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The role of strategic planning and HR managerial involvement and types and sources of analytic information on SME performance

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Background

Methods of planning, including a long term horizon, formality, the use of planning sources/tools and evaluation of plans are all focal areas of strategic planning (Wiesner and Millet 2009). These key aspects constitute strategic planning processes employed in organisations with the view to enhance firm performance (Tapinos, Dyson and Meadows 2005). Although findings vary, research has highlighted a strong link between strategic planning and firm performance and there is strong evidence that successful SMEs undertake more formal planning than failed firms (Gibcus and Kemp 2003; Gray 1997; Rue & Ibrahim 1998; Gibbons and O'Connor 2005). Furthermore, global challenges necessitates the alignment of functional activities with the firm's strategic objectives resulting in numerous calls for a greater strategic role of HR in organisations in these key aspects of strategic planning. This role is twofold. Firstly, it constitutes contributing to the firm's strategy in guaranteeing that the firm has sufficient HR capabilities to implement strategy. Secondly, the focus is on executing HR activities in order to successfully implementing strategy (Truss & Gratton, 1994; Wright & McMahan, 1992). An obstacle in optimally fulfilling these two roles has been the traditional view that HR management doesn't necessarily have a direct impact on firm performance (Carroll, 1991; Thornburg, 1991; Walker & Bechet, 1991; Wright, McMahan, McCormick and Sherman, 1998). A further barrier has been the lack of empirical studies demonstrating the contribution of HR management to firm performance. This has amplified the view that HR management may not be as important or effective as other functions in the firm (for example finance and marketing). This has resulted in a vicious circle of strategic decision-makers believing that HR management is either ineffective or does not substantially enhance firm performance and therefore not inviting HR managers to participate in the strategic decision-making process. When this happens, HR managers are not given adequate opportunity to demonstrate their input in strategic planning activities and are unable to optimally demonstrate their role in strategic planning and ultimately firm performance (Krause and Schwarz 2006).

However, there are considerable differences between how the strategic role of HR managers plays out in large organizations compared to SMEs. Progress in the influencing strategic role of the HR manager in strategic planning is significantly more widespread in larger firms with HRM practice than in small and medium sized firms, the latter regarded often as still largely administrative in nature (Walsh 2001; Wiesner and McDonald 2001; Nankervis, Compton and Savery 2002; Michelson and Kramar 2003). The same trend is evident in Europe and the UK (Bacon and Hoque 2005). Against this current, numerous authors have called for increasing the extent to which HR managers are involved in the strategic management of organisations (Krause and Schwarz 2006; Martell & Carroll, 1995; Schuler, 1992). It appears that very little is known about the how strategic involvement of the HR manager impacts upon key aspects of the strategic planning process, in the case of this paper, the use of planning sources/tools, and particularly in the context of the SME. Furthermore what is less explored in the SEM research is whether the extent of strategic planning employed is

mediated through HR managerial involvement in planning, in driving analytic sources or tools and their subsequent impact on SME performance measures. In view of the fact that the concepts and role of the extent of strategic planning and HR managerial involvement, as well as the types and sources of analytic tools which SMEs utilise, is less examined in the context of SMEs than it is in the rubric of larger firms, we question the nature and relevance of the HR manager, in bringing analytic tools to the strategic planning process.

The research objective of this paper is to examine the mediation of strategic planning and HR managerial involvement in planning, for driving different analytic sources or tool clusters/factors, and their subsequent impact on two SME performance measures. More specifically, three measures of analytic types include: *Normative Analytics*; *Tool-based Analytics*; and *Network-oriented analytic tools* used by the SME. *Normative analytics* includes: use of SWOT analysis, spreadsheets, brainstorming, and professional referents such as company accountants and external consultants. *Tool-based analytics* comprises: TOWS, Internal and External Factor Evaluation, Company Performance Matrix, and Porter's five forces model. Finally, *Network* analytics focuses on using informal networks including knowledgeable friends, knowledgeable family and company auditors. We seek to examine the role of strategic planning, and HR managerial involvement, in the contingent use of the three analytic types, and their subsequent impact on performance (financial and alternative performance).

Brief Literature

Strategic Involvement of HR Managers

Ignoring firm size, studies have studied the linkage between Human Resource Management and strategy processes. One of the first studies on this topic area, examined the relationship between HR and strategic decision-making in ten firms (Golden and Ramanujam 1985). They identified several linkages including, firstly, an 'Administrative Linkage' which entails a focus on administrative duties such as maintaining payroll, record keeping, and processing benefits claims. The second level entails the role that HR plays in strategy implementation, however with exclusion of impact of the formulation of firm strategies. They labelled the third level the 'two way linkage' including a contribution of HR department to both the strategy formulation and strategy implementation processes. The HR department contributes to the strategic decision-making process with regards to the strengths, weaknesses, opportunities, and threats relevant to the firm's human resources. As a result, the strategic decision-making team uses this information in formulating the strategy. As a result of the selection of a particular strategy, the HR department pursues the development and alignment of HR policies, programs, and practices that fit with strategy implementation. Finally, the 'Integrative Linkage' was found in a small number of firms where the HR manager is a member of the strategic decision-making team, and actively participates in the entire strategy formulation process, whilst playing an integral role in the firm's competitive advantage. Our analysis in this paper aligns with the latter type of linkage. However since we focus on SMEs, we do not focus on the contribution of large-firm HR departments, but rather HR managers.

It would seem somewhat axiomatic that HR managerial skills are aligned and integrated into the strategic planning of the SME. Studies have reported on the impact of strategic involvement of HR managers on HR effectiveness and performance outcomes (Wright . McMahan, McCormick Sherman 1996). Gitzendanner, Misa, and Stein (1983) found a strong linkage between HR and strategy among the higher performing performance firms as opposed to low performing firms. Glass (1988) found that higher performing firms involve HR managers to a greater extent in the planning and decision-making processes, than low performing firms. In another study, Martell and Carroll (1995) found varying extent of linkages between HRM and the strategic planning process between forty-four and sixty-nine percent of the participating firms. The latter study found that even though the HR function was viewed as important in the implementation of business strategy, it was not valued equal to other functions. Furthermore the integration of HRM and strategy processes did not correlate with short-term performance of business units.

Thus, the integrative and strategic role of the HR manager is a contentious matter, even more so in the context of SMEs. We now turn to focus on the kinds of tools, relevant to business analysis, planning and strategy, which can illuminate the nature and potential contribution of the HR manager in SMEs, for which our paper examines.

The role of analytic sources and tools in driving through operational and tactical plans

Planning sources/tools are techniques that assist long-term planning by systematically structuring goals and means for goal attainment (Kraus, Harms, and Schwarz 2006). There are an abundance of techniques, tools, methods, models, frameworks, approaches and methodologies, available to support decision-making within the context of strategic planning (Frost 2003). Various lists of strategic tools have been reported in the literature (e.g., Hussey, 1992; Rowe, *et al.*, 1994). More recently Hussey (1997) and Frost (2003) provided a more updated repertoire of strategic planning tools.

This begs the question, what is the importance of strategic planning sources/tools since they do not make strategy nor do they implement strategy? In addition to adding in the presentation of complex issues, source/tools are valuable communication devices (Frost 2003) and depict information in different ways in order to gain new insights in firm progression (Hussey, 1997). They also generate valuable information, engender a formation for analysis, aid with coordination and control, and may also serve a symbolic function (Clark, 1997). Therefore, planning sources/tools enhance the efficiency and effectiveness of planning. However, because a tool is a means to an end and plays a secondary role, often there is an absence of a strong focus on tools. The value of tools is diminished owing to their partial contribution to the strategic task, rather than addressing all aspects of the strategic decision and often a comprehensive exercise using strategic tools is reduced to one or two conceptual frameworks (Frost 2003).

Despite the continuing expansion of types of strategic planning tools, there is a distinct lack of research on usage of tools in the SME context and the subsequent impact of firm performance (Baker and Leidecker 2001; Gunn and Williams 2007). Even in the large organisational context, the majority of the empirical studies reporting tool usage have

included one or two questions on tools as part of a major study of strategic planning processes (Frost 2003). Frost (2003) made a significant contribution in the area by examining the use of a comprehensive list of strategic tools in four countries within the SME context. However he exclusively focuses on tool usage and excludes the performance link. Nevertheless, even though the results are mixed there is also strong support of empirical research regarding the positive and significant relationship between planning sophistication in terms of the use of planning instruments and firm performance (Rue and Ibrahim in Krause et al, 2006).

Given the limited use of sources/tools usage by SMEs and the link with firm performance, there is clearly a need for a wider understanding of how strategic planning tools contribute to firm performance (Kraus, Harms, and Schwarz 2006). Furthermore, the valuable strategic contributions that HR managers make in bringing to bear their influence of the strategic planning process itself, such as bringing analytic tools to the strategic planning process, has been largely ignored. We attempt to fill this gap in this paper and suggest several possible ways in which types of planning tools might be understood in the flow of association between strategic planning, HR managerial input, and firm performance.

Hypotheses: 1. Strategic Planning, HR Managers and Industry Context

If anything, our literature review is oriented towards positioning the role of traditional analytic planning tools as mediating the arch between strategic planning and the firm's financial performance. That is, the greater the degree of strategic planning, the greater the use of mainstream analytic tools, such as what we term traditional, *normative*, planning analytic sources of information and tools which might reasonably be expected to be used by the firm. In the context of this study, our normative practices represent mainstream use of a cluster of analytic and planning practices which encapsulate generic SWOT analysis, brainstorming, use of spreadsheets with the added use of informational professional referents as formal company accountants and external consultants.

H_{1(a)}: Therefore we expect strategic planning to be generally directly related to alternative and financial SME performance across sectors;

To some extent it might be expected that HR managers may only partially enhance what are conventionally mainstream managerial analytic and planning practices, including the use of typical professional referents for further informational sources. The importance of HR managers, in articulating and contributing to generic/normative analytic practices in SMEs, may be more or less involved given: (i) such practices are typical of general managerial knowledge and skills; (ii) the varying degree of importance of human resources in the bundling and leveraging of resources in the particular organisation (Sirmon, Gove et al. 2008); which has been the focus of (iii) industry or context dependencies as shown by more recent theoretical developments regarding SME labour or market orientations (Edwards, Ram et al. 2006). In short, we expect service sector SMEs to be much more dependent upon value and competitive advantage through human resources than would manufacturing SMEs.

Further, the tactical responsibilities of HR managers and their specialist role in articulating strategic planning implicate more specific use of *tool-based* practices such as: TOWS, Internal and External Factor Evaluation, Company Performance Matrix, and Porter's five

forces model. Therefore, we argue that the extent of HR managerial participation in strategic planning should be mediated primarily through the use of tool-based analytic practices, particularly in the context of service sector SMEs.

H_{1(b)}: *The role (extent of involvement) of the HR manager mediates the extent of strategic planning on positive performance through the greater use of tool-based analytic practices, more prominently in service sector SMEs.*

Hypotheses: 2. Strategic Planning, HR Managers and Informality

Second, and finally, our third type of analytic practices focus on analytic knowledge gleaned from network resources which represent a fundamentally different use, and type, of resources in comparison with the strategic and technical role of HR managers in normative and tool-based analytic practices already presented. When considering the role of networks, specifically in engaging knowledgeable friends, knowledgeable family and company auditors, as an independent type of analytic practices/sources of information, relationships of an informal nature are highlighted (Marlow, Taylor et al. 2009). Furthermore, the informational nature of informal interaction raises the potential of several fundamentally different explanatory frameworks less applied in the context of strategic management, HR managers and SME performance. These are indicative of, but not limited to, at one extreme the role of informal interaction (Misztal 2000) and network ties between actors (Granovetter 1973), and at the other, the potential for institutional forces (DiMaggio and Powell 1983) to permeate the firm via the spread of prevailing authoritative rationalisations. A more thorough treatment of the latter is presented by Pursey, Heugens, and Lander (Pursey, Heugens et al. 2009), particularly in relation to the impact and relationship with symbolic and substantive firm performance.

In the present study, our focus on what we term "*network resources*", in the context of the SME, taps almost directly into the potential for informal interactions to either drive the adaptation of existing organisational practices towards greater efficiency, or an arguable trade-off in efficiency for legitimacy through the isomorphic adoption of practice 'templates'. In the former, particularly relevant in the context of management in SMEs, the development of informal routines has been argued as crucial to align the smaller sized firm's interests in localised and family-oriented norms and values which develop employee consent over managerial control (Marlow, Taylor et al. 2009). The potential for informal interactions in SMEs is more likely to be related to owner-operators than it is through HR managerial incumbency. Turning to HR managers, at the other extreme, institutional knowledge drives fads and fashions which are carried through the vectors of professional learning in pursuit of legitimacy with organisational fields (Pursey, Heugens et al. 2009). While institutional theory has argued for the basis of adoption of practice "templates" in pursuit of legitimacy over efficiency, recent meta-analyses has indicated that firm performance does benefit from isomorphic adoptions (Pursey et al. 2009). The treatment of network resources as a distinct type of analytic tools can then be seen as possible in light of two polarising frameworks.

First, as a variant of the formal-informal polemic, *network resources* are potentially unrelated (or negatively related) to strategic planning or HR managerial involvement while directly driving the development of beneficial informal practices within the SME which would flow positively into SME performance. Alternatively, and second, the presence and greater

involvement of HR managers in strategic planning are likely to reinforce prevailing formalised institutional logics, related to the indirect impact on *tool-based* analytic practice adoption. The first, geared towards the informal alignment of norms and values in SMEs, should then directly and positively impact on firm performance, while the second, engaging isomorphic pressures, through HR managerial agents, provides the firm with enhanced legitimacy, indirectly related to financial performance through the use of tool-based analytic practices. Formally,

H_{2(a)}: The use of network resources are directly and positively associated with SME performance, and are unrelated (or negatively related) to the extent of strategic planning or HR managerial involvement in strategic planning;

H_{2(b)}: The extent of HR involvement in strategic planning is positively associated with network resources, which is associated, indirectly through normative or tool-based practices, with SME financial performance.

Methodology

Sample and Procedure

This study draws from a large scale, representative, survey questionnaire measuring the extent of strategic planning, HR involvement in strategic planning and strategic planning source/tool usage practices. These practices were identified by conducting an in-depth research and literature review on current strategic planning approaches. The survey includes a range of demographic variables and questions measuring the type of strategic planning employed, the involvement of the HR manager in the strategic planning process and fifteen strategic planning source and tools. The content validity of the questions employed in the survey as well as their relevance was tested through an initial qualitative phase of the research. This involved in-depth interviews with an additional 14 SME managers (one from each of the ABS industry categories) and 10 interviews with a multinational group of academic experts from Australia, New Zealand, South Africa, The Netherlands, Canada and Malaysia who have published in the area of recruitment and selection. Discussions were also held with members of the Australian Chamber of Commerce which is an employer-representative body. Furthermore, the survey questionnaire was also tested and modified through a pilot phase which formed part of the field-work phase of the project. This involved 20 SME managers. Subsequent revisions were made in line with the feedback.

The survey was sent out to 4000 Australian small and medium-sized enterprises. The sample frame was derived from Dun and Bradstreet database, stratified by: all Australian Bureau of Statistics (ABS) industry categories (excluding agriculture); employee size between ten and two hundred employees; and representation of each state and territory in Australia. After allowing for incorrect mail addresses and closed businesses, a response rate of thirty one percent was achieved ($n=1230$). Action to encourage organizations to respond to the survey included a covering letter explaining the purpose of the survey, provision of a reply paid envelope, follow-up letters and an assurance of confidentiality (Dillman, 2006).

Demographic Profile of the Sample

Small businesses (ten to one hundred employees) constituted forty nine percent of the sample and medium businesses (one hundred and one to two hundred), fifty one percent. The Australian Bureau of Statistics (ABS) industry categories were used to describe the main operations of the organisations. The manufacturing category represented the highest percentage of respondents (nineteen percent). The remaining categories represented less than fifteen percent of the respondents. Thirty-nine percent of organisations were family organisations of which family members are working directors of fifty nine percent of these organizations; Sixty percent exported their products or services of which eighty seven percent had been exporting for more than three years. Less than five percent of the SME sample were franchise operations. Almost one-third of organisations operated from a single location, with more than half of the respondents operating in two to ten locations and the remainder in more than ten locations. The respondent organisations could be said to be ‘surviving’ businesses with having been established for more than five years (10% for more than 5 years and 90% for more than 10 years). Fifty-three percent of respondents said their organisation had at least one union member with more than two-thirds of the sample estimating that there was less than ten percent union membership. As far as the personal demographics of respondents are concerned, eighty five percent claimed to have a post-secondary school qualification, sixty nine percent were older than forty five years, forty percent were owners or part owners and thirty four percent were female.

Because the paper focuses on the impact of the extent of HR managerial involvement in strategic planning on firm performance, mediated by normative practices, tool-based practices, and network resources, the sample focuses only on the sixty-five percent of respondent SMEs that did have a designated manager whose principle responsibility covered human resource management. Therefore 657 SMEs were taken into the analysis, which is further divided by two broad industry classifications, manufacturing and services, given our framing of the hypotheses. Of the 657 SMEs with managers with HR responsibilities, 73.6% provided industry classifications, resulting in our two modelling samples examining 327 service sector SMEs and 174 manufacturing firms.

Apart from the strategic planning source/tools reported on in this paper, respondents were asked to ‘specify any other strategic source/tools used’. Respondents did not indicate the use of any other tools. This is indicative that we have succeeded in capturing the full spectrum of strategic planning sources/tools utilised in Australian SMEs.

Data was entered into SPSS for analyses. Our approach to the data analysis examining the relationship between strategic planning, HR managerial involvement, analytic types and sources and subsequent performance was to engage structural equation modelling (SEM). The advantage of SEM was to employ path analyses using SPSS’ AMOS 17.0 in order to estimate models which represent the relationships between independent (exogenous) and dependent (endogenous) variables through a number of mediated variables which are both independent and dependent. The assessment of estimates, using maximum likelihood, is made using chi square fit of models with original intercorrelations and the traditional additional reporting of multiple fit indices, NFI, CFI, and RMSEA. According to Loehlin, and others, (Loehlin 1992) SEM is used in a number of modes, including formal testing of hypothesised relationships (which we term ‘model test’) as well as exploring multiple models or ideal fitted

models (which we term ‘ideal fitted’). While the former often presents strict conditions which tend to drive down the model fit between theoretical models and correlations and their derived structural estimates based on the data, the latter provides a more close fit with the data, but suffers from providing model supported and driven by specific data (including unique random error and therefore prone to reporting type I error). SEM is used in this study in both modes, presenting a formal test replicated across both the manufacturing and services subsample, as well as a ideally “fitted” model representing the best fit between variables given the data collection.

Measures

Dependent variable – Organizational performance

‘Firm performance’ is measured variously in the literature, including objective and subjective measures (Apospori 2008; Paauwe 2004). Since SMEs are mostly privately owned and operated, it is likely that CEOs are reluctant to make available detailed financial and accounting information. Hence, Garg, Walters and Priem (2003) argue that “subjective, self-reporting measures of performance” are the solution to research in SMEs. Utilising subjective performance data in SME research also provides a broader perspective on organizational performance apart from just financial performance. Alternative or nonfinancial dimensions of performance indicators, that are also important measures of performance, such as perceived product/service quality and customer satisfaction (Tsai 2006; Eccles, 1995, Dent 2002), are also be assessed in this study.

There is also widespread support for the use of “overall performance/success” measures owing to its high correlation with objective measures of firm performance (Robinson and Pearce, 1988; Venkatraman and Ramunajam, 1987). In our study firm performance was measured in two general domains: Financial performance and Alternative performance, by using nine specific questions. Of the nine specific questions, seven were factor analysed to confirm loading onto the two general domains, resulting in a final four firm performance indicators (two factors and two measures). Both of the general domains used measures of performance based on perceived performance.

Three of the four final measures focus on financial performance. Two of these three were based on perceived financial performance, with one of these a resultant factor based on four items. This latter perceived *financial performance measure* comprises four perceived financial performance sub-measures, including: *Annual revenues’ growth* – the ratio of annual income in the current year to that of the last year; *Return on sales* – the ratio of net profit to net sales (revenues); the higher the ratio, the more profitable is the firm (e.g. Waldman, Ramirez, House and Furanam 2001); *Return on equity* – the ratio of net profit to total equity investment; the higher the ratio, the more profitable the firm (e.g. Smith, Smith, Olian, Sims, O’Bannon and Scully 1994); and *Liquidity soundness* – an assessment of liquidity soundness based on parameters such as the quick ratio and cash flow from operating activities (Carmeli and Tishler 2006). These four variables were factor analysed and factor loadings were used to differentially weight the item-factor contribution to a total combined perceived financial performance scale. The second measure of financial performance includes a single (subjectively-oriented) *perceived profit/loss level*. This was measured by asking

respondents how they rated their firm's financial standing over the last three years. Five categories were provided: Resulted in a big loss; Resulted in a moderate loss; The firm broke even; Generated moderate profits; and Generated big profits. Third, an objectively-oriented *dollar indication used to position the SME's profitability* was included. This was measured by asking respondents what their firm's most recent financial statement result (profitability) was. Five categories were provided: under \$100,000; \$100, 000 - \$500,000; \$501,000 – 999,000; 1 – 5 million; 5 million plus. This measure was then subtracted from the industry average response based upon the large sample (N=1230) providing a derived firm-based relative industry profitability measure.

The final measure focused on perceived alternative performance. *The alternative performance measure*, comprises three perceived alternative performance sub-measures, including: *Market share change* – estimate of last year's change in the firm's market share; the larger the increase in market share, the more successful is the firm (e.g. Eisenhardt and Schoonhoven, 1990); *Customer satisfaction* – an assessment of the extent to which the firm fulfils customer's needs, in comparison to its competitors (e.g. Collis and Montgomery, 1998); and *Quality of products and services* – an assessment of the quality of the firm's products and/or services relative to its competitors. Again, a factor analysis confirmed the combination of the three items and the item-factor loadings were used to differentially weight the item-factor contribution to a total combined perceived alternative firm performance scale.

Independent variables –

Our study examines the role of strategic planning sources/tools in mediating either or both the extent of strategic planning and HR managerial involvement in planning effect on SME performance. The independent variables of strategic planning, HR managerial involvement and analytic tools are described in this section.

The questionnaire asked the respondents to select from a list of 15 analytic tools and/or techniques they use to help compile strategic business plans. These tools include: SWOT analysis, spreadsheets, brainstorming, and professional referents such as company accountants and external consultants, Business Planning Software and Financial software tools, TOWS, Internal and External Factor Evaluation, Company Performance Matrix, Porter's five forces model, inclusion of knowledgeable friends, knowledgeable family and company auditors.

The measures used three-point responses which excluded the use of factor analysis for scale development. In our validation of these tools, we used SPSS Hierarchical Cluster Analysis to explore the underlying dimensions across the patterning of the 15 measures. For reasons of constraints in space, we do not include the cluster dendrograms combining and reducing the 15 analytic practices to three types in this paper. The resulting three analytic factors comprise *normative*, *tool-based*, and *network sources*. Two practices were left out as a result of a lack of reliability in the analysis, including, Business Planning Software and Financial software tools. While the cluster analyses distinguished the three analytic types, there were marginal relationships between the normative cluster and the tool-based cluster of analytic practices, as might be expected, in contrast with a more distinct network resources cluster. Our modelling will recognise the non-orthogonality of these three analytic types.

Normative analytics includes: Use of spreadsheets, SWOT analysis and brainstorming. Normative analytics include well-known aligns with the deliberate or prescriptive approach to planning that emphasises long-term planning designed to achieve a ‘fit’ between an organisation's strategy and its environment, with strategic management viewed as a highly systematised and deterministic process (Andrews, 1987). While such heavily structured planning is clearly inappropriate in times of rapid and turbulent change, the setting of longer-term objectives is necessary for the survival and progression of an organisation (Stonehouse 2002). The prevalence of these well-known formal tools was: spreadsheets (74 percent); brainstorming (70 percent) and SWOT analysis (58 percent) and professional referents such as company accountants and external consultants (37%). SMEs’ high engagement in these formal tools/techniques are indicative of a deliberate approach to strategic planning (Wiesner and Millett 2009). According to Stonehouse (2002) the high usage of financial analysis techniques SMEs is consistent with an emphasis on short-term business planning rather than on strategic management of the business.

Tool-based analytics comprises: TOWS, Internal and External Factor Evaluation, Competitive Performance Matrix, and Porter’s five forces model. This type of analytics aligns with competitive positioning, based upon the work of Porter (1980), and centring on the premise that a business positions itself within its competitive environment with the aim of generating superior performance. According to Stonehouse (2002) this approach has generated the five forces, but also generic strategy and value chain frameworks that are often presented as the ‘tools’ of the strategic management trade. Its focus is on the environment and could be seen as an ‘outside-in’ approach (Stonehouse 2002). Our results reflect the findings of Stonehouse (2002), that a striking feature of the findings is how few SMEs make use of what is regarded as the traditional tools of strategic management (TOWS – 8%; Internal, External Factor Evaluation and Competitive Performance Matrix – all at 11%; and Porters Five Forces model at 6%) or in Wiesner and Millett’s words ‘sophisticated tools/techniques’. Stonehouse (2002) has found that other tools fitting this type of analytics, such as STEP, value chain analysis and portfolio analyses (not measured in our study) are also seldom used by the responding SMEs. The same is true for Business Planning Software and Financial Software Planning tools (Stonehouse 2002) and this is also reflected in our study (even though the cluster analysis excluded these two tools).

Finally, Network Analytics focuses on a combination of informal networks including knowledgeable friends and knowledgeable family and company auditors. This cluster reflects an organisational boundaries dimension regarding the involvement of other in the strategic discussions of the firm (Wiesner and Millett 2009). Informal networks in combination with a very low participation of external networks (less than 22 percent) aligns with an emergent approach to planning or learning approach (Mintzberg *et al.*, 1995; Wiesner and Millett 2009). Mintzberg et al (1995) argues that even though these type of informal analytics is better suited to dynamic and hyper- competitive environments, it does not imply a complete absence of strategic planning.

The extent of strategy formulation was measured by asking respondents to indicate which term describes their firm the best across five ordinal values: Does not have a strategic plan; has a strategic plan, but it is not written down; has a written strategic plan, but it is not used to develop operational plans; and has a strategic plan that is used to develop operational plans and drive day-to-day operations.

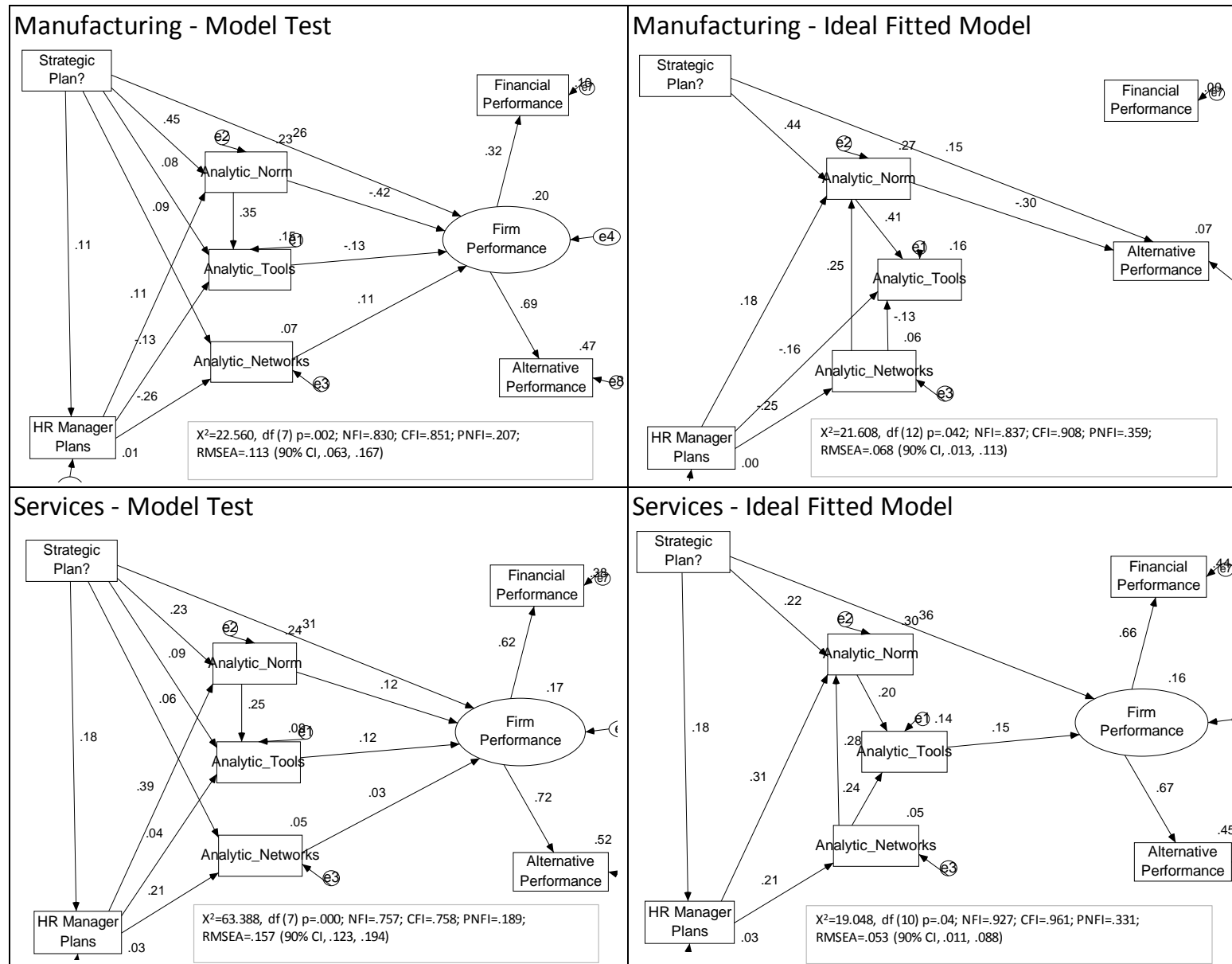
The following measures were included in the questionnaire regarding the measuring of the centrality of the HR manager. Firstly, the ‘presence of a HR manager’ was measured by asking the respondents if there is a manager in their organization whose principle responsibility covers human resource management. For our final analysis and presentation of the SEM model, the original dataset was reduced by entry into this question to . Furthermore, respondents were also asked to indicate whether a HR manager is involved in the strategic planning process and from what stage the HR manger is involved in business strategy planning: ‘At no stage’; ‘from the beginning stage’; ‘from the counselling stage’; ‘from the implementation stage’ Because of the skewed nature of this distribution, this variable was recoded into a dichotomous positive role of the HR Manager as either no involved, or involved.

Results and Discussion

Figure 1 provides both the formal model test and the ideal fitted models for each subsample of SMEs in manufacturing and services sectors.

The model tests, on the left of Figure 1, represent a full test of hypothesised relations raised in the literature review. The indicators of model fit for the left-hand model test reflect a poor fit for both the manufacturing and services models. The models to the right of Figure 1, represent the ideal “fitted” model, unique to each sample’s data which effectively removes insignificant paths from, and adds any additional significant paths to, the original model test. In these models, the bottom right model, representing the services ideal fitted model has a good fit between the presented structural relationships and the original correlations in the data. However, for the manufacturing ideal fitted model, there is an insignificant reduction in the chi square model fit, indicating that the ideal model is not a significant improvement on the model test, which regards both as poorly fitting to the underlying covariances in the raw data. One explanation for this poorer fit among manufacturing-only SMEs is that such firms are less likely to rely upon the HR function, with other functional skills moderating and mediating the strategic management to performance link. The differences in the model fit between manufacturing and services do indicate the salience of SME context in determining the importance of human resources in driving firm performance, particularly in this study, through the mediated use of three types of analytic tools. We turn now to our more formal hypotheses to reflect on the roles of the HR manager and analytic types in the strategic planning to performance arc.

Figure 1: Presentation of Test and Ideal “Fitted” Models: Manufacturing v Services



First, it is clear from Figure 1 that to some extent there are interrelationships (within factor relationships in the middle of Figure 1) between the three analytic types, which varies in both size and direction between the manufacturing and service sector models. For example, by design in the model tests, normative analytic type drives tool-based analytics, while in the ideal fitted models the association between network resources and normative and tool-based analytic types are also significant. Two points are raised regarding the interrelationships between analytic types before moving to the formal tests of hypotheses: (i) analytic networks are positively related to the normative analytic type, representing a surprising interplay, albeit marginal, between what is in essence the more general formal role of normative analytic practices with the informal relationships, and (ii) the relationship between analytic networks and the more specific tool-based practices varies from a marginal negative association in manufacturing SMEs to a marginal positive relationship among service sector SMEs. This latter difference might be representative of the firm-in-sector relevance of informal sources of knowledge and learning to much more formal and specific analytic tools in *service* SMEs.

Formal Hypotheses

Our first hypothesis (H_{1a}) relates to the positive impact of strategic planning on performance, which is supported in both industry-based models. While this hypothesis is somewhat axiomatic, it provides predictive validity in terms of the measures and general strategic framework which positions planning with performance among SMEs. The ideal fitted models provide some degree of a critique on the role of strategic planning, and other elements of our model, particularly among manufacturing SMEs, on the type of performance: This is described appropriately in this discussion.

Our hypothesis H_{1b} focuses on the role of the HR manager as mediating the role of strategic planning through tools-based analytic types, and more prominently in the service sector SME sample. The model only provides indirect support for this relationship. The service sector ideal fitted model (bottom right in Figure 1) shows that HR managers do positively influence tool-based analytic type use, but only indirectly through the normative analytic type. The direction of the relationship within the analytic types is driven by our theorising which positions the mainstream normative analytic practices before the more precise and technically specific tool-based analytic types – but these could arguably be reversed or regarded as simultaneous in association. Given this indirect relationship, we can confirm a chain of mediating relationships among service sector SMEs, between the extent of strategic planning, the extent of HR managerial involvement, and normative and tool-based analytic practices and SME performance.

The model for manufacturing SMEs presents a far more complex arrangement of relations which are not entirely incompatible with our presented theorising around the role of HR managers in planning and their use of specific tool-based practices in driving SME performance. What makes the manufacturing model interesting is that (i) the extent of strategic planning is not associated with the extent of HR managerial involvement in planning; (ii) HR managerial involvement is positively related with the mainstream, normative analytic type but

negatively related with the more specific tool-based analytic type; and (iii) there is an overall negative relationship between tool-based analytic practices and firm performance. Part of the explanation of these results is in the unmeasured role of other functional skills important to the manufacturing SME which are more likely to be directly related to performance, such as those which revolve around cost accounting and technical efficiencies. We know this is a plausible explanation because of the way the measurement model around performance appears to breakdown in the manufacturing sample, supporting the notion that financial performance, in manufacturing SMEs, is one part of a bifurcation of SME performance which is not as related to analytic practices, HR managers, or strategic planning in general.

Our second set of analyses concerns the informal and interaction, and potentially institutionalising effects, of network resources in the relationship between strategic planning, HR managerial involvement and SME performance. The first hypothesis (H_{2a}) detached the role of HR managers in any association with the otherwise hypothesised positive impact and role of informal networks and knowledge on SME performance. The second hypothesis (H_{2b}) concerned the normative institutional practices which tie in HR managers to their professional networks in the vector of other practices which have been argued as having a marginal, but positive, impact on SME performance. While the informality thesis polarises the role of HR managers in network resources, the institutional argument draws upon their incumbency. Both of these hypotheses are partially supported by the data but are most different and distinguishable for each industry sector.

Among the manufacturing sample, there is a negative relationship between HR managerial involvement in planning and network resources partially supporting the divisive formal v informal thesis. However, the role of network resources does not play out in positive associations with SME performance as hypothesised. If anything, HR managers are increasingly less likely to draw upon network resources, but when SMEs do use network resources, they impact on the normative analytic type, which is moderately negative in its impact on SME performance (specifically alternative performance). Thus, while this appears to support the H_{2a} polarisation of informality against HR managerial formality, the former does not appear to provide benefits to the manufacturing SME. We would add here that in further analyses, not presented here, a manufacturing subsample comprising only smaller SMEs provides a stronger significant link between network resources and SME performance against a stronger significant negative relationship between normative types and alternative performance. The process in the service sector sample and model is quite different with regards network resources.

The service sector model appears to support the H_{2b} positive association between HR managerial involvement in strategic planning and the use of network resources as an analytic type. Further, such use of network resources is positively associated with tool-based analytic type use which has a subsequent positive impact on SME performance. This result is supportive of our final hypothesis, which represents the role of institutional processes which draw from interaction. Of course, we do recognise that institutional hypotheses can be difficult to test, particularly in our survey where the exact nature of the relationship with network resources is not clear. Therefore, in our second set of hypotheses, it might be possible to

interpret the positive role of network resources between HR managers and SME performance as the benefits of informal interaction, mixing our H_{2a} and H_{2b} hypotheses. In part this may be true, given that the role of informal interaction might be seen as institutionising beyond just normative professional networks through (i) coercive and informally-transmitted dependency relationships with other interlocking firms (i.e. financial, suppliers or contractors requiring formalisation of SME management and planning) and; (ii) more broadly mimetic isomorphism which focuses on interfirm replication of practices. None-the-less, in contrast to manufacturing, the service sector SME provides the context which reveals a greater degree of interweaving between the formal normative and specific tool-based analytic types and the potentially informal network resources, which play out in positive SME performance.

In summary, we find that beyond the generally positive impact of strategic planning on SME performance (H_{1a}), the HR manager does have a role in the mediation of positive impacts of analytic tools on SME performance (H_{2a}). However, this result must be firmly located within the context of services sector rather than in manufacturing SMEs. In service sector SMEs our models reveal a greater consistency between alternative and financial performance than in manufacturing SMEs which suggests the potential for other functional areas to be important in the strategic management mechanism outside of, and in addition to, human resource management. The role of informal interactions through network resources is also industry-dependent, highlighting its positive role in service sector SMEs in being both driven by HR managers and in driving SME performance.

Conclusions

SMEs are special in strategic and human resource management and organisational literatures because they are significantly and differently rendered by both external and internal contexts. With their smaller size, the informality of interaction in SMEs has been argued as important to their success, yet SMEs have also been seen as constrained by inter-firm and industry conditions. The position of more formalised human resource managers and analytic tools in the strategic planning process is then of great interest among management scholars, practitioners and SME managers alike. What role do HR managers play, if any, in mediating a strategic planning on SME performance? Further, how do HR managers relate to the type of analytic practices which may be important in mediating strategic planning on SME performance?

Our hypothesis tests, and extended fitted modelling, reveals that HR managers play a positive role in service sector SMEs, drawing upon a mix of informal networks and formal normative and tool-based analytic practices to help drive positive SME performance. However, our models reveal that in manufacturing, the process and mechanism is quite different with a bifurcation of performance drawing the financial outcomes out of the reach of direct HR managerial control. Further, it would appear that despite the formalisation of HR managerial impact on analytic techniques, these negatively impact on SME alternative performance. Given that alternative performance draws from increases in customer satisfaction, market share, and quality of products and services, this negative relationship might indicate the greater competitive struggle that SMEs face in manufacturing against their larger firm counterparts.

Implications

Standard analytic practices (normative and tool-based types) are useful in the strategic planning process, enabled also by HR managerial involvement in driving marginal performance gains in service sector SMEs. The case of HRM in manufacturing SMEs is different and potentially auxiliary to developing other managerial skills oriented towards cost controls, technical, and functional efficiencies.

Further, network resources represent different aspects of analytic processes in manufacturing than they do in service sector SMEs. Among service SMEs, network resources are arguably more indicative of institutional connections which work together with more formal tools to create value in the SME performance. In manufacturing SMEs network resource are more likely to represent sources of informality which sit in contrast to the utilised HR managerial knowledge. Industry is therefore a potentially powerful moderator, as is the role of network resources in relation to the impact of HR managers in strategic planning.

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