and employees) in order to be profitable. With a primary objective of innovation being the development of new or modified products/processes aimed at improving organizational performance and with superior performance inherently dependent on understanding and satisfying customer needs better than one's competitors, market orientation and innovation are intrinsically linked constructs (Augusto & Coelho, 2009; Hauser, Tellis, & Griffin, 2006).

Kohli and Jaworski (1990), Narver and Slater (1990), Jaworski and Kohli (1993), and Kohli, Jaworski and Kumar (1993) are four seminal studies on market orientation. These four articles are the research foundations of a large body of literature that can be grouped in two major strands; a behavioural and a cultural perspective. The former perspective views market orientation as a behavioural response to the competitive operational dynamics that an organization faces. The cultural perspective, on the other hand, defines market orientation as "the organization culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and thus superior performance for the business" (Narver & Slater, 1990:21). In this paper, the cultural conceptualisation of market orientation is adopted on the basis that culture has the potential to influence behaviours (Raap, Schillewaert, & Hao, 2008). Similar to previous studies, market orientation is, therefore, defined in terms of an organization's customer orientation, competitor orientation and its inter-functional coordination (e.g. Augusto & Coelho, 2009; Han, Kim, & Srivastava, 1998; Lukas & Ferrell, 2000).

The basic hypothesis of the market orientation literature attributes a positive relationship between the market orientation construct and performance. Although it is worth noting that not all studies confirm the positive outcomes of being market oriented (e.g. Diamantopoulos & Hart, 1993; Harris, 2001), the aggregate conclusion attributes a positive relationship between market orientation and organizational performance.

Most studies examining market orientation have investigated a direct relationship with performance. However, a few others have inferred innovation as a moderating variable between market orientation and performance (e.g. Deshpandé et al., 1993; Hurley & Hult, 1998; Jaworski & Kohli, 1996). These studies conceptualise innovation as the actual mechanism that transforms market orientation into superior performance. This paper extends this debate by suggesting that the link between innovation and performance is mediated by the ability of the firm to develop and sustain a competitive advantage. Competitive advantage, for the purpose of this study, is defined as "a value creating strategy not simultaneously being implemented by any current or potential competitors" (Barney, 2000: 206). A firm, thus, attains a sustainable competitive advantage when the benefits of its value-adding strategy are not competed away by the replication efforts of its competitors (Barney, 2000). The framework adopted in this study posits three main links: (i) in order to exhibit marketing innovation capabilities, a firm needs to adopt a market orientation approach (ii) marketing innovation capabilities help to develop and sustain a competitive advantage and (iii) a competitive advantage allows a firm to better perform and survive in an economic crisis. This theoretical position constitutes the point of departure of this paper and is represented in Fig. 1. Each construct in the model is elaborated in the next section. In the interest of space, the antecedents of market orientation are not addressed in this study. Several factors influencing market orientation have been examined in the current academic business literature. These include top management teams, risk aversion, internal operational dynamics among others (Jaworski & Kohli, 1993). Readers interested in this literature should refer to Kirca, Jayachandran, and Bearden (2005) for a recent review.

3. Hypotheses development

3.1. Market orientation–marketing innovation link

As previously highlighted, most of the literature on market orientation demonstrates a positive and direct relationship with performance (e.g. Narver & Slater, 1990; Ruekert, 1992; Slater & Narver, 1994). Day (1994) for example, outlines how market orientation

[2] Subtle differences have emerged in the literature regarding market orientation and marketing orientation. The latter concerns the implementation of a customer focused philosophy while market orientation widens the focus to consider both customers and competitors (Shergill & Nargundkar, 2005). The focus of the current article is on market orientation.

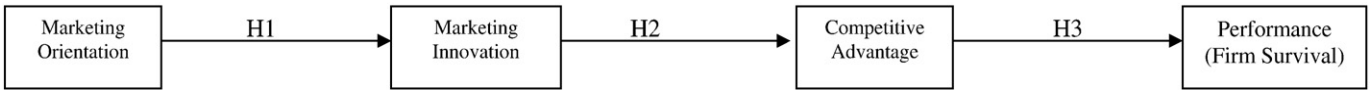

Fig. 1. Conceptual model.

enhances performance by providing organizations a superior ability to understand, attract and retain customers. Other studies, however, also suggest no significant relationship (e.g. Diamantopoulos & Hart, 1993) or mixed results (e.g. Jaworski & Kohli, 1993) between the two constructs. Han et al. (1998) suggest that innovation as a missing link between market orientation and organizational performance might help to address these irregularities in the empirical literature. Similarly, Slater and Narver (1994) highlight that market orientation leads organizations to adopt an external focus and commitment to innovation, which in turn allows them to achieve and sustain superior performance. Slater and Narver (1994) propose that innovation is a core value-creating capability that drives the market orientation and performance relationship. Deshpandé et al. (1993) further suggest that market orientation might facilitate innovation en route to organizational performance. Zaltman, Duncan, and Holbek (1973), suggest that there are two stages of innovation: initiation and implementation. A critical element of the initiation stage is the openness and willingness to innovate (Hurley & Hult, 1998). With market orientation representing organization-wide responsiveness to market information (Kohli & Jaworski, 1990), Jaworski and Kohli (1996) suggest that market orientation is an antecedent to innovation. Market orientation, can thus serve as the catalyst for innovation, since it opens up the firm to new customer needs and new business processes. In other words, market orientation can be a critical part of the initiation stage of innovation (Hurley & Hult, 1998). Therefore, building on extant literature, it is hypothesized that:

H1. The market orientation of a small-to-medium manufacturer is positively related to its marketing innovation capability.

3.2. Marketing innovation–competitive advantage link

Innovation can be an important source of competitive advantage en route to superior performance. Schumpeter (1950) was among the first to have suggested that innovation helps firms to sustain the value of their asset endowment which otherwise would be eroded under economic dynamics that tend to relentlessly converge towards perfect competition. More recently, this thinking has been picked up by strategy theorists who argue under the resource-based view and organizational capability perspective, that asset endowments are valuable in providing a source of competitive advantage only if they are idiosyncratic (hence valuable and rare) to the firm and inimitable/non-transferable outside the firm (Amit & Shoemaker, 1993). It is the firm's ability to develop and sustain these strategic asset endowments which provide them with a source of competitive advantage. Without these strategic assets, firms' performances are likely to converge towards perfect equilibrium in competitive markets. In other words, it is the existence of strategic assets that allow firms to delay the appropriation of rents by their competitors. Strategic assets, however, remain sources of competitive advantage as long as they cannot be replicated (Dierickx & Cool, 1989). Innovation is one such mechanism for firms to ensure that strategic assets are hard to imitate (Hamel, 2000). Innovation brings an element of change to extant asset endowments and if successful, results in valuable new resource combinations that competitors will find difficult to imitate quickly. This difficulty is enhanced not only by the idiosyncratic nature of the created new resource but also through the path-dependent nature of resource accumulation (Nelson and Winter, 1982). This means that an element of time is introduced before competitors can match the new resource combination. Consequently, as long as innovation is ongoing, leading to the "flows" of resources adding to the "stock" of strategic assets (Dierickx & Cool, 1989), a firm should be able to retain a source of sustainable competitive advantage subject to the desired outcome of the innovation being achieved (Chakravarthy, 1997). Thus, building on extant literature, it is hypothesized that:

H2. The marketing innovation capability of a small-to-medium manufacturer is positively related to its competitive advantage.

3.3. Competitive advantage–performance (firm survival) link

The link between developing/sustaining a competitive advantage and superior performance has well been established in the literature (e.g. Barney, 1997; Grant, 1998; Porter, 1980). From a focus on superior performance in the form of monopoly rents (Caves & Porter, 1977; Porter, 1980) to Ricardian rents resulting from idiosyncratic firm-specific resources (Wernerfelt, 1984) to Schumpeterian rents attributed to the dynamic capability of firms in renewing advantages over time (Teece, Pisano, & Shuen, 1997; Winter, 1987), the hypothesis of competitive advantage as a determinant of superior performance dominates strategic management research (Powell, 2001). Although some studies have suggested that competitive advantage might not lead to superior performance (e.g. Coff, 1999; Ma, 2000), most research in strategy posit competitive advantage as a value-creating strategy which contributes to firm performance (e.g. Porter, 1980; Wernerfelt, 1984; Barney, 1997; Teece et al., 1997). Building on the strength of the latter stream of research, a positive relationship between competitive advantage and performance is also hypothesized in this study. Thus, based on extant literature, the final link in our conceptual model, investigating the relationship between competitive advantage and performance, is hypothesized as:

H3. The competitive advantage of a small-to-medium manufacturer is positively related to its survival.

4. Methodology

In this study, a survey methodology was used to collect data. Longitudinal study might be more suited to a study on market orientation given that the latter construct is considered a long-term endeavour which does not necessarily lead to short-term pay offs. However, cross-sectional data is accepted in the extant literature as a second best alternative given the difficulty in collecting longitudinal data (e.g. Augusto & Coelho, 2009). Based on the proposed conceptual model, a series of measures were developed from the current extant academic business literature and adapted to fit the current study (see Appendix A). To ensure that these measures, which have largely been developed in a western environment, could be applied to cross-cultural settings, they were pretested through both exploratory qualitative interviews ($N=5$) and survey pretests ($N=15$). Any ambiguities and unclear questions were modified or eliminated. With this study also taking place within the Chinese context, the questionnaires were translated from the original English version to Mandarin Chinese and back-translated to ensure that the original meaning was maintained. The finalised survey was then distributed to a randomly developed sampling frame of export-oriented[3] manufacturing SMEs from the textile industry (clothing and footwear). The

[3] The focus was on export-oriented firms given that it is the fall in export demand that is largely blamed for the slump in Chinese industrial activity (The Economist, 2009b).

sampling frame was generated from a database provided by a professional market research agency. Following Zheng, Morrison, and O'Neill (2006), SMEs in the Chinese context, were defined as firms with less than 500 employees and with a turnover of less than or equal to RMB Yuan 5 million (US$500,000). A total of 1000 questionnaires were distributed to small-to-medium manufacturers located in the industrial textile clusters around Guangdong (245), Shandong (215), Zhejiang (102), Jiangsu (92), Fujian (84), Hebei (82), Wenzhou (76), Chongqing (68), and Dalian (36). These clusters are said to account for over 80% of the Chinese collective textile export (China Business Intelligence, 2008). To maximise the response rate, a research assistant fluent in mandarin was employed to make contact with the targeted SMEs, educate them of the objectives/ benefits of the study and proactively encourage participation by being a point of contact which respondents could approach if in need of assistance when filling in the questionnaires. 184 completed usable questionnaires were obtained, representing an 18.4% response rate. It is acknowledged that this response rate is relatively low, although not entirely unexpected. Very low response rates tend to be a feature of south-east Asian countries (Harzing, 2000). For example, Wang, Wee, and Koh (1998) mention a typical response rate of 10–15% for China. To address this relatively low response rate, an attempt was made to demonstrate the representativeness of this sample through key secondary data of the non-respondents v/s respondents (e.g. age, employee size, turnover, etc). However, a lack of data made this attempt unattainable. An alternative approach employed, was thus, to assume that the non-respondents are similar to late respondents (the so-called "interest hypothesis"—see Tse, Sin, Yau, Lee, & Chow, 2003). Through this method, the second wave of respondents was compared to their first wave counterparts. χ^2 was computed to distinguish key differences on selected demographic characteristics. No significant differences were found, leading to the assumption that non-response bias may not be a serious problem in the current study.

The surveys, conducted on the basis of confidentiality, were distributed between November 2008 and February 2009, a period that saw a sudden collapse of the Chinese manufacturing sector as a result of the current economic crisis. In fact, some of the respondents that participated in this study in late 2008 had closed down by early 2009. Table 1 below provides an overview of the SMEs that participated in this study. Of particular note is the fairly low cash-flow of the firms that participated in this study, reinforcing footnote 1 above that SMEs often suffer from financial scale disadvantages and that their survival in challenging environments/times is not just a function of deep pockets. Controlling for cash-flow, thus, allows for a more focused investigation of marketing innovation capabilities as a determinant of firm survival.

Table 1
Characteristics of respondents.

Characteristic	Category	%
Industry categories[a]	Consumer manufacturing firms	63
	Industrial manufacturing firms	37
Employment size	1–9	12
	10–49	34
	50–99	28
	100–199	22
	200–499	4
Turnover	Under RMB100,000	9
	RMB100,001–500,000	21
	RMB500,001–1,000,000	33
	RMB1,000,001–3,000,000	32
	RMB3,000,001–5,000,000	5
Cash-flow	Under RMB100,000	43
	RMB100,001–500,000	24
	RMB500,001–1,000,000	19
	RMB1,000,001–3,000,000	12
	RMB3,000,001–5,000,000	2
Age	Under 5 years	3
	Between 6–10 years	22
	Between 11–20 years	32
	Between 21–50 years	22
	Between 51–100 years	19
	Greater than 101 years	2

[a] Consumer manufacturing refers to SMEs which are producing products directly bound for the consumer retail market (e.g. footwear) while industrial manufacturing refers to SMEs which are producing intermediary products used in the production process of other goods (e.g. thread production).

4.1. Measurements

The survey items used in this study, were based on a nine-point Likert scale format and sourced from extant literature, wherever possible (1—strongly disagree, 9—strongly agree) (see Appendix A). Multi-item measures were developed to help reduce measurement errors associated with single-item measures. Both exploratory factor and reliability analyses were conducted to identify and refine the constructs used for data analysis. The questions in the survey were asked specific to the time period of the crisis, i.e. between late 2007 and the second quarter of 2009. This temporal focus was to ensure that the proposed conceptual model could be assessed in relation to activities undertaken during the crisis, rather than activities that were undertaken pre- or post-crisis.

Market orientation was measured from the scale developed by Narver and Slater (1990) and adopted the following components as the basis of measurement: customer orientation (eight items), competitor orientation (eight items) and inter-functional coordination (eight items). Following Han et al. (1998), a component-wise approach individually investigating each of the three components of market orientation was used for analysis purposes. Similar to Han et al. (1998), confirmatory factor analysis indicated that while a combined market orientation construct provided reasonable fit indices, a three-factor measure provided a better fit to the data.[4]

The *marketing innovation* (7 items) scale was adapted from Hurley and Hult (1998). The *competitive advantage* scale used in this study was based on Porter (1980) three generic strategies: differentiation, cost leadership and focus. A differentiation strategy involves developing and sustaining a market position that is perceived as being unique. With a cost leadership strategy, firms aim to minimise relative costs (and, therefore, maximise profitability) through benchmarking against competing firms. A focus strategy involves serving a narrowly defined market segment and outperforming competing firms that are operating more broadly. The measures of differentiation (4 items), cost leadership (5 items) and focus (4 items) competitive advantages were developed based on Frambach, Prabhu and Verhallen (2003). Since firms can either adopt one competitive strategy over another or simultaneously pursue a combination of competitive strategies (e.g. Campbell-Hunt, 2000; Frambach et al., 2003), conceptually I treat the three generic strategies of differentiation, cost leadership and focus as complementary rather than mutually exclusive. Thus, a respondent firm may score equally high (or low) on all the three generic strategies. Similarly, the respondents firms might also choose one generic strategy over another. Last, but not least, *survival* (4 items), a measure of performance (Sinha & Noble, 2008), was measured using a perceptual construct. This measure was informed from the interviews conducted during the pre-testing of this study.

This subjective measure of performance was chosen over a more objective measure (e.g. financial data such as profitability or dummy variables showcasing actual survival) for two main reasons. First,

[4] Confirmatory factor analysis revealed the following fit indices for the one factor structure of market orientation: goodness-of-fit (GFI) = 0.86, adjusted goodness-of-fit (AGFI) = 0.82, $\chi^2 = 127.23$ ($p<0.05$), $\chi^2/df = 1.542$ and the root mean square residual (RMSR) = 0.073. For the three-factor structure of market orientation, the following fit indices were obtained: GFI = 0.92, AGFI = 0.86, $\chi^2 = 92.09$ ($p>0.05$), $\chi^2/df = 1.193$ and RMSR = 0.067.

absolute scores of financial performance can be affected by industry related factors (Covin & Slevin, 1989; Miller & Toulouse, 1986). Given the focus of this study on two different types of manufacturing SMEs (i.e. consumer and manufacturing firms), directly comparing objective survival data could be misleading. Second, since the current economic crisis was still ongoing at the time of undertaking this research, accessing reliable objective survival data proved difficult. As discussed below, such an attempt was made through the use of a dichotomous objective measure collected through follow-up phone calls at the end of February 2009, when the initial data collection part of this study concluded. However, concerns were raised over whether the observed findings from the use of such an objective survival measure could be time sensitive. In other words, would the results differ if the follow-up contacts were carried out six, nine or 12 months after the first contact? Given that one of the objectives of this study was to provide practitioners with up-to-date, relevant findings, rather than wait for the current economic crisis to end and then collect archival data, the trade off of using a subjective measure of survival over a more objective one was made. This limitation should be kept in perspective when interpreting the observed findings.

In total, 48 indicators are presented in the proposed research model (see Appendix A). Exploratory factor analysis with varimax rotation was performed to establish validity in the constructs used. For the customer orientation factor, six of the eight items loaded reasonably high (0.73, 0.52, 0.67, 0.53, 0.69, and 0.76) with the exception of CUSOR5 and CUSOR8. These two items were dropped from subsequent analyses. For the competitor orientation factor, five of the eight items have high loadings (0.74, 0.82, 0.76, 0.86, and 0.79). Items COMOR3, COMOR5 and COMOR7 were dropped from subsequent analyses. For the inter-functional coordination factor, seven of the eight items have reasonably high loadings (0.62, 0.73, 0.59, 0.55, 0.72, 0.77, and 0.68) with the exception of INTFUNC8 which was dropped from subsequent analyses. The Cronbach's alpha coefficients of each of these three components of market orientation – customer orientation (0.76), competitor orientation (0.79) and inter-functional coordination (0.83) – all exceed the recommended cut-off of 0.70 (Nunally, 1978). The items for the marketing innovation, differentiation competitive advantage, cost leadership competitive advantage and focus competitive advantage factors all loaded onto their respective conceptualised factors. The Cronbach alpha coefficients of each of these factors were respectively 0.83, 0.76, 0.84 and 0.75. The four items for survival all loaded reasonably well onto the conceptualised factor (0.66, 0.63, 0.76, and 0.56). Although survival has a reliability below the recommended level of 0.70, it is retained with the caveat of a somewhat lower reliability and the need for future development of additional measures to represent this concept. Muticollinearity using Variance Inflation Factor statistics was also tested on the factors without revealing any problems. Table 2 provides descriptive statistics and the standardized loadings for each of the hypothesized factors. Table 3 details the means, standard deviations and associated correlations for the factors.

To test the robustness of the subjective survival measure, a post-hoc analysis was conducted. With the surveys conducted on the basis of confidentiality (as opposed to anonymity), it was possible for the research assistant to conduct follow-up phone calls and track down which SMEs had actually survived the sudden collapse of the Chinese manufacturing sector rather than solely relying on a perceptual measure of survival. These follow-up contacts took place between February and June 2009, at the end of the initial data collection period. Doing so, provided an objective measure of survival in the form of a dummy variable, coding 1 for survival ($n=98$) and 0 for non survival ($n=86$). To directly test whether perceived survival is strongly correlated with actual survival and assess the robustness of the perceived survival measure, correlation analysis was undertaken. Table 3 shows a significant correlation between the objective and perceptual measure of survival, indicating that the latter measure is acceptable.

Table 2
Means, standard deviations and standardized loadings.

Construct	Indicators	Mean[a]	Standard deviation	Standardized factor loading
Customer orientation ($n=184$)	CUSOR1	4.23	0.93	0.73
	CUSOR2	4.79	1.46	0.52
	CUSOR3	5.17	2.47	0.67
	CUSOR4	6.72	1.54	0.53
	CUSOR5	3.71	2.61	0.43
	CUSOR6	6.79	3.42	0.69
	CUSOR7	6.13	1.46	0.76
	CUSOR8	2.72	2.01	0.39
Competitor orientation ($n=184$)	COMOR1	5.89	1.24	0.74
	COMOR2	6.81	2.43	0.82
	COMOR3	3.74	2.46	0.41
	COMOR4	6.49	1.52	0.76
	COMOR5	3.99	1.99	0.28
	COMOR6	4.68	1.64	0.86
	COMOR7	2.98	2.61	0.33
	COMOR8	5.96	2.67	0.79
Inter-functional coordination ($n=184$)	INTFUNC1	6.76	1.46	0.62
	INTFUNC2	7.21	3.42	0.73
	INTFUNC3	6.43	2.46	0.59
	INTFUNC4	6.22	2.81	0.55
	INTFUNC5	5.97	2.49	0.72
	INTFUNC6	4.67	1.56	0.77
	INTFUNC7	5.61	1.47	0.68
	INTFUNC8	3.89	2.94	0.45
Marketing innovation ($n=184$)	MKTGINNV1	6.46	2.41	0.71
	MKTGINNV2	6.97	1.63	0.69
	MKTGINNV3	7.38	1.74	0.58
	MKTGINNV4	6.92	1.33	0.63
	MKTGINNV5	5.76	2.49	0.62
	MKTGINNV6	5.94	1.46	0.59
	MKTGINNV7	6.83	2.74	0.67
Competitive advantage (differentiation) ($n=143$)	DIFF1	5.94	2.35	0.72
	DIFF2	7.62	2.13	0.81
	DIFF3	6.19	1.49	0.69
	DIFF4	6.49	2.13	0.63
Competitive advantage (cost leadership) ($n=172$)	COST1	5.49	2.14	0.63
	COST2	6.72	2.36	0.76
	COST3	6.94	2.65	0.85
	COST4	8.21	1.49	0.71
	COST5	7.48	1.46	0.62
Competitive advantage (focus) ($n=61$)	FOCUS1	6.46	1.43	0.82
	FOCUS2	8.04	2.49	0.76
	FOCUS3	6.09	2.43	0.71
	FOCUS4	5.97	2.22	0.69
Firm survival ($n=184$)	SURVIVE1	5.03	1.46	0.66
	SURVIVE2	4.95	1.47	0.63
	SURVIVE3	4.86	1.41	0.76
	SURVIVE4	4.76	0.56	0.56

[a] Negatively worded items were reverse-coded for the calculation of means.

4.2. Model specification and estimation

Using the SAS system's CALIS procedure, structural equation modelling performed with maximum likelihood estimation was applied to assess the hypothesized model. Fig. 2 shows the path diagram that was empirically tested. Overall, the tested model provided a good fit to the data. The GFI = 0.94, AGFI = 0.91, root mean square error of approximation (RMSEA) = 0.06, normed fit index (NFI) = 0.93, comparative fit index (CFI) = 0.92, and $\chi^2 = 18.06$ ($p > 0.05$). Residual terms and modification indices were also reviewed and revealed no problematic issues. Consistent with the literature, the tested hypotheses received strong empirical support to the exception of H_{1a} and H_{2c}. To investigate whether the obtained results hold true regardless of age, size of the firm and industrial category (i.e. whether industrial or consumer manufacturing), the data was dissected across these descriptor variables and the path model re-run (Hair, Black, Babin, Anderson, & Tatham, 2005). The obtained results were similar to the overall aggregate path model and are, therefore, not reported further.

Table 3
Correlation matrix, means and standard deviations.

Measure	Alpha	Mean	Standard deviation	1	2	3	4	5	6	7	8
1. Customer orientation	0.76	5.23	1.24	–							
2. Competitor orientation	0.79	6.72	2.31	0.43***	–						
3. Inter-functional coordination	0.83	7.21	2.06	0.21*	0.25**	–					
4. Marketing innovation	0.83	5.24	1.96	0.24**	0.27**	0.31**	–				
5. Differentiation competitive advantage	0.76	6.89	2.47	0.38**	0.24**	−0.12	0.19*	–			
6. Cost leadership competitive advantage	0.84	6.76	1.95	−0.42**	0.18*	0.32**	0.24**	0.43**	–		
7. Focus competitive advantage	0.75	8.16	2.68	0.23**	0.32**	−0.10	0.10	0.16*	0.24**	–	
8. Survival (perceptual)	0.68	5.73	1.49	0.42**	0.43***	0.46**	0.37**	0.39**	0.43**	0.31**	–
9. Survival (objective: dummy variable)	N/A	0.13	0.34	−0.20*	−0.06	−0.03	−0.03	0.23*	−0.05	−0.15	0.31*

Note: Negatively worded items were reverse-coded for the calculation of means.
* $p<0.05$.
** $p<0.01$.
*** $p<0.001$.

5. Findings and discussion

$H_{1a,}$ which hypothesizes a positive relationship between customer orientation as a component of market orientation and marketing innovation is not supported. Customer orientation relates to a proactive disposition to providing superior customer value by meeting customers' needs and wants. As these needs and wants evolve over time, a focus on customer satisfaction, therefore, advocates continuous innovation (Peters, 1984). Although significant, the negative sign associated with the findings for H_{1a}, however, contradict this position. The findings suggest, opposite to the market orientation literature, that customer orientation deters marketing innovation. While this finding is counter-intuitive, previous studies have suggested that customer orientation may deter innovation. For example, some scholars suggest that the adoption of customer orientation leads to product imitations rather than innovation (Bennett & Cooper, 1981; Christensen & Bower, 1996; Voss & Voss, 2000) Furthermore, Bhidé (2006) suggests that new innovative products can result in "backward compatibility" problems with the incumbent technology, such that customers might "be left stranded" (p. 12). Bhidé (2006) also indicate that since innovative products run the risk of being abandoned by vendors if they do not attract a critical mass of the incumbent market, there is an increased uncertainty from the customers' perspective, as vendors might discard the product lines of innovative, non-established products, resulting in the unavailability of crucial upgrades, maintenance and spare parts. This liability of newness leads customers to often be conservative in their adoption of new innovative products (Christensen & Bower, 1996; Meredith, 2002). For the customer oriented firms, customers might, thus, be communicating a lack of interest in innovative products, especially when the innovations do not deliver major improvements or value. From this logic, Christensen and Bower (1996) advance that a negative relationship between customer orientation and innovation may exist. This argument is also shared by others such as Bennett and Cooper (1979; 1981), Chandy and Tellis (1998) and Tauber (1974). Similarly, the role of habit in consumer behaviour can also explain how the liability of newness can lead to conservatism in the adoption of innovative products (e.g. Beatty & Kahle, 1988). Another plausible reasoning to the observed negative findings between customer orientation and marketing innovation might be explained by the fact that all the manufacturers in the sample used for this study, were contractors for a global manufacturing value chain. Consequently this might mean that the examined SMEs might have had less of an ability to innovate through customer orientation. Given their roles as suppliers within the value chain, the SMEs are more likely to take and fulfil orders rather than adopt a customer oriented approach in identifying, qualifying and quantifying customers' needs and wants as part of the product conception and development process.

H_{1b} with respect to the relationship between competitor orientation and marketing innovation is supported. Competitor orientation relates to a firm's ability to identify, sustain and improve its strengths (and minimise weaknesses) relative to other competitors. As hypothesized, this finding would suggest that in adopting a competitor oriented culture, Chinese manufacturing SMEs are more likely to undertake marketing innovation. In other words, a competitor oriented culture facilitates marketing innovation.

H_{1c} with respect to inter-functional coordination is also supported. Inter-functional coordination relates to the firm's ability to implement a coordinated effort among various functions in being responsive to customer needs and wants. As hypothesized, this finding would suggest that Chinese manufacturing SMEs who have a greater likelihood of coordinating their activities across various functions are more likely to be able to respond to markets' exigencies through marketing innovation activities. This ability to respond is likely to come from the openness in communication that inter-functional coordination facilitates within an organization (Ruekert & Walker, 1987; Zaltman et al., 1973).

H_{2a} with respect to the relationship between marketing innovation and differentiation competitive advantage is supported. As hypothesized, this finding would suggest that marketing innovation can help Chinese manufacturing SMEs develop a competitive advantage on the basis of differentiation. Similarly, H_{2b} was supported suggesting that

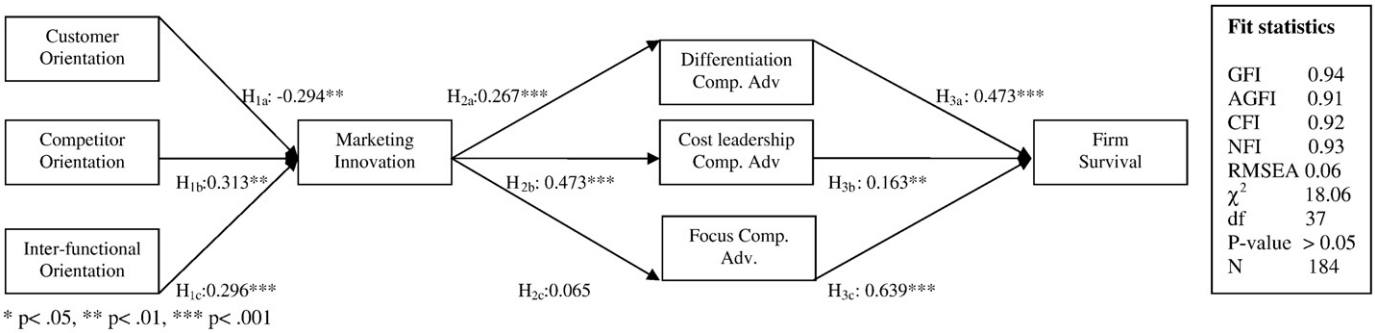

Fig. 2. Path model results (standardized coefficients shown).

marketing innovation capabilities can also help Chinese manufacturing SMEs develop a cost leadership based competitive advantage. H_{2c}, on the other hand, was not supported indicating that marketing innovation capabilities might not assist Chinese manufacturing SMEs develop a focus based competitive advantage. It is conjectured that by nature of its strategy, a focus based competitive advantage which only services a narrowly defined market segment, might put less emphasis on marketing innovation which emphasises improvement in product design, placement, promotion or pricing. A niche market segment might not require such improvements by nature of its nicheness. Hamermesh, Anderson, and Harris (1978) and Workman (1993) in their study of niche marketers found that marketing may play a limited role for focused firms. They suggest that focused firms often develop focus competitive advantages because of their specific strengths. Coupled with an increased likelihood of suffering from a scarcity of resources (Frambach et al., 2003), focused firms are likely to leverage their existing strengths rather than to engage in constant innovative activities, including (but not exclusive to) marketing innovation. Frambach et al. (2003) highlight how a manager of a focused firm they interviewed said: "we first look at our own possibilities and only then listen to the customer" (p. 391). The finding of this study with respect to H_{2c} reinforces this position.

Last but not least, H_{3a}, H_{3b} and H_{3c} are all supported as hypothesized. These findings suggest that regardless of the type of competitive advantage adopted, a Chinese manufacturing SME is likely to survive the current economic crisis if it developed and sustained a competitive advantage. These findings align themselves with previous studies that have examined the relationship between competitive advantage and performance.

6. Implications for research and practice

The above findings suggest three simple messages. First, regardless of the type of competitive advantage analysed, Chinese manufacturing SMEs that had developed and sustained a competitive advantage, had a greater perceived likelihood of survival from the current economic crisis. Second, Chinese manufacturing SMEs that had implemented a marketing innovation capability were able to develop, reinforce and sustain their competitive advantages founded on either differential or cost leadership strategies. Marketing innovation did not, however, assist those Chinese manufacturing SMEs that were operating on the basis of focused strategies. Third, competitor orientation and inter-functional coordination assisted the studied Chinese small to medium manufacturers to develop their marketing innovation capabilities. Surprisingly, the examined Chinese manufacturing SMEs did not seem to have developed their marketing innovation capabilities on the basis of being customer oriented. Taken together, these three messages have several important implications for both research and practice. First, this study points to the critical role of innovation, particularly marketing innovation, as a moderating variable between market orientation and performance. As indicated further above, research on the market orientation–innovation–performance link is scant in the extant academic business literature. Further, by using a component-wise approach to measuring market orientation, this study advances the current academic business literature by analysing how the three different components of market orientation relate to the market orientation–innovation–performance link. Third, by incorporating a competitive advantage construct as a mediating variable between innovation and performance, this study extends the literature on the market orientation–innovation–performance relationship. Last but not least, the implication for practice is that contrary to what has been postulated by the popular business press, marketing innovation does not appear to be the all encompassing panacea that will assist manufacturers from surviving the current economic crisis. Rather the link between marketing innovation and firm survival during an economic crisis seems to be mediated by the ability to develop and sustain a competitive advantage. Only those manufacturers that have developed and sustained a competitive advantage had a greater perceived likelihood of surviving the current economic crisis. Marketing innovation capabilities do, however, assist in developing and sustaining this competitive advantage. In the context of the examined Chinese manufacturing SMEs, this argument holds true though only for differentiation and cost leadership based competitive advantages. Those Chinese manufacturing SMEs that adopted a focused strategic approach did not seem to rely on marketing innovation to develop and sustain their competitive advantage.

7. Conclusion

This study has been motivated by a need to improve our understanding of the current crisis being experienced in the global manufacturing sector. Using Chinese small to medium manufacturers as case studies, this study has sought to investigate whether incremental innovation activities could increase the likelihood of surviving the current industrial crisis. Particularly, focusing exclusively on marketing innovation as a form of incremental innovation, this study has examined the link between marketing innovation, defined as improvements in product design, placement, promotion or pricing, and the likelihood of survival. A conceptual model linking market orientation, marketing innovation, competitive advantage and firm survival was theoretically derived and empirically tested using structural equation modelling. Three key findings emerged: (i) the examined Chinese manufacturing SMEs had a greater likelihood of survival had they developed and sustained a competitive advantage, (ii) that marketing innovation assisted in developing and sustaining competitive advantages based on differentiation and cost leadership and (iii) that marketing innovation capabilities improved when the Chinese manufacturing SMEs were competitor oriented and had good inter-functional coordination capabilities.

This study has aimed to make three important contributions. First, while innovation as a driver of performance has been well established in the literature (e.g. Butler, 1988, Lengick-Hall, 1992; Porter & Stern, 2001), marketing innovation as a determinant of performance has received less scrutiny (Han et al., 1998; Hurley & Hult, 1998; Lukas & Ferrell, 2000). This study adds to the marketing innovation literature. Grounded in the resource-based view of strategy and organizational capability theory, this study views marketing innovation as a key resource and capability that small and medium manufacturers can use to manage their environment, perform and even survive in tough economic times (Grewal & Tansuhaj, 2001).

Second, studies examining the "market orientation–innovation–performance" link are scarce in the academic business literature. This study aims at extending extant literature by examining how market orientation allows firms to improve their marketing innovation capability and in turn, perform better.

Last but not least, given the empirical modelling was conducted using data from the Chinese organizational context, the third contribution of this paper is to extend the extant enquiry on market orientation which has primarily focused on the North American and Western Europe environment (Grewal & Tansuhaj, 2001).

However, as with any research, these findings need to be interpreted with caution because of methodological limitations. First, the caveats concerning self-reported questionnaires apply to this study. For example, the dependent measure of survival used in this study is a perceptual one, informed and developed based on the interviews in the pre-testing stage. The observed Cronbach alpha of 0.68 for survival indicates potential reliability concerns, suggesting the need for measure refinement in future research. This paper attempted to minimise this weakness through a post-hoc correlation analysis using objective dummy measures of survival. However, the collected data is accurate as of the first quarter of 2009. With the industrial and economic crises still ongoing at the time of writing, firms that were noted as survivors

might succumb to the ramifications of the economic crisis in the time that this article goes to press. Consequently, the second limitation of this study is that the findings ought to be only exploratory in nature since a cross-sectional study might not adequately capture a longitudinal-type phenomenon such as firm survival. A follow-up study at the end of the current crises would assist in validating the current exploratory findings. Furthermore, it needs to be reinforced that the exploratory nature of this study means that no causal relationships can be inferred from the empirical results. Rather, the empirical analysis indicates observed correlations. Last but not least, this research did not focus on medium to large manufacturers. Additional research is, therefore, required to provide further insights on the role of marketing innovation in assisting medium to large manufacturing firms to manage the current industrial and economic crises.

Appendix A. Scale development

Construct	Indicators	Item
Customer orientation	CUSOR1	My firm's strategies are driven primarily by customer satisfaction.
	CUSOR2	My firm's strategies are based on understanding customer needs.
	CUSOR3	My firm's strategies are driven by its beliefs about how it can create greater value for its customers.
	CUSOR4	The customers' interests are one of the key priorities of my firm.
	CUSOR5	My firm conducts market research with customers at least once a year to assess the quality of its products.
	CUSOR6	My firm incorporates the extent to which its customers are satisfied with its products as part of its quality assessment.
	CUSOR7	If my firm finds that its customers are dissatisfied with the quality of its products, it immediately takes corrective actions.
	CUSOR8	My firm has a strong commitment to its customers.
Competitor orientation	COMOR1	My firm rapidly responds to competitive actions that threaten it in its industry.
	COMOR2	My firm is very well aware of its competitors.
	COMOR3	My firm is more customer focused than its competitors.
	COMOR4	My firm competes primarily based on product differentiation.
	COMOR5	My firm's product(s) are the best in the business.
	COMOR6	My firm is quick to respond to significant changes in its competitors' pricing.
	COMOR7	My firm regularly monitors its competitors' marketing efforts.
	COMOR8	If a major competitor were to launch an intensive campaign targeted at export markets, my firm would implement a response immediately.
Inter-functional coordination	INTFUNC1	Different functional areas across my firm work together as a team in servicing customers.
	INTFUNC2	The activities of my firm's export team and the firm's other business functions (e.g. finance) are integrated in pursuing a common goal.
	INTFUNC3	There is interdepartmental conflict in my firm (R).
	INTFUNC4	Key players from other functional areas (e.g. finance) within my firm hinder export activities (R).
	INTFUNC5	Key players from other functional areas (e.g. finance) within my firm are supportive of export activities.
	INTFUNC6	Certain key players within the firm's senior management team attach little importance to our export activities (R).
	INTFUNC7	In my firm, employees in charge of exporting and those in other functional areas (e.g. finance) help each other out.
	INTFUNC8	In my firm, departments/individuals compete with each other to achieve their own goals rather than working together to achieve common objectives (R).
Marketing innovation	MKTGINNV1	Management actively seeks innovative marketing ideas.
	MKTGINNV2	Improvements in product design are readily accepted.
	MKTGINNV3	Improvements in product placement are readily accepted.
	MKTGINNV4	Improvements in product promotional activities are readily accepted.
	MKTGINNV5	Improvements in product pricing are readily accepted.
	MKTGINNV6	Staff are penalized for new marketing ideas that do not work (R).
	MKTGINNV7	New marketing ideas are perceived as too risky and are resisted (R).
Competitive advantage (differentiation)	DIFF1	In my industry, my firm is always the first to market a new product.
	DIFF2	Relative to competition, my firm is always ahead in the use of innovative promotional strategies.
	DIFF3	Relative to competition, my firm is always ahead in the use of innovative pricing strategies.
	DIFF4	My firm distinguishes itself from competition by the quality of its products.
Competitive advantage (cost leadership)	COST1	My firm emphasises cost reduction in all its business activities.
	COST2	In my firm, the production process changes all the time with the goal of constantly reducing production costs.
	COST3	My firm invests mainly in large projects to realise economies of scale.
	COST4	In my firm, costs is the most important consideration in the choice of a distribution system.
	COST5	My firm tries to force competitors out of the market by good cost control.
Competitive advantage (focus)	FOCUS1	My firm produces one single unique product.
	FOCUS2	My firm attempts to specialize by concentrating on producing a limited number of products.
	FOCUS3	My firm is active in a broad domain of products (R).
	FOCUS4	My firm targets a specific, limited part of the market with its products.
Survival	SURVIVE1	My firm will survive the current economic crisis.
	SURVIVE2	My firm possesses the ability to withstand the challenges of the current economic crisis.
	SURVIVE3	My firm is in a good position to address the slow down in business activity currently being experienced as a result of the economic crisis.
	SURVIVE4	Sales volume have decreased in the last three months as a result of the economic crisis but sales will rebound back to pre-crisis level.

(R) = reverse scaled items.

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