

Small business strategy and the industry life cycle

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Abstract This article proposes that individual small firms, just like large firms, use different approaches to make strategy. Three processes relevant to small firms are identified: simplistic, participative and adaptive. The article examines how these processes are related to performance, depending on industry life cycle stage. Empirical analysis indicates that all three approaches are related to small firm performance, but that the importance and impact of these relationships will change according to the industry life cycle stage. Markedly, and contrary to evidence from studies in large firms, small firms in mature industries are most likely to benefit from using adaptive strategy-making processes.

Keywords Strategy-making process · Firm performance · Industry life cycle stage · Small firms

JEL Classifications M10 · L26

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1 Background

Performance differences in small firms are often the subject of research, government policy and media attention. The importance of identifying those factors that may provide small firms with a competitive advantage cannot be overstated. Small firms are frequently faced with restrictions such as skill shortages, difficulties in attracting staff, funding issues and continuous changes in the supply chain and industry, and therefore need to utilise all potential factors that may help to overcome these constraints. The strategic management literature is replete with examples of strategic, managerial, industry and process elements that may improve firm performance (Anderson and Zeithaml 1984; Covin and Slevin 1989; Hart 1992; Keeley and Roure 1990; Robinson and McDougall 2001). One such element is the strategy-making process(es) that a firm uses (Beaver 2007). This article sets out to investigate the influence of these processes on performance in small firms against the background of a changing industry life cycle.

The concept of strategy-making process was first examined in the late 1960s and early 1970s. Henry Mintzberg (1973) wrote his seminal article using the term ‘strategy-making’, defined as ‘a process that involves the range of activities that firms engage in to formulate and enact their strategic mission and goals’ (Dess et al. 1997, p. 679), which promulgated the idea of different approaches for a firm to make strategy. Mintzberg’s article discussed the planned, adaptive

and entrepreneurial modes. Extending the approach introduced by Mintzberg, other authors described additional approaches to strategy-making such as rational (similar to planned), symbolic, command, transactive, generative (Hart 1991), simplistic (Lumpkin and Dess 1995, 2006) and participative (Dess et al. 1997). These authors typically present their modes of strategy-making in the form of typologies that include a 'menu' of approaches that are available to firms. The approaches that make up these typologies can be arranged on a continuum from formal to informal; for example, in Mintzberg's typology the planned approach would be the most formal, followed by the entrepreneurial and adaptive approaches, which would be the most informal. In Hart's (1992) typology rational strategy-making would be most formal, followed by command, symbolic, transactive and generative strategy-making.

Firms can use one of these approaches exclusively, but it is more likely that firms will use a combination of approaches (Hart 1992); for example, Mintzberg and Waters (1982) illustrate how a firm changes its approach to strategy-making as it matures. Firms can also use more than one approach in combination or, in larger firms, different approaches may be used in different parts of the firm. The typologies of strategy-making processes (e.g. Ansoff 1987; Dess et al. 1997; Hart 1992; Nutt 1984) therefore identify approaches used within one firm, as well as approaches used in different firms. Most authors recognise that formal approaches such as rational strategy-making are most likely to enhance firm performance (Hart 1991; Mintzberg 1973; Robinson and Pearce 1983) or at least have a greater effect on performance than other approaches (Hart 1992).

Nevertheless, as argued by Verreyne (2006), this notion of formality in strategy-making is questionable in a small firm environment, especially within those firms with fewer than 100 employees. The rational mode of strategy-making, for example, assumes that strategic decision-making takes place in a number of steps, usually including an exhaustive analysis of the environments, comprehensive formulation and evaluation of alternatives, and the choice of one or more of these alternatives for implementation. If formal processes are this comprehensive, with a high level of information processing, separated means and ends, and an organisational structure that follows strategy (Hart 1991; Hart and Banbury 1994), it is unlikely that many of the small

firms studied in this research will have the time and other resources required to adopt formal processes. Furthermore, doubt has been cast on the success of formal processes in small firms (Beaver 2007; Robinson and Pearce 1983). It therefore is important to investigate other, more informal and often emergent, approaches to strategy-making in small firms.

This article argues that small firms do make strategy, and that, instead of formal processes, they use approaches that are more suitable to their unique circumstances. Furthermore, it has been shown that the nature of strategy-making processes may change depending on a number of contextual factors such as organisational structure (Chaston 1997), environmental uncertainty (Covin and Slevin 1989; Hart 1991) and the industry life cycle stage (Lumpkin and Dess 2001) of a firm. Whereas the moderating influence of factors such as organisational structure and environmental uncertainty has been investigated in small firms, such studies have not been undertaken for industry life cycle stage.

This article therefore aims to identify and confirm the existence of strategy-making processes in small firms, and to investigate their relationship with firm performance. It then compares the nature of this relationship during different stages of the industry life cycle to offer insights into which practices are most likely to have a positive relationship with firm performance at each stage. It does so by first providing a background for the notion of strategy-making. Thereafter, this study is conducted in two phases. In the first phase the assertion that participative, adaptive and simplistic strategy-making are used by small firms is investigated. In the second phase the key relationships between strategy-making processes, firm performance and industry life cycle are explored. Lastly, a discussion and conclusions are provided.

2 Background and hypotheses

2.1 Strategy-making processes

Robinson and Pearce (1984 p. 128) call small firm strategy-making research 'woefully inadequate' and 20 years of further research have done little to change that assertion, with the literature on strategy-making in small firms remaining sparse (e.g. Frese et al. 2000) and commonly exploratory (e.g. Gibson and

Cassar 2002). The term ‘strategy-making’ is seldom used in a small firm context; rather the term that seems to be prevalent is ‘planning’. With the exception of a few recent advances (e.g. Alpkam et al. 2007), researchers who explore planning in small firms focus on the presence or absence of formal processes and their relationship with firm performance (e.g. Robinson and Pearce 1984), rather than the exploration of the nature of the applied processes and the contexts in which each process is most likely to enhance firm performance.

This lack of a strong theoretical base in small firm strategy-making research leads this article to draw from those processes identified by researchers in large firms, as briefly indicated in the ‘Introduction’. It argues that three processes in particular are more likely to be used in small firms. These are the adaptive (Alpkam et al. 2007; Chen and Hambrick 1995; Harris et al. 2000; Keeley and Roure 1990), participative (Bourgeois and Brodwin 1984; Cutting and Kouzmin 2000; Floyd and Wooldridge 1992; Hillman and Hitt 1999) and simplistic (Lumpkin and Dess 1995, 2006; Miller 1993) processes. Table 1 compares these three approaches to the typologies of Dess et al. (1997), Hart (1992) and Mintzberg (1973), indicating their place on the formal/informal continuum. The table shows that simplistic strategy-making exhibits dimensions of Hart’s (1992) command and symbolic modes, and that the adaptive mode can be viewed as an external transactive mode, whereas the participative mode can be viewed as an internal transactive mode. This approach is similar to that of Dess et al. (1997). The following paragraphs define these processes and argue why they are relevant to small firms.

Adaptive strategy-making is defined as an active engagement of external stakeholders in decisions regarding the direction and strategies of the firm, and adapting the strategic direction of the firm by using market feedback. This process is often used by small firms because of their dependence on these

stakeholders, which typically include customers and suppliers. This engagement may be less formal than when a rational strategy-making process is followed, but may nevertheless exhibit elements of strategic thinking, as suggested by Quinn (1980). In small firms, adaptive strategy-making commonly provides flexibility to quickly adapt firm strategy to pursue opportunities or deal with threats (Alpkam et al. 2007).

Participative strategy-making is defined as a mode of strategy-making in which strategies and the strategic direction of the firm are the result of the inclusion of various internal stakeholder views in the strategy-making process (Collier et al. 2004). Participative approaches can be undertaken by including employees, managers, shareholders or corporate boards, or other stakeholders in the process. Strategy is therefore made through ongoing dialogue with internal stakeholders, and the role of the owner/manager is often that of facilitator. In small firms, where the influence of the owner–manager is frequently pervasive in determining strategic direction, participation breaks this mould and leads to more emergent strategies. It is therefore considered to be a less formal process, and more of a social learning process which has the benefit of improving the skills and knowledge of the firm (Hart 1992).

Miller (1993) suggests that firms which employ *simplistic strategy-making* focus on the factors that led to success in the past and repeat these actions, developing an ‘overwhelming preoccupation with a single goal, strategic activity, department or worldview’ (p. 117). He defines ‘simplicity’ as a frame of mind or perspective in which highly successful firms become overconfident in pursuing a single strategic goal, something that may ultimately affect such a firm negatively. Therefore, decisions and ultimately strategy-making are simplistic and often driven by the prevailing organisational values. In this article, however, simplistic strategy-making is not defined as a process driven by organisational values, but

Table 1 Formal and informal approaches to strategy-making

Author	Formal				Informal		
Mintzberg (1973)	Planned	Entrepreneurial			Adaptive		
Hart (1992)	Rational		Command	Symbolic	Transactive		Generative
Dess et al. (1997)			Simplistic		Adaptive	Participative	Innovative
Small firms			Simplistic		Adaptive	Participative	

rather one that is top down in nature, driven by top management, yet simplistic in as much as it is preoccupied with the strategies of past success and focussed on internal aspects only (Lumpkin and Dess 2006). Aspects of simplistic strategy-making, such as a preoccupation with a single goal and the use of previously developed blueprints for strategy, often developed by consultants, are well suited to small firms (Hart 1992). Therefore, simplified processes may suit small firms which do not have the time or other resources to spend on complicated, drawn-out strategy-making processes.

The informal nature of strategy-making in small firms is supported by other researchers. Beaver and Jennings (2000), Cooper (1979) describe strategy-making processes in smaller firms as special and frequently unique. Robinson and Pearce (1983, 1984) characterise strategic planning in small firms as informal, unstructured, irregular, incomprehensive, short term and reactive. Beaver (2007) suggests that small firm practitioners do not distinguish between strategy formulation and implementation. In summary, through the close physical proximity of staff and other stakeholders, small firms are well suited to adaptation and participation, while limited resources and experience often leads to the use of simplistic processes. These three processes form the basis for the discussion that follows.

2.2 Strategy-making process and firm performance

The impact of strategy-making processes on firm performance has been widely investigated in large firms (Dess et al. 1997; Hart 1991; Lumpkin and Dess 1995) and, to a lesser extent, also in small firms (Covin and Slevin 1991; Robinson and Pearce 1983; Verreyne 2006). Building on the notion that small firms may not benefit from highly formalized forms of planning (Robinson and Pearce 1983), the relationships between the three identified processes and firm performance are explored.

First the relationship between *adaptive* strategy-making and firm performance is investigated. Barney (1991) suggests that adaptive strategy-making is a rare and inimitable process that will lead to competitive advantage. This is supported by Hart (1991), who finds in a study of 916 firms of all sizes and from all industry sectors that the transactive mode of

strategy-making, in which 'strategy is crafted based upon an ongoing dialogue with key stakeholders' (Hart 1992, p. 338), has a stronger association with firm performance than the rational and generative modes. Adaptive strategy-making is likely to provide small firms with an advantage not only because the rigidity of some alternative approaches may lead to long-term distress (Alpkan et al. 2007), but also because it allows firms to be responsive to the needs of supply chain partners and customers. This is more likely to be the case in small rather than large firms (Alpkan et al. 2007). In this regard Robinson (1982) finds that small firms which incorporate 'outsiders' in their planning processes enhance their performance. The evidence supporting the positive role of adaptive strategy-making in firm performance is very strong. Arguments supporting an alternate hypothesis are based on the premise that informal strategy-making processes are less likely to have a positive impact on firm performance. However, even though authors such as Hart (1991) find that such a process will not contribute to performance to the same extent as formal processes, they still find that there is a positive association with firm performance. This article argues that firms that pay close attention to the needs of their customers, suppliers and/or other stakeholders, and are responsive to those needs, will have an advantage over competitors.

Similarly, Parnell and Crandall (2001) raise the possibility that *participative* decision-making techniques may improve decision quality. Ciavarella (2003) suggests that participative processes may hold advantages such as greater innovation, worker motivation, higher customer satisfaction and loyalty, and therefore improved firm performance. This supports studies by Frese et al. (2000) and Wooldridge and Floyd (1990), who find that participation in strategy-making is associated with improved firm performance. This advantage accrues as a result of either improved decisions, or improved implementation of decisions due to participation (Wooldridge and Floyd 1990). Although it can be argued that participative strategy-making can be time consuming (Covin et al. 2006) and can add to political pressures in decision-making, resulting in compromise, it is unlikely that this result would translate to small firms with fewer employees to include in the process. However, Beaver (2007) claims that many owners/managers of small firms are sensitive about business matters

and will therefore avoid participative strategy-making to prevent these negative effects. Nevertheless, this article argues that those small firms that do involve their employees in their strategy-making processes are more likely to have buy-in by employees or better information and decision-making, and will therefore improve performance.

A similar relationship between *simplistic* strategy-making and firm performance is, however, not supported by the literature. Lumpkin and Dess (2006) only find a moderating role for simplistic strategy-making on the cost-leadership—firm performance relationship, while Miller (1993) hypothesises that it may even have a negative impact on firm performance, a most likely scenario for an approach to strategy-making that does not allow for wider consultation and evaluation of alternatives. However, simplistic strategy-making was earlier defined as a process with aspects of top-down decision-making by top management. Hart (1991) has argued that such processes, which he terms the ‘command mode’, will have a positive relationship with performance. However, overreliance on internal processes without any external focus, and focus only on previous successful strategies rather than the development of new strategies, means that this process is perhaps too simplified to allow for positive effects to stem from strong leadership. It can therefore be hypothesised that:

H1 Strategy-making processes will influence firm performance, specifically:

H1a Participative or adaptive strategy-making will have a positive relationship with small firm performance

H1b Simplistic strategy-making will have a negative relationship with small firm performance

2.3 The moderating role of industry life cycle

As explained earlier, strategy-making processes will differ between firms and also within firms. Such differences are usually the result of a number of circumstances, many of which have been investigated before, including the informality of the organisational structure (Gibbons and O’Connor 2005), environmental uncertainty (Dess et al. 1997) and an entrepreneurial orientation (Covin et al. 2006). In this article it is argued that industry life cycle may also

influence the approach to strategy-making that a small firm uses as well as the success of that approach at various stages of the life cycle, thereby moderating the relationship between strategy-making processes and firm performance. Industry life cycle has been investigated as a moderating variable in a number of other relationships, including entry barriers and firm performance (Robinson and McDougall 2001) and competitive aggressiveness or proactiveness and firm performance (Lumpkin and Dess 2001). In this section it is argued that the relationship between participative strategy-making and performance will be strengthened in growth industries, that the relationship between simplistic strategy-making and firm performance is more likely to be positive in mature industries, and that, although adaptive strategy-making is appropriate in growth and mature industries, its relationship with performance will be stronger in growth industries.

Usually the industry life cycle is described as having four phases, namely introduction, growth, maturity and decline (Lumpkin and Dess 2001). However, this conceptualisation has not been accepted universally; for example, according to Klepper and Graddy (1990) there are three industry life cycle stages. In a study involving 46 new products they define stage 1 of the lifecycle as the period during which the number of firms grow. During stage 2 there is a decline or shakeout in the number of firms, while the number of firms stabilizes during stage 3. In this study managers were asked to place their industry on the more conventional continuum. In order to allow for the reordering of stages suggested by the work of Klepper and Graddy (1990), the introduction and growth stages have been combined under the growth mantle while maturity and decline have been combined under the maturity mantle.

Several studies investigate the behaviour of firms during the different stages of the industry life cycle. Using the automobile industry as an example, Abernathy and Utterback (1978) explain the evolution of an industry life cycle in terms of uncertainty about user preferences. This uncertainty initially produces an influx of firms into the industry, producing different variants of the product and competitive focus on innovation. Gradually a dominant design emerges, heralding the beginning of the shake-up stage where producers who cannot produce the dominant design exit the industry. Those firms which remain in the

industry lock into the dominant design, heralding a decline in innovation and an increase in investment in capital-intensive production methods. This investment raises barriers to entry and leads to the demise of smaller manufacturers who cannot compete. Klepper (1996) has challenged the idea of a dominant design, suggesting that innovation attracts only new buyers, resulting in a market advantage for early industry entrants and increasing entry barriers. He suggests that firms start to leave an industry when insufficient innovation (research and development investment) leaves them in a position where they can no longer compete. During the growth phase innovation peaks and then falls as producers devote increasing effort to process relative to product innovation. These theories can be interpreted to suggest that a strategy-making process that nurtures innovation, such as adaptive or participative strategy-making (Barringer and Bluedorn 1999; Ciavarella 2003; Cooke and Wills 1999; Miller and Friesen 1984), will be important during the growth phase of the industry life cycle, while a strategy-making process that favours process efficiency, such as a simplistic strategy-making process, is necessary during the mature phase of the industry cycle (Miller and Friesen 1984).

Strategy-making scholars also support these views. Their research indicates that in the *introductory and growth* phases of the industry, industries are often viewed as attractive because of the lack of competition (Lumpkin and Dess 2001) as well as the abundance of opportunities (Porter 1980). At this stage it is likely that firms will be proactive, risk-taking and innovative (Miller and Friesen 1984); differentiators and innovators (Anderson and Zeithaml 1984); and that these characteristics will improve firm performance (Lumpkin and Dess 2001). Under these conditions it is likely that small firms will be seeking assistance with various aspects of the strategy-making process, thereby including the views of external stakeholders such as financiers, accountants, lawyers and other professionals in decision-making, but also seeking views from other consultants and casual contacts in decisions (Massey 2005), proactively seeking to improve products/services and processes (Lumpkin and Dess 2001). This supports the importance of adaptive strategy-making in growth industries. However, some firms may try to keep their ideas secret at this stage, thereby including only internal stakeholders during the decision-making

process, using a participative process (Chen and Hambrick 1995). In fact, participative processes may be crucial to firms in new industries to enable them to extend growth and delay decline (Ciavarella 2003).

In the early stages of industry development a focus on opportunities as well as a broadening of the product/market scope and innovations in product/service lines is important to firms, making simplistic strategy-making processes less attractive (Hart 1992). It is also unlikely that simplistic approaches will be constructive in industries which grow rapidly and where firms will be successful when differentiated from competitors (Bracker et al. 1988). Furthermore, in a new industry, it is less likely that practices that led to past success would be useful to the firm. However, Miller and Friesen (1984) note that firms in the later stages of this phase may start to focus on efficiency, consolidate their strategy and show conservative behaviour, indicating that simplistic strategy-making may become more useful as industry maturity progresses.

In the *maturity* and early *decline* phases of the industry, competition intensifies as even more competing businesses enter the market (Lumpkin and Dess 2001). These authors suggest that at this stage firms are more likely to be successful if they can take market share off existing competitors. They therefore succeed by managing resources and enhancing marginal returns better than competitors (Lumpkin and Dess 2001) and doing so through a conscious and controlled process (Anderson and Zeithaml 1984; Hart 1992). While these findings are relevant to larger firms, Miller and Friesen's (1984) explanation that decision-making becomes instinctive at this stage seems more appropriate to small firms (Hewitt-Dundas and Roper 2001). This is indicative of a simplistic approach to strategy-making, confirming the earlier suggestion. McGahan et al. (2004) support this by explaining that more scalable, simplistic business approaches become the dominant model at later stages of the industry life cycle, most likely because they lead to process efficiencies.

In summary, it can be argued that during the early stages of a new industry's existence firms will have to act entrepreneurially to develop products or services which lead to the creation of the industry, thereby heavily involving a select number of stakeholders in strategy-making. During the later stages, firms tend to

follow those approaches that were valuable in the past, simplifying them to be more efficient—thus using past blueprints. These arguments suggest that firms using appropriate processes during each stage of the industry life cycle are more likely to improve performance, indicating a moderational effect. It is therefore proposed that:

H2 In the early stages of the industry life cycle small firms will benefit from participative and adaptive approaches, while firms in the later stages will benefit from simplistic approaches.

3 Methods

The measurement instrument used for this article contained 45 firm behavioural items as well as questions regarding organisational characteristics. The measurement instrument was tested for reliability and validity and then mailed to 2,000 New Zealand small firms. The firms, which were randomly selected from the Kompass database, excluded farming operations, foreign-owned firms and firms with more than 100 employees (Massey 2005). The questionnaire was mailed to the owner/manager and a reminder was mailed 1 month later. About 504 questionnaires were returned, of which 477 were deemed usable for a response rate of 23.85%. The sizes of the firms in terms of full-time employee equivalents ranged from 1 to 99. In this article only firms with at least ten full-time employees were considered to ensure that all strategy-making modes could in principle be present in the firms (e.g. a firm with only one staff member cannot use participative strategy-making) and because previous studies have shown that organisational processes do differ for very small firms (O'Regan and Ghobadian 2004). Furthermore, this is more in line with other published works (e.g. Gray 2004). This meant that only 320 of the usable questionnaires were considered in this study.

The above response rate is typical for surveys of this nature, however, it does raise concerns in relation to nonresponse bias. A comparison of the size of firms and the type of industry with national statistics from Statistics New Zealand (2003) suggest that the sample had more larger firms and more manufacturing firms than are found in the general population. The national statistics indicate that, for firms with

between 10 and 99 employees, 58% will have fewer than 20 employees, 19% will be in the manufacturing sector, and 52% will be in the services sector. As indicated below, only 40% of the firms included in the sample of 320 firms had fewer than 20 employees, while 44% operated in the manufacturing industry and only 25% in the service industry. This result was expected because larger firms should typically have more resources to devote time to noncore tasks such as completing questionnaires for researchers. However, at least in terms of performance, the sector differences are similar to those obtained in the New Zealand economy at this time, suggesting that nonresponse bias is not a problem in this study.

Nonresponse bias was also assessed on the basis that later respondents are more closely related to nonrespondents than early respondents (Armstrong and Overton 1977). Therefore the early respondents were compared to the late respondents. Firms were divided into three groups: those that responded in the first 2 weeks after the questionnaire was distributed, those that responded in the last 2 weeks before the deadline, and the rest. Parametric Analysis of Variance (ANOVA) and nonparametric (Kruskal–Wallis) tests for mean differences were employed. No significant differences were found for any of the variables included in this study. In particular there was no significant difference in the age, size, performance or strategy-making style for these three groups of respondents, as shown in Table 2.

In view of this result it can be assumed that nonresponse bias is unlikely to have had an adverse effect on this study, but this conclusion will be explored further using the Heckman (1979) method. In this approach nominal logistic regression is used to predict the respondent categories described above,

Table 2 Check for nonresponse bias based on return dates for questionnaires

Variables	χ^2 (df = 2) Kruskal–Wallis test	p-value
Age	2.703	0.259
Size	5.166	0.076
Performance	1.352	0.509
Simplistic SM	0.293	0.864
Participative SM	0.509	0.775
Adaptive SM	0.522	0.770

SM strategy-making

using a variety of available scales that were constructed from the data collected (e.g. size, performance, strategy-making styles, entrepreneurial orientation, organicity index, environmental hostility and dynamism, market heterogeneity, differentiation, cost emphasis and market breadth). A Mills ratio is then produced using the ratio of the normal probability and cumulative distribution functions for each residual. If the inclusion of this Mills ratio in regression analyses has a major impact, it means that nonresponse bias cannot be ignored. This approach will be further discussed in the 'Results' section.

The dependent variable, firm performance, was measured by using the financial performance scale developed by Covin and Slevin (1989) and Gupta and Govindarajan (1984). Respondents had to indicate the 'importance' of ten financial measures to the firm on a five-point Likert scale. These measures include sales, growth, cash reserves, return on equity, gross and net profit, return on investment, growth in funding sources and the ratio of profit to sales. Thereafter they were asked to indicate their satisfaction with the firm's performance for the same ten performance measures. The 'satisfaction' scores were multiplied by the 'importance' scores and aggregated in order to compute a weighted average performance index for each firm. Weighting satisfaction with importance scores is the same method followed by Covin and Slevin (1989) when producing a performance index. The higher the aggregate score on this index, the better the perceived level of firm performance. The reliability of this measure was checked using Cronbach's alpha ($\alpha = 0.902$) and the correlation ($r = 0.702$) with a scale constructed using items that compared perceptions of firm performance with that of competitors in terms of the same ten performance measures.

The validity of this performance measure was more difficult to check because no objective financial statistics were available for the firms included in the study. The only check that was possible consisted of discriminant validity checks in terms of the strategy-making scales defined below and a comparison of national statistics by industry with the performance results obtained in this study. The June quarter of 2003, during which this survey was conducted, was remarkable in several aspects in New Zealand. Internal demand increased by 2.4% in this quarter, 6.1% higher than in the same quarter of the previous

year. Furthermore, annual spending on durable goods was up by 7.6% with new housing investment rising 24.8%. Industry production was mixed in this quarter. Service industries grew by only 0.5% in this quarter and manufacturing was down 2.1%. Electricity, gas and water fell 8.0% as a result of a 'power crisis' and activity in goods-producing industries declined 2.1%.

As shown in Table 3, the perceived performance results considered in this study reflect the above national statistics, suggesting that there was insignificant reporting bias for this variable. As expected, perceived performance levels were indeed higher for the firms engaged in retail/wholesale trade and, to a lesser extent, for firms in the construction sector. At the same time firms in the services and manufacturing sectors reported lower performance, with particularly low results for the three firms classified as electricity, gas and water (Mean (MN) = 97.67, Standard deviation (SD) = 58.77). These results suggest that the performance levels used in this survey are valid. They also suggest that nonresponse bias in terms of perceptions of performance is unlikely, despite the differences between the sample and the research population in terms of firm size and industry. Unfortunately no growth rates were obtained for individual firms, making a more thorough validation of the performance measure impossible.

The strategy-making process was measured with the Hart (1991) scale as modified by Dess et al. (1997) using 25 items scored on a five-point Likert scale. Dess et al. (1997) tested this scale in large firms and found that four strategy-making modes resulted from their factor analysis. Exploratory factor analysis was also used in the current study in order to define the strategy-making modes commonly used in small firms and to test the first hypothesis. Kaiser's (1959) rule and Cattell's (1966) rule were used to determine the

Table 3 Perceptions of performance by sector ($F(3,316) = 2.846, p = 0.038$)

Sector	<i>N</i>	Mean	Standard deviation
Services	81	134.49	33.14
Manufacturing (electricity, gas and water)	140 (3)	135.88 (97.67)	37.98 (58.77)
Construction	48	138.50	38.70
Retail/wholesale	51	152.78	46.88

optimum number of factors. Principal-axis factoring was used to extract factors, with the application of a promax rotation to allow for correlations between the factors. As suggested by Hair et al. (1998), correlations of above 0.3 are considered to be strong. Items that did not load strongly on any factor were removed, as were items loading strongly on more than one factor. In addition, when only two items loaded strongly on a factor, these items were removed on the grounds that the factor was not reliably measured. The final factor pattern showed a simple structure allowing the factors to be named according to the strategy-making modes suggested by their loadings. The internal validity of this model for the strategy-making process was tested using a confirmatory factor analysis for each of the factors. In particular, the Root Mean Square Error of Approximation (RMSEA) statistics (at most 0.06), the Goodness of Fit Index (GFI) statistics (more than 0.90) and the Normed Chi-Square (CMIN/DF) statistics (between one and three) suggest adequacy according to Byrne (2001). The discriminant validity of the measurement model and performance scale were confirmed using imputed correlations, the results confirming that each item was loading strongly on only one factor after one additional item was removed from the simplistic strategy-making construct. Scales were computed for the three strategy-making processes with Cronbach's alpha used to assess their reliability. Correlation and regression analyses were used to test the first hypothesis, allowing for interaction effects. The second hypothesis was initially addressed by comparing the mean levels for the three strategy-making process scales for firms in the growth and mature stages of the life cycle. This was done using a nonparametric Mann-Whitney test due to skewness in the scale distributions.

The reliability of the scale used to represent the simplistic strategy-making process was unacceptably low, suggesting that the remaining analyses should be conducted using the original items rather than the scales. This was done using structural equation modelling rather than factor scores in order to make the results more transparent. A model relating the strategy-making process to performance was developed, allowing for mediation effects. The internal validity of this model was tested using structural equation modelling, and the relative importance of the strategy-making modes in terms of performance was assessed. SPSS version 13 and AMOS version 6 were the packages employed in the analysis.

This model should be interpreted with caution. Although there are compelling theoretical reasons to argue in favour of causal links, this is not justified by the model alone. A longitudinal or experimental study would be required in order to justify a causal argument on the basis of the model alone. However, the effect of control variables, such as the age, size and industry sector of the firm and the years of experience of the respondent, was considered and found to be insignificant in terms of the structural model. This suggests that the relationships observed in the model cannot be discounted as spurious on the grounds of these firm characteristics. Nevertheless, it was found that the model parameters did differ significantly for firms in growth and mature industries. The model was therefore fitted separately for firms in growth and mature industries, further testing the second hypothesis.

4 Findings

Among the 320 small firms included in this study, firms from the manufacturing industry were most common (44%) with lower representation for services (25%), retail/wholesale (16%) and construction (15%). The majority of the firms were private companies (71%), 12% were owner operated, 8% were run as partnerships and 7% were public companies. Firms in the mature stage of the life cycle were most common (54%), followed by firms in the growth phase (37%). The remaining 9% of firms were scattered in between these phases, the introductory phase and the decline phase. Only 15% of the small firms had existed for more than 5 years, while 67% had existed for less than 3 years. The percentage of firms under 1 year was 12% and the percentage under 2 years was 46%. As expected, a nonparametric Mann-Whitney test showed that firms in the growth phase were significantly younger ($z = 2.624$, $p = 0.009$) and significantly smaller ($z = 2.341$, $p = 0.019$) than firms in the mature phase. The results suggest that small firms in New Zealand tend to enter mature industries fairly often, with 48% of young firms considering themselves to be in mature industries after only 2 years of operation.

The initial exploratory factor analysis suggested four factors according to Kaiser's criterion and four factors according to Cattell's scree plot. After a

promax rotation of the four-factor solution it was found that one of the factors had strong loadings for only two items, 'People in this firm are very dynamic and entrepreneurial' and 'Most people in this firm are willing to take risks', two items which are commonly referred to as entrepreneurial strategy-making (Dess et al. 1997). This meant that there was insufficient information to reliably measure the level of entrepreneurial strategy-making because the correlation between the responses for these two items was only moderate (0.53). These two items were therefore removed and the factor analysis was rerun allowing for only three factors. The resulting factor pattern showed low loadings for the items 'Failure is something to be avoided in this firm at all cost' and 'Specific work roles and expectations are clearly defined in this firm' on all factors. In addition, loadings of nearly 0.50 occurred for 'This firm has a characteristic management style and a common set of management practices' on two of the three factors. These three items were therefore removed and the factor analysis was rerun, producing the simple structure shown in Table 4.

Interpretation of the resulting three factors using loadings revealed that these factors describe similar constructs to three of the factors defined by Dess et al. (1997), namely participative, adaptive and simplistic strategy-making. The first factor, 'participative strategy-making' includes aspects such as teamwork, equality, cooperation, a fair hearing for all, input from employees in decisions and a long-term pragmatic business approach. The second factor, 'adaptive strategy-making', includes aspects such as adaptation, ongoing planning and listening to and involving stakeholders in strategy-making. Adaptive strategy-making in this context was therefore externally directed participation and adaptation. The third factor was termed 'simplistic strategy-making' (compare Lumpkin and Dess 1995, 2006). This factor includes aspects such as top-down behaviour, an internal process and the fact that the CEO takes decisions with a blueprint of strategies. At this point it can be concluded that the small firm data on strategy-making are factorable and that participative, adaptive and simplistic strategy-making are used by small firms in varying degrees, providing a basis for further analyses.

Table 4 Exploratory factor analysis with loadings bolded for items belonging to each factor

Item	Participative SM	Adaptive SM	Simplistic SM
Work as part of a team	0.866	-0.141	-0.061
Most people are treated equally	0.776	-0.080	-0.070
Cooperation and collaboration are encouraged	0.734	0.000	-0.061
People with unpopular views are heard	0.667	0.067	-0.193
Most people have input to decision-making	0.667	0.099	-0.238
Modus operandi is well suited to the business	0.640	-0.057	0.311
Long-term potential is valued more than short-term performance	0.599	-0.107	0.202
Clear and consistent set of values	0.551	0.085	0.197
Business strategy decisions by consensus	0.519	0.160	-0.092
Conflict is often suppressed	0.453	0.014	0.010
Experimentation is encouraged	0.439	0.119	0.035
Decision making at level with best data	0.382	0.219	-0.003
Business planning is ongoing involving all	0.049	0.693	-0.087
Listen to what stakeholders say	0.023	0.688	0.010
Stakeholders involved in our planning	-0.098	0.633	-0.002
Continuous adaptation to market feedback	0.133	0.416	0.252
Top-down decision-making	0.056	0.023	0.502
Planning is an internal process	-0.032	-0.067	0.426
CEO places his mark on almost everything	-0.259	-0.016	0.420
Clear blueprint for strategy	0.117	0.134	0.389

In order to further test the validity of the hypothesised small firm strategy-making model, confirmatory factor analysis was performed for each of the factors and the full measurement model was tested for discriminant validity. All three factors were validated in the confirmatory factor analysis with values of CMIN/DF less than 3, GFI and CFI indices greater than 0.90 and RMSEA less than 0.06. However, when the full measurement model was tested it was found that one of the items from the simplistic strategy-making, 'The chief executive of our firm insists on placing his/her mark on virtually every major initiative', had a strong negative loading on participative strategy-making. This item had to be removed in order to ensure discriminant validity. Adding the performance construct to the above strategy-making model, using the product of the importance and satisfaction measures, only weak correlations were found with the strategy-making process items, confirming the discriminant validity of the performance measure in regard to the strategy-making constructs.

Scales were constructed for the three strategy-making processes by averaging the responses to the items assigned to each scale. As shown in Table 5 the reliability of the scale for simplistic strategy-making was poor ($\alpha = 0.425$) but good for participative and adaptive strategy-making. All three strategy-making scales had a significant positive correlation with performance, thereby supporting Hypothesis 1a, but not Hypothesis 1b.

In order to apply the Heckman check for nonresponse bias, ordinal logistic regression was used to predict the timing category for questionnaire responses. It was found that firms that returned their questionnaires quickly tended to have less focus (i.e. wider market breadth), with a relatively high tendency to use adaptive strategy-making processes and a relatively low tendency to use participative strategy-

making processes. The residuals from this regression were used to create the Mills ratio referred to below.

A hierarchical regression analysis for performance was then undertaken in order to test for mediation effects, an interaction effect between participative and adaptive strategy-making and to test for non-response bias. The stage 1 results shown in Table 6 suggest full mediation for the effect of simplistic strategy-making by adaptive and participative strategy-making and partial mediation of the participative and adaptive strategy-making processes by each other. Stage 2 results suggest no significant interaction effects for these two strategy-making processes and the stage 3 results suggest a nonsignificant effect for Mills ratio. This last result, together with the very minor change in the coefficients between stages 2 and 3 of the regression, suggest that nonresponse bias is unlikely to be significant in this study.

The above results suggest that simplistic strategy-making supports participative and adaptive strategy-making processes, without having a direct impact on performance. In view of this result and the poor reliability of the simplistic strategy-making scale this construct was ignored in the following structural model, which is based on the original items. The model shown in Fig. 1 describes the data well (CMIN/DF = 2.12, GFI = 0.913, CFI = 0.928, RMSEA = 0.059) with 15.3% of the variation in performance explained.

This model shows significant direct links between adaptive strategy-making and firm performance and between participative strategy-making and firm performance, supporting Hypothesis 1a. This model suggests that firm performance will improve when there is adaptive strategy-making or when there is participative strategy-making, with adaptive strategy-making marginally more important than participative strategy-making.

Table 5 Correlations and descriptive statistics

	Participative SM	Adaptive SM	Simplistic SM	Performance
Participative SM	1.000	0.564**	0.178**	0.349***
Adaptive SM	0.564***	1.000	0.169**	0.315***
Simplistic SM	0.178**	0.169**	1.000	0.129*
Mean	3.77	3.50	3.55	138.62
Standard deviation	0.60	0.71	0.70	38.84
Cronbach alpha	0.883	0.719	0.425	0.906

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6 Hierarchical regression analysis for performance with interaction and Mills ratio

	Participative SM	Adaptive SM	Simplistic SM	Adaptive/participative interaction	Mills ratio	Change R ²
Performance correlation	0.349***	0.315***	0.129*	-0.163**	0.025	
Beta coefficients						
Stage 1	0.245***	0.167**	0.057			0.145***
Stage 2	0.234***	0.166**	0.052	-0.036		0.001
Stage 3	0.259**	0.142*	0.048	-0.033	0.044	0.001

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

When this model was fitted separately for firms in the growth phase and then for firms in the mature phase of the industry life cycle, it was found that the coefficients of the model changed significantly ($\chi^2 = 34.98$, $df = 16$, $p = 0.004$). As shown in Table 7, simplistic strategy-making was only weakly correlated with performance for firms in both growth and mature industries and regression analyses found no significant link with performance when adaptive and participative strategy-making were included, further justifying the omission of this construct in Fig. 1. In the case of firms in growth industries, Table 7 shows that participative strategy-making is more important in terms of firm performance than adaptive strategy-making. Although the participative and adaptive strategy-making scales have a significant correlation with performance for these firms, together they explain only 7% of the variation in performance in the structural model. The very low significance of the adaptive strategy-making link to performance suggests that participative strategy-making may mediate the relationship between adaptive strategy-making and

firm performance. In growth industries it seems that firms which use adaptive strategy-making are more likely to be successful only if they use participative strategy-making. However, strategy-making processes appear to have little influence for these firms.

However, in the case of firms in the mature phase of the industry life cycle, strategy-making processes appear to be more important, explaining 21% of the variation in performance. This is particularly true in the case of adaptive strategy-making. It seems that adaptive strategy-making mediates the relationship between participative strategy-making and firm performance. There is no direct link between participative strategy-making and firm performance, only an indirect link via adaptive strategy-making. This means that firms in mature industries which use participative strategy-making are more likely to use adaptive strategy-making to generate performance. Figure 2 illustrates the nature of the above relationships for firms in growth and mature industries.

Firms operating in the growth stage of an industry are more likely to be younger than firms operating in

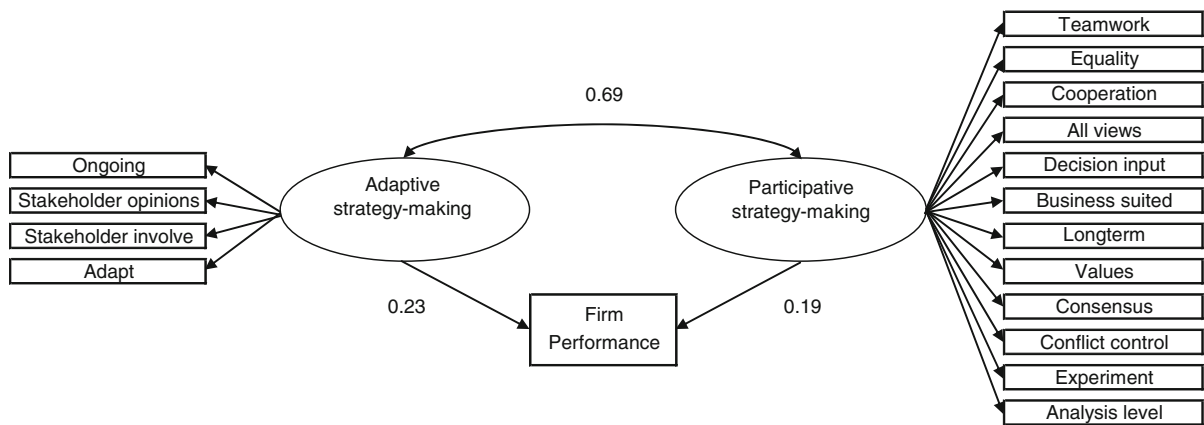


Fig. 1 A Structural Equation Model (SEM) of strategy-making and performance in a small firm with β coefficients shown

Table 7 Scale correlations and structural model for performance in growth and mature industries

	Growth industries ($R^2 = 7\%$)		Mature industries ($R^2 = 21\%$)	
Correlation performance with simplistic SM scale	0.121		0.135*	
	Participative SM	Adaptive SM	Participative SM	Adaptive SM
Scale correlation with performance	0.274**	0.207**	0.393***	0.389***
Scale correlations with simplistic SM scale	0.366***	0.266**	0.097	0.037
Standardised performance coefficients (Fig. 1)	0.23	0.04	0.18	0.32*
Critical ratio	1.358	0.229	1.658	2.523
p-value	0.174	0.819	0.097	0.015

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

mature-stage industries. The results show that 62% of growth industry firms are at most 25 years old whereas only 43% of mature industry firms are in this age bracket. However, when the model shown in Fig. 1 was compared for young firms and older firms, no significant difference was found ($\chi^2 = 19.9$, $df = 16$, $p = 0.222$). Also, growth-industry firms tended to be smaller than mature-industry firms, but when this model was compared for firms with at most 23 employees and firms with more than 23 employees, no significant difference was found ($\chi^2 = 19.4$, $df = 16$, $p = 0.250$). Similarly there was no significant difference ($\chi^2 = 11.9$, $df = 16$, $p = 0.750$) in terms of the experience of the manager (at most 13 years or more than 13 years). There was also no significant difference between manufacturing and service firms ($\chi^2 = 22.7$, $df = 16$, $p = 0.121$). These results suggest that the above industry life cycle effect is not due to age, size or management experience differences, nor is it due to industry sector. Instead, it appears to be a genuine industry life cycle effect, supporting Hypothesis 2.

In summary, the importance of participative and adaptive strategy-making differs for firms in growth and mature industries, with adaptive strategy-making

playing a more important role in the case of mature industries as opposed to participative strategy-making in the case of growth industries. Also, as illustrated in Fig. 2, adaptive and participative strategy-making explain a significant proportion of the variance in performance for firms in mature industries, but this was not really the case for growth industries, even though the model fit statistics were reasonable in both cases (CMIN/DF = 1.60 and 1.72; CFI = 0.928 and 0.894, RMSEA = 0.059 and 0.078).

Finally, Table 8 compares the use of participative, adaptive and simplistic strategy-making for firms in the growth and mature stages of the industry life cycle. Nonparametric Mann-Whitney tests show no significant differences in the distribution of values for the scales used to measure simplistic and adaptive strategy-making; however, there is slightly higher use of participative strategy-making in the case of firms in growth industries and these firms appear to be slightly more successful. These results show that on average there is little difference between the strategy-making processes of firms in growth and mature industries, suggesting that firms do not realise that the optimum combination of strategy-making processes differs for industries in these two stages.

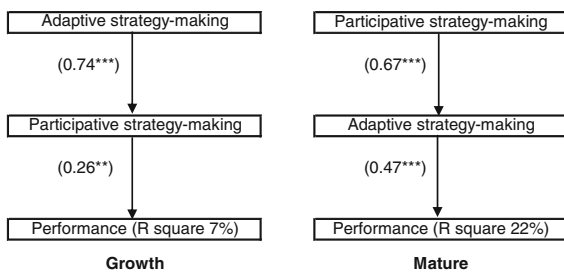


Fig. 2 Effect of industry life cycle on performance model with β coefficients shown (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

5 Discussion and conclusions

This article set out to explain the relationships between strategy-making processes and small firm performance and how they change for firms in the growth or mature stages of the industry life cycle. Three major findings emerge from the literature survey and subsequent empirical study.

First, the model in Fig. 1 shows that adaptive strategy-making and participative strategy-making are

Table 8 Mean usage of strategy-making processes and performance

Phase	Participative SM	Adaptive SM	Simplistic SM	Performance
Growth ($n = 119$)	3.84	3.55	3.57	144.4
Mature ($n = 173$)	3.72	3.46	3.54	136.0
Mann-Whitney Z	0.218	1.181	0.410	1.990
p -value	0.027	0.234	0.682	0.011
Effect size	0.010	0.004	0.000	0.011

directly related to small firm performance. Although simplistic strategy-making has a significant positive relationship with performance, this can be attributed to an increased level of participative and adaptive strategy-making in small firms that have higher levels of simplistic strategy-making. The results from the model support Hart and Banbury's (1994) assertion that firms which use combinations of strategy-making processes instead of focusing on one process exclusively are more likely to be successful. The total variation in firm performance that is explained by participative and adaptive strategy-making is 15.3%. This finding indicates that, as suggested by Barney (1991) and Hart (1991) for large firms, small firms which actively engage their stakeholders during the strategy-making process and which seek feedback on various aspects of the firm from their market will find that these actions have a positive impact on their performance. As suggested by Parnell and Crandall (2001) and Wooldridge and Floyd (1990) for large firms, the same is true of small firms that involve their employees in the strategy-making process, devolve decision-making to the most suitable level, and ensure input into decisions from the most appropriate levels or departments in the firm (Frese et al. 2000). This result suggests that strategy-making in successful firms is the result of small firms exploring their environment and engaging internal and external stakeholders to ensure complete information about not only opportunities and threats, but also strengths and weaknesses. In these small firms strategies result from ideas gathered from stakeholders and decisions made by people with the appropriate level of information to make these decisions. In the computer industry a strategy of supplier involvement has been found to be particularly beneficial for mature industry segments (Eisenhardt and Tabrizi 1995). Robinson and Pearce (1984) suggest that the informal use of aspects of rational strategy-making processes, for example environmental analysis, will have a

positive relationship with performance. This finding is supported in this study, which clearly indicates that small firms can expect advantages from informal strategy-making processes.

Second, the weak positive relationship between simplistic strategy-making and small firm performance is noteworthy. Lumpkin and Dess (1995) find that simplistic strategy-making moderates the relationship between cost-leadership and performance in large firms, while Miller (1993) suggests a negative impact on performance. Hart and Banbury (1994) also find a negative correlation between this type of process and performance. The results suggest that, in the case of small firms, the so-called blueprint for strategy-making that is found in the simplistic mode of strategy-making facilitates the use of adaptive and participative strategy-making practices, in effect providing an umbrella strategy for these processes. It is also likely that the interaction between stakeholders and the small firm is driven, or even executed, by the owner/manager. The performance advantage still accrues from the interaction with stakeholders, but is supported by top management. The lack of a strong association between simplistic strategy-making and performance indicates that such a process on its own will not improve firm performance, but that it has to be used in combination with adaptive and/or participative strategy-making processes, providing direction while the other processes provide action.

Third, when small firms in growth and mature industries are separated a very interesting picture emerges. It seems that in mature industries adaptive strategy-making is more important than participative strategy-making, with the reverse true in the case of firms in a growth phase of the industry life cycle. In growth industries internal staff participation in the strategy-making process is more important in planning growth. Furthermore, greater competition during the maturity phase demands greater attention to external

stakeholders, while reliance on internal staff is more important in driving the growth phase. The importance of adaptive strategy-making during the mature phase of the industry life cycle was not hypothesised, but there are several explanations for this. Most notably, responsiveness to the needs of customers and suppliers will contribute to the competitive advantage of small firms (Hart 1992). Additionally, advice from knowledgeable 'outsiders' such as consultants, accountants and lawyers will improve the practices and policies of the small firm, and improve their ability to take advantage of opportunities (Robinson 1982). For mature-industry firms, adaptive strategy-making can also perhaps be seen as a low-resource reaction to competitive action. Strengthening relationships with stakeholders is a relatively inexpensive way of building barriers to entry, in fact the strength of relationships with stakeholders may be the only entry barrier that protects small firms in mature industries. This explains why this study has found that adaptive strategy-making will be the most important strategy-making process for small firms in mature industries.

The interaction between adaptive and participative strategy-making differs according to life cycle stage. In growth industries, participative processes are nurtured by information derived from interaction with stakeholders, whereas in mature industries, participation nurtures interaction, most likely indicating a more deliberate search for opportunities by organisational members. Older firms are larger, employ more people and therefore have more people who can contribute to strategy-making, further supporting the more deliberate search for opportunities. More specifically, firms in mature industries operate in a more competitive environment and therefore have to ensure that they are aware of industry conditions at all times, leading to an emphasis on adaptive strategy-making.

Interestingly, simplistic strategy-making is only important for firms in growth industries and only when used in conjunction with adaptive or participative strategy-making. Previous studies (e.g. Miller and Friesen 1984) indicated that simplistic strategy-making would become more relevant at later stages of the industry life cycle, but clearly these results indicate that using simplified processes will not impact on performance in small firms located in a mature industry. In order to explain this result, it can be argued that in older, more complex firms it may be complicated for individuals such as owners/managers

to handle all the decision-making responsibilities successfully (Gilmore and Kazanjian 1989). Since firms in the mature stage of this study are generally older firms, as indicated in the 'Findings', which may explain why simplistic strategy-making does not support performance in firms in mature industries. A more likely explanation is that in mature industries a facilitation role for the owner/manager is incompatible with other strategy-making processes which are more participative in nature (Collier et al. 2004). For the firms included in this study there was little difference between the strategy-making processes of growth-stage and mature-stage industries, suggesting that small firms do not realise that the optimum combination of strategy-making processes differs for industries in these two stages. In particular, it seems that firms in mature industries should be paying more attention to adaptive strategy-making.

However, strategy-making is a better predictor of performance in the case of mature-stage industries ($R^2 = 22\%$) than in the case of growth-stage industries ($R^2 = 7\%$). This suggests that the strategy-making process has greater importance for firms in more mature industries than for firms in growth industries, most likely because competition intensifies at this stage, leading to the need for a more systematic approach, as suggested by Anderson and Zeithaml (1984). Furthermore, the inclusion of stakeholders to help in setting the strategic direction of the firm may hold many benefits for the firm, including better awareness of opportunities, customer expectations and needs, as well as developments or innovations in supplier products.

It is important to note a number of limitations against which the results of this study should be interpreted. These include the use of single respondents and firms from only one country, namely New Zealand. However, it can be argued that in small firms the owner/manager of the firm should have sufficient knowledge about organisational processes to complete such a questionnaire. The use of New Zealand as a context is also a reasonable decision, seeing that this country adopts strong free-market principles and has a stable democracy.

Several implications result from this study. Most importantly, this study shows clearly that the approach to strategy-making that a small firm adopts has a significant relationship with the performance of that firm, and that owners/managers of small firms

should therefore pay careful consideration to this issue. It further indicates that processes that include internal and external stakeholders have a more profound relationship with firm performance than simplistic strategy-making processes, and that small firms should therefore seek the input of stakeholders such as customers and suppliers when they make strategy. It also supports the assertion that strategy-making processes are likely to differ depending on the context in which they take place. This study suggests that the maturity of the industry in which a firm competes will change the nature of the optimum strategy-making process, with the strategy-making process being less important in new industries but more important in mature industries where a greater number of firms are jockeying for position. Further, the study suggests that firms in mature industries will not benefit by allowing a simplistic approach to invade their strategy-making process. However, in the case of firms in growing industries, blueprints and a top-down-induced strategic management style may actually promote the development of ongoing adaptive and participative stakeholder-centred strategy-making. Finally, it appears that the involvement of internal and external stakeholders in strategy-making will improve the performance of small firms. However, in the case of firms in growing industries it is the internal stakeholders who are more important, while for more mature industries it is the external stakeholders who are crucial.

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