

Richard A. Heiens

University of South
Carolina Aiken

Majdi A. Quttainah

Larry P. Pleshko

Kuwait University

The Miles and Snow Typology Groups: A Comparison of Services and Manufacturing Samples

Keywords

*Miles and Snow,
organizational
structure, marketing
orientation, services
versus manufacturing.*

Abstract

The study represents an investigation of the Miles and Snow (1978) strategic profiles in samples drawn from two distinct industry sectors: financial services firms and product manufacturing firms. In particular, the authors investigate how the Miles and Snow (M&S) strategy groups differ in organizational structure, marketing orientation, and performance. Findings indicate that Prospectors and Analyzers are more market oriented overall as well as more competitor oriented than their Defender and Reactor counterparts. In addition, financial services Reactor firms exhibited the lowest market share and profit performance. The findings also show that Analyzers from the product manufacturing sample performed at the highest level in terms of both market share and profits. Except for the product manufacturing Analyzers, the profit performance of services Prospectors was also superior to the other M&S types.

Introduction

As famously illuminated by the ancient Greek philosopher, Aristotle, scientific inquiry is dependent on the establishment of a system of typological categorization for the construct under investigation (Ferejohn, 1980). Perhaps the most widely accepted and empirically validated typological framework in the context of business is the classification scheme first conceptualized by Miles and Snow (1978). According to this typology, businesses can be organized into one of four categories: Prospector, Analyzer, Defender, or Reactor. Each of these firm types are suggested to be distinct in their orientation, operating under consistent

Submitted June 2017, accepted December 2017

principles and implementing consistent actions across a variety of internal dimensions as well as towards their external publics. Over the past four decades, many studies have demonstrated the inherent reliability of this typology, and the Miles and Snow (M&S) strategic groups have been found to differ amongst each other on a variety of factors. Specifically, differences have been recorded in their use of environmental scanning, in terms of environmental perceptions, and on a variety of measures related to organizational performance (Auh and Bulent, 2005; Bednall and Valos, 2005; Freel, 2005; Moore, 2005). In recent years, researchers have extended the M&S typology to a wide range of organizations and industries both in the US and abroad, including engineering (Kazaz *et al.*, 2015), health care (Helmig *et al.*, 2014), and even the public sector (Walker, 2013).

An organization can be viewed as a relatively complex social system composed of several interdependent subsystems (Olson, *et al.*, 2005). As such, one important purpose of management policies and practices is to achieve coordination among these subsystems. According to configuration theory, achieving coordination or alignment between the configuration of these internal subsystems and the firm's chosen strategic posture is an important determinant of a firm's success in the marketplace. Although either a firm's structure or strategy alone is capable of influencing a company's outcome, configuration theory suggests that the variation between organizational outcomes is better explained by considering the nature of alignment between strategy and structure (Najafi-Tavani *et al.*, 2015). In essence, superior performance is contingent on the 'fit' between the organizational configuration or design and the elements of a firm's chosen strategic posture, or how well organizational subsystems are aligned with the requirements of a specific strategy.

Vorhies and Morgan (2003) were among the first to specifically draw on configuration theory in order to assess the marketing performance implications of the fit between an organization's M&S strategic type and their realized business strategy. Although their findings indicated that organizing marketing activities in ways that are consistent with a firm's business strategy type can be an important source of competitive advantage, Vorhies and Morgan (2003) acknowledged that multi-industry studies and different sets of marketing organization variables are needed to establish the generalizability of their findings. One such approach is to examine the M&S strategic profiles from the perspective of both products and services firms.

The differences between physical products and services have received significant research attention over the years. For example, research suggests that the effectiveness of a given sales presentation format may differ between physical products and services (Szymanski, 2001). In addition, the effects of satisfaction

and loyalty on profits and growth may be more positive for marketers of services than for physical products (Edvardsson *et al.*, 2000). A review of the literature also suggests that there are differences between the innovation processes of new products versus those of new services (Djellal and Gallouj, 2001; Nijssen *et al.*, 2006). These differences exist mainly due to the unique characteristics of services, including their intangibility, simultaneity, heterogeneity, and perishability (Schleimer and Shulman, 2011). In essence, the marketing of physical products can be significantly different from the marketing of services. Therefore, it is also likely that the implications of organizational typology may differ for marketers of products versus services. As such, the purpose of this study is to examine the various M&S strategic profiles for both physical goods and services in terms of organizational structure, organizational strategy, and performance. In addition, specific interactions between M&S typology, industry category (service versus product manufacturing) and the various indicators of structure, strategy, and performance will be examined.

One possible complication when exploring the product-service dichotomy is that many services are actually hybrids on the service continuum, involving a large degree of tangibility. Examples of this would be the restaurant industry or even the health care industry with their associated medications and medical devices. Therefore, our analysis focuses on financial services, which previous research has classified as a pure service industry with no significant tangible aspect to them (Piercy and Rich, 2009).

Hypotheses

Organizational Structure

Organizational structure can be thought of as the means by which power and responsibility are allocated within an organization and how specific job tasks are coordinated within an organization (Daft, 2004). The existing literature suggests that organizational structure is a multi-dimensional construct. Although the literature profiling the sub-dimensions of organizational structure varies widely, this study incorporates four of the most commonly employed sub-dimensions used to define a firm's organizational structure. These include formalization (Damanpour, 1991; Vickery *et al.*, 1999), integration (Germain, 1996; Nahm *et al.*, 2003), centralization (Damanpour, 1991; Germain 1996; Vickery *et al.*, 1999), and complexity (Aiken and Hage, 1971).

The past four decades have been especially tumultuous in the financial services industry. This is largely due to new forms of competition, bank failures, mergers, acquisitions, changing consumer banking patterns and a major financial crisis (Bhasin, 2005; Talbot *et al.*, 2015). In one recent industry publication, Daigneault (2016) acknowledges that credit unions, in particular, face unique demands that require these companies to learn and grow on an ongoing basis and be open to the idea of change. According to Skaggs and Galli-Debicella (2012), high degrees of customer contact, such as what might be found in the financial services industry, is significantly related to the use of higher degrees of flexibility in organizational structure. Similarly, Germain *et al.* (2008) find that in uncertain environments, decentralization may provide the latitude necessary for adapting and controlling variability. On the other hand, given the larger sunk costs and the investments in physical infrastructure often required by manufacturing firms, organizational structure may not be quite as flexible. For example, in a study of manufacturing companies in Malaysia, Tuan *et al.* (2014) report that neither market competition nor the introduction of advanced manufacturing technology influenced change in organizational structure. As such, irrespective of a firm's position in the M&S classification, we offer our first set of hypotheses related to the formalization, integration, centralization, and complexity of organizational structure.

H1_a: Financial service firms are lower in structural formalization than product manufacturing firms.

H1_b: Financial service firms are lower in structural integration than product manufacturing firms.

H1_c: Financial service firms are lower in structural centralization than product manufacturing firms.

H1_d: Financial service firms are lower in structural complexity than product manufacturing firms.

M&S Typology and Market Orientation

As summarized by Miles and Snow (1978) themselves, Prospectors typically concentrate on many diverse markets which they periodically help to redefine. They value being first-in with new products or in new markets, even when these efforts are not highly profitable initially. Prospectors are said to generally respond rapidly to most new opportunities, and they are aggressive, rather than passive, in their efforts. On the other hand, Analyzers generally attempt to maintain a stable and secure position in the market while, at the same time, moving quickly to follow

new developments in the industry. Consequently, they are seldom first-in with new services or into new markets, but are often second-in with better offerings. They emphasize longer-term planning and methodical decision-making prior to action in most instances. Defenders generally attempt to locate and maintain a secure niche in a relatively stable market environment. While not often being at the forefront of industry developments, Defenders nevertheless try to protect their markets by offering high-quality, well-targeted products. Finally, Reactors are said to have an inconsistent approach to their markets, and are oftentimes indecisive. They are rarely aggressive in attacking new opportunities or even in defending current markets. Rather, they take action mostly when pressured to by outside forces, such as the economy, competitors, or market pressures. Reactors will most likely spend an inordinate amount of time thinking about a decision prior to acting.

Market orientation can be thought of as an important part of a firm's capabilities, and it is often dependent on the resources and technology available to a firm (Adhikari and Gill, 2011). From a cultural perspective, market orientation (MO) is the recognition that value creation for customers is the key driver of business. On the other hand, from a behavioral perspective, MO can be thought of as a set of corporate activities that include generating market intelligence, distributing market intelligence across departments, and responding to the intelligence disseminated (Lai, 2016). Although researchers overwhelmingly tend to operationalize MO by emphasizing customer intelligence, markets are actually a collection of both buyers and sellers. As such, it has long been recognized that in addition to customers, competitors could also serve as the focus for a company's intelligence gathering activities (Day and Wensley, 1988, Slater and Narver, 1994). Moreover, according to Slater and Narver (1994), because businesses have limited resources to generate market intelligence, trade-offs between customer and competitor monitoring must sometimes be made. Consistent with the M&S framework, we would expect active and dynamic firms, such as Prospectors and Analyzers, to have implemented a more market-oriented philosophy. These include MO activities related to both customers and competitors, as well as MO activities that may emphasize either customers or competitors, perhaps at the expense of the other. Furthermore, the importance of MO activities has been demonstrated in both goods (Spillan *et al.*, 2013) and services sectors (Kara, *et al.*, 2004). Because Prospector and Analyzer firms have been shown to exhibit characteristics that differ from Defender and Reactor firms (Lukas, 1999), our second set of hypotheses are offered as follows:

H2_a: Prospector and Analyzer firms are more market oriented overall than Defender and Reactor firms.

H2_b: Prospector and Analyzer firms are more competitor oriented than Defender and Reactor firms.

H2_c: Prospector and Analyzer firms are more customer oriented than Defender and Reactor firms.

Market and Financial Performance

Regarding the market and financial performance of the M&S typologies, Miles and Snow (1978) originally proposed that reactors will be the lowest performers, while the other three types could perform equally well, depending on the situation and the industry. In most cases, empirical evidence supports these proposals (McKee *et al.*, 1989; Smith *et al.*, 1989). In some studies, however, somewhat contradictory results are found (Aragon-Sanchez and Sanchez-Martin, 2005; Desarbo *et al.*, 2005). Nevertheless, given the principles of the M&S scheme, it should be expected that Prospector, Analyzer, and Defender strategies will all tend to be more successful than the Reactor approach, and this should be true regardless of the industry or the performance measure employed. Consequently, hypotheses related to the market share and profit performance of the combined industry samples are as follows:

H3_a: Reactor firms exhibit the lowest market share performance.

H3_b: Reactor firms exhibit the lowest profit performance.

Descriptions of Samples

A sample of executives was taken from both financial services companies and manufacturers of physical goods. The procedure resulted in a total of 266 companies which provided data for the study. Regarding the financial services sample, data for the study were gathered from a statewide survey in Florida of the 325 firms belonging to the Florida Credit Union League. A single mailing was directed to the president of each credit union, all of whom were asked by mail in advance to participate. A four-page questionnaire and a cover letter, using a summary report as inducement, were included in each mailing. Of those responding, 92% were presidents and 8% were marketing directors. This approach yielded one hundred and twenty-five useable surveys, a 38.5% response rate, of which the smaller asset sized credit unions are underrepresented ($X^2 = 20.73$, $df = 7$, $p < 0.01$).

Regarding the product sample, both consumer and industrial products firms were chosen from four randomly selected industrial classification groups within the United States. A systematic sample of three hundred firms, twelve hundred in total, was drawn from four groups: (1) food and kindred products, (2) textile mill products, (3) primary metal industries, and (4) miscellaneous manufacturing. A single mailing was directed towards the chief executive officer in each of the selected firms. A personalized cover letter, a two-page questionnaire, and a self-addressed stamped return envelope were sent to each executive. Of those responding, eighty-one percent were either chief executives or owners, while the remainders were mostly higher level managers. This procedure yielded one hundred and forty-one total responses: a 12.2% response rate. The breakdown of the respondents is as follows: (1) food and kindred products: 26.6%, (2) textile mill products: 22.6%, (3) primary metal industries: 27.4%, and (4) miscellaneous manufacturing: 23.4%. A Chi-squared test of the respondents versus the sampling frame indicated that the responding firms were evenly distributed across the four industrial groups ($X^2 = 0.84$, d.f. = 3, $p < .80$). Additionally, an analysis of variance was performed to determine if the respondents from the various groups differed by firm size. Neither differences in annual sales ($p < .15$) nor number of employees ($p < .20$) were significant.

Analysis and Results

Given the unique industry environments of the two samples, classification into the M&S strategic groups was done with two different industry specific scales. For the financial service sample, the M&S strategic typology was measured according to the method employed by McKee *et al.* (1989). Product manufacturers were classified into the various M&S strategic groups according to the method employed by Pleshko and Nickerson (2008). Because the scale has been previously used in both services and manufacturing industries (Ward *et al.*, 2006), market-orientation was measured via the Narver and Slater (1990) questionnaire across both samples. Finally, organizational structure, market share performance, and profit performance were measured with scales developed specifically for this project. Information regarding each of the measurement scales used, as well as the relevant statistics for assessing their psychometric properties, can be found in the Appendix.

Mean scores were calculated on all of the strategic indicators and for each of the four strategy groups across the two samples. Each of these mean scores is provided

in Table 1. As noted in Table 1, it appears without statistical testing that on most of the constructs, Prospectors and Analyzers show higher levels than do Defenders and Reactors. This is evident for all four organizational structure indicators, almost all of the marketing strategy indicators, and all of the performance indicators. One might conclude from this that Prospectors and Analyzers in these two samples are simply more organized, put more efforts into studying their markets, and are more aggressive in their strategies, which somehow leads to better performance.

Subsequently, analyses using the univariate general linear model were conducted in order to test sample type (product versus service) and M&S strategy group and their interactions with the strategic variables included in the study (organizational structure, marketing strategy, and performance). If significant differences were evident, then a post-hoc test using least-squared differences was

Table 1
Strategic Profiles

Variable	Sample	Means	M&S Pr.	M&S An.	M&S De.	M&S Re.
Structure						
Formalization	services	7.02	8.33	7.36	6.75	6.13
	products	5.84	6.10	6.31	5.19	5.84
Centralization	services	6.03	6.17	6.33	5.95	5.20
	products	6.21	6.12	6.39	5.97	6.48
Integration	services	5.98	8.11	6.06	5.81	5.18
	products	7.65	7.59	8.25	7.20	7.60
Complexity	services	3.68	7.50	4.04	2.87	3.33
	products	4.87	5.34	5.05	4.46	4.59
Strategy						
Market Orientation	services	23.54	25.08	24.29	23.27	21.08
	products	24.78	25.38	26.05	24.25	22.90
Competitor Focus	services	10.19	11.83	10.75	9.69	9.13
	products	11.24	11.73	11.94	10.63	10.48
Customer Focus	services	13.35	13.25	13.55	13.58	11.95
	products	13.52	13.65	14.10	13.56	12.42
Performance						
Market Share	services	14.73	16.83	15.86	14.39	10.31
	products	18.06	17.81	20.01	17.22	16.99
Profit	services	16.06	19.83	16.84	15.27	14.20
	products	18.09	17.61	20.10	17.10	17.34

performed. These post-hoc contrasts are noted as significant only if they exhibit a '*p*'-value of 0.05 or less. Table 2 shows the test statistics and summarizes the findings for each group and each variable.

Regarding organizational structure, the results shown in Table 2 fail to support hypotheses H1_{a-d}. Specifically, there is no evidence to support the hypotheses that financial service firms will be lower in structural formalization, integration, centralization, or complexity. Instead, contrary to H1_a, the financial services firms in our sample actually appeared to be significantly more formalized in their organizational structure than product manufacturers. Additional analyses of the interactions between M&S and industry reveal further insights. For instance, consistent with H1_d, services Reactors and Defenders, which together comprise 51% of the services sample, did in fact exhibit the lowest levels of structural complexity. However, services Prospectors exhibited the highest levels of structural complexity, effectively negating the general relationship hypothesized in H1_d. Thus, there is a more nuanced relationship between industry and the complexity

Table 2
General Linear Model Results

Variable	Sample 'p'	Sample finding	M&S 'p'	M&S Finding (all)	Interac- tion 'p'	Interaction finding
Structure						
Formalization	0.021	S > P	0.186	none	0.149	none
Centralization	0.335	none	0.566	none	0.193	none
Integration	0.066	none	0.433	none	0.000	Rest > SAn,SDe,SRe
Complexity	0.544	none	0.259	none	0.001	SPr > Rest > SRe,SDe
Strategy						
Market Orientation	0.013	P > S	0.016	Pr,An > De > Re	0.707	none
Competitor Focus	0.020	P > S	0.029	Pr,An > De,Re	0.724	none
Customer Focus	0.113	none	0.018	De,An,Pr > Re	0.655	none
Performance						
Market Share	0.027	P > S	0.154	none	0.006	PAn > Rest > SRe
Profit	0.209	none	0.233	none	0.029	PAn,SPr > Rest > SDe,SRe

P = Products, *S* = Services; *Pr* = Prospectors, *An* = Analyzers, *De* = Defenders, *e* = Reactors, *Rest* = remaining groups

dimension of organizational structure that may be at least partly explained by a firm's M&S strategy type.

Regarding the relationship between M&S typology and market orientation, H2_{a-c} proposed that, regardless of industry, Prospector and Analyzer firms would be more market oriented overall, as well as more competitor oriented and customer oriented, than Defender and Reactor firms. It can be seen from the results in Table 2 that Prospectors and Analyzers are in fact more market oriented overall as well as more competitor oriented than their Defender and Reactor counterparts. Thus, although H2_c is not supported, the findings do lend support to both H2_a and H2_b. Further analysis reveals that the financial services companies in our sample are significantly less customer focused and exhibit less overall market orientation than do the product manufacturers. It could be that the intensity of competition may be higher, therefore requiring more of a focus on the market environment in order to succeed in the marketplace.

Regarding performance, H3_{a-b} proposed that Reactor firms would exhibit the lowest market share and profit performance. This was indeed true in the case of financial services firms, lending partial support to H3_{a-b}. The findings also show that Analyzers from the product manufacturing sample performed at the highest level in terms of both market share and profits. In addition, with the exception of the product manufacturing Analyzers, the profit performance of services Prospectors was also superior to the other M & S types. Additional analysis also shows that product manufacturers as a whole exhibited higher perceived market share performance than the financial services firms in the sample.

Discussion and Implications

According to Miles and Snow (1978), successful organizations achieve successful alignment of structure, strategy, and the environment. In the current study, we began by examining four distinct dimensions of organizational structure in the context of both financial services firms and product manufacturing firms. Existing research led us to hypothesize that financial service firms would exhibit less formalization, less integration, less centralization and less complexity than product manufacturers. Not only were these hypotheses not supported, but the financial services firms in our sample actually appeared to be significantly more formalized in their organizational structure than product manufacturers. It could be that in the financial services industries, regulations and policies lead to more bureaucratic structures capable of allowing more control over monetary decisions

at the higher levels of the firm. Instead, for product manufacturers, effective management may require more direct and informal interaction with front line employees. Providing insight on the relationship between industry category and organizational structure is the first noteworthy contribution of the current study.

In addition, we have examined the relationship between a company's M&S profile, market orientation, and performance. Importantly, the current study provides additional evidence for the existence of the M&S clusters in both financial services and manufacturing companies. The study also finds compelling evidence that one distinguishing characteristic of Prospector and Analyzer firms is their relatively high degree of market orientation, with a particular focus on activities emphasizing the collection, dissemination, and utilization of competitive intelligence. Conversely, Reactor firms and, to a lesser extent, Defender firms appear to neglect this important proclivity. Finally, particularly in the case of financial services firms, there is a corresponding lack of market share and profit performance.

Additional analysis of the data found in Table 2, however, reveals that not all services firms underperformed relative to their manufacturing counterparts. Instead, services Prospectors actually had higher profit performance than all other firm types with the exception of product manufacturing Analyzers. The findings also indicate that the services firms in our sample as a whole are more formal with regard to organizational structure. In addition, the services firms in the sample exhibited lower levels of MO. Considering that the financial services sample tended to over-represent larger firms, future studies may seek to specifically examine the relationship between firm size and the structure, strategy, and performance dimensions that size may influence.

The study has also examined the relationship between M&S profile and performance. One key finding is that service Reactors exhibited the lowest market share and profit performance outcomes. One interesting observation is that a greater proportion of the firms in the product manufacturing sample were classified as Reactors (18%) than the percentage found in the financial services sample (13%). Nevertheless, the product manufacturing sample significantly outperformed the financial services sample on the important performance dimension of market share. It appears as if assuming a reactive posture is especially problematic for financial services companies. Instead, these firms would be well advised to adopt a more proactive stance. In fact, the service Prospectors were actually among the best profit performers in the study.

Overall, the study has shown that different organizational structures and approaches to the external environment may be necessary depending on type of industry and external environment. Nevertheless, caution should be taken when generalizing this study to other firms. Non-response rates are 61.5% for the financial services sample and 87.8% for the manufacturing sample. Therefore, one potential limitation of the study could be the impact of non-response bias. Another potential limitation of the current study could be the cross-sectional measurement approach utilized. Specifically, organizational structure and strategic initiatives both tend to evolve over time. Therefore, a longitudinal analysis might reveal trends or patterns that could provide important insight that is not possible given our methodology. Moreover, Hatten *et al.* (2004) recognize that, rather than the classification of the strategic type, it is the implementation of a given strategy which is truly important. Additionally, one is cautioned about applying the conclusions to international markets. Stremersch and Tellis (2004) suggest that successful strategies differ from country to country. Thus, replication across regions and cultures might offer new insights. It is also possible that objective or other indicators of performance may lead to different results than those obtained here (Kirca *et al.* 2005). Finally, future studies might investigate these relationships in other types of services or products industries to further test the findings.

References

- Achrol, R.S., Torger, R. & Stern, L.W. 1983. The Environment of Marketing Channel dyads: A Framework for Comparative Analysis. *Journal of Marketing*, 47: 55-67.
- Adhikari, A. and Gill, M.S. 2011. Impact of Resources, Capabilities and Technology on Market Orientation of Indian B2B Firms. *Journal of Services Research*, 11(2), 75-98.
- Aiken, M., & Hage, J. 1971. The Organic Organization and Innovation. *Sociology*, 5(1): 63-82.
- Aragon-Sanchez, A. & Sanchez-Marin, G. 2005. Strategic Orientation, Management Characteristics, and Performance: A Study of Spanish SMEs. *Journal of Small Business Management*, Vol. 43(3): 287-309.
- Auh, S. & Bulent, M. 2005. Balancing Exploration and Exploitation: The Moderating Role of Competitive Intensity. *Journal of Business Research*, 58(12): 16-52.
- Bhasin, M.L. 2005. E-Broking as a Tool for Marketing Financial Services in the Global Market. *Journal of Services Research*, 5(2): 151-167.
- Bednall, D.H. & Valos, M.J. 2005. Marketing Research Performance and Strategy. *International Journal of Productivity and Performance*, 54(5/6): 438-451.

- Daft, R. L. 2004. *Organizational Theory and Design*. Cincinnati, OH: Southwestern Publishing Co.
- Daigneault, M.G. 2016. Charting a new direction. *Credit Union Management*, 39(4): 48-51.
- Damanpour, F. 1991. Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators. *Academy of Management Journal*, 34(3): 555-590.
- Day, G. & Wensley, R. 1988. Assessing Advantage: A Framework for Diagnosing Competitive Superiority. *Journal of Marketing*, 52(2): 1-20.
- Desarbo, W.S., Di Benedetto, C.A., Song, M., & Sinha, I. 2005. Revisiting the Miles and Snow Strategic Framework: Uncovering Interrelationships Between Strategic Types, Capabilities, Environmental Uncertainties, and Firm Performance. *Strategic Management Journal*, 26(1): 47-74.
- Djellal, F. & Gallouj, F. 2001. Patterns of Innovation Organization in Service Firms: Portal Survey Results and Theoretical Models. *Science and Public Policy*, 28(1): 57-67.
- Edvardsson, B., Johnson, M.D., Gustaffson, A., & Strandvik, T. 2000. The Effects of Satisfaction and Loyalty on Profits and Growth: Products Versus Services. *Total Quality Management*, 11(7): 917-927.
- Ferejohn, M.T. 1980. Aristotle on Focal Meaning and the Unity of Science. *Phronesis*, 25(1): 117-128.
- Freel M. 2005. Perceived Environmental Uncertainty and Innovation in Small Firms. *Small Business Economics*, 25(1): 49-64.
- Germain, R. 1996. The Role of Context and Structure in Radical and Incremental Logistics Innovation Adoption. *Journal of Business Research*, 35(2): 117-127.
- Germain, R., Claycomb, C., & Dröge, C. 2008. Supply Chain Variability, Organizational Structure, and Performance: The Moderating Effect of Demand Unpredictability. *Journal of Operations Management*, 26(5): 557-570.
- Hatten, K.J., James, W.L., & Meyer, D.G. 2004. The Longevity of the Performance Effects of the Miles and Snow Strategic Archetypes: A Ten-year Perspective in US Banking. *International Journal of Management & Decision Making*, 5(2/3): 196-215.
- Helmig, B., Hinz, V., & Ingerfurth, S. 2014. Miles and Snow's Strategy Choice Typology to the German Hospital Sector. *Health Policy*, 118(3): 363-376.
- Kazaz, A., Er, B., Ulubeyli, S., & Ozdemir, B.E. 2015. Classification of Construction Firms in Turkey by Using Miles and Snow's Typology. *Engineering Economics*, 26(2): 204-210.
- Kara, A., Spillan, J.E., & DeShields, O.W. 2004. An Empirical Investigation of the Link Between Market Orientation and Business Performance in Nonprofit Service Providers. *Journal of Marketing Theory and Practice*, 12(2): 59-72.
- Kirca, A.H., Jayachandran, S., & Bearden, W.O. 2005. Market Orientation: A Meta-Analytic Review and Assessment of its Antecedents and Impact on Performance. *Journal of Marketing*, 69(2): 24-41.

- Lai, C.J. 2016. The Effect of Individual Market Orientation on Sales Performance: An Integrated Framework for Assessing the Role of Formal and Informal Communications. *Journal of Marketing Theory and Practice*, 24(3): 328-343.
- Laugen, B.T., Boer, H., & Acur, N. 2006. The New Product Development Improvement Motives and Practices of Miles and Snow's Prospectors, Analyzers, and Defenders. *Creativity and Innovation Management*, 15(1): 85-95.
- Lukas, B.A. 1999. Strategic Type, Market Orientation, and the Balance between Adaptability and Adaptation. *Journal of Business Research*, 45(2): 147-156.
- McKee, D.O., Varadarajan, P.R., & Pride, W.M. 1989. Strategic Adaptability and Firm Performance: A Market Contingent Perspective. *Journal of Marketing*, 53(3): 21-35.
- Miles, R.E. and C.C Snow 1978. *Organizational Strategy, Structure, and Process*, New York: McGraw-Hill.
- Moore M. 2005. Towards a Confirmatory Model of Retail Strategy Types: An Empirical Test of Miles and Snow. *Journal of Business Research*, 58(5): 696-704.
- Nahm, A.Y., Vonderembse, M.A., & Koufteros, X.A. 2003. The Impact of Organizational Structure on Time-Based Manufacturing and Plant Performance. *Journal of Operations Management*, 21(3): 281-306.
- Najafi-Tavani, Z., Zaefarian, G., Henneberg, S.C., Naudé, P., Giroud, A., & Andersson, U. 2015. Subsidiary Knowledge Development in Knowledge-Intensive Business Services: A configuration Approach. *Journal of International Marketing*, 23(4): 22-43.
- Narver, J.C., & Slater, S.F. 1990. The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*, 51(4): 20-35.
- Nijssen, E.J., Hillebrand, B., Vermeulen, F., & Kemp, R.G.M. 2006. Exploring Product and Services Innovation Similarities and Differences. *International Journal of Research in Marketing*, 23(3): 241-251.
- Olson, E.M., Slater, S.F., & Hult, T.M. 2005. The Performance Implications of Fit Among Business Strategy, Marketing Organization Structure, and Strategic Behavior. *Journal of Marketing*, 69(3): 49-65.
- Piercy, N. and Rich, N. 2009. Lean Transformation in the Pure Service Environment: The Case of the Call Service Centre. *International Journal of Operations and Production Management*, 29(1/2): 54-76.
- Pleshko, L.P. & Nickerson, I. 2008. Strategic Orientation, Organizational Structure, and the Associated Effects on Performance in Industrial Firms. *Academy of Strategic Management Journal*, 7: 95-110.
- Schleimer, S.C. & Shulman, A.D. 2011. When Intra-Firm and Inter-Firm Collaborations Co-Occur: Comparing their Impact Across new Services Versus new Product Innovations. *International Journal of Innovation Management*, 15(5): 869-898.
- Skaggs, B.C. & Galli-Debicella, A. 2012. The Effects of Customer Contact on Organizational Structure and Performance in Service Firms. *The Service Industries Journal*, 32(3): 337-352.

- Slater, S.F. & Narver, J.C. 1994. Does Competitive Environment Moderate the Market Orientation Performance Relationship? *Journal of Marketing*, 58 (1): 46-55.
- Smith, K., Guthrie, J., & Chen, M. 1989. Strategy, Size and Performance. *Organizational Studies*, 10(1): 63-81.
- Spillan, J.E., Kara, A., King, D.O., & McGinnis, M.A. 2013. Market Orientation and Firm Performance: An Empirical Analysis of Ghanaian Microenterprises. *Journal of Global Marketing*, 26(5): 258-272.
- Stremersch, S. & Tellis, G.T. 2004. Understanding and Managing International Growth of new Products. *International Journal of Research in Marketing*, 21(4): 421-438.
- Szymanski, D.M. 2001. Modality and Offering Effects in Sales Presentations for a Good Versus a Service. *Journal of the Academy of Marketing Science*, 29(2): 179-189.
- Talbot, S., Mac an Bhaird, C., & Whittam, G. 2015. Can Credit Unions Bridge the Gap in Lending to SMEs? *Venture Capital*, 17(1-2): 113-128.
- Tuan, M., Tuan, Z., & Smith, M. 2014. The Impact of Changes in Environment and AMT on Management Accounting Practices and Organizational Strategy, Structure, and Performance. *Journal of Applied Management Accounting Research*, 12(1): 55-82.
- Vickery, S., Dröge, C., & Germain, R. 1999. The Relationship Between Product Customization and Organizational Structure. *Journal of Operations Management*, 17(4): 377-391.
- Vorhies, D.W. & Morgan, N.A. 2003. A Configuration Theory Assessment of Marketing Organization fit with Business Strategy and its Relationship with Marketing Performance. *Journal of Marketing*, 67(1): 100-115.
- Walker, R.M. 2013. Strategic Management and Performance in Public Organizations: Findings from the Miles and Snow frame work. *Public Administration Review*, 73(5): 675-685.
- Ward, S., Girardi, A., & Lewandowska, A. 2006. A cross-National Validation of the Narver and Slater Market Orientation Scale. *Journal of Marketing Theory & Practice*, 14(2): 155-167.

APPENDIX

The M&S strategic typology: The services sample

Consistent with the method employed by McKee *et al.* (1989), the respondents were asked to check the box which best describes their firm's strategy. They could choose from four standard descriptions. The respondents' choices are as follows. *Prospectors*: 'We typically concentrate on many diverse markets which we periodically help to redefine. We value being first-in with new services and in new markets even when these efforts are not highly profitable initially. We respond rapidly to most new opportunities'. *Analyzers*: 'We attempt to maintain a stable and secure position in the market while at the same time moving quickly to follow new developments in our industry. We are seldom first-in with new services or in new markets, but are often second-in with better offerings'. *Defenders*: 'We attempt to locate and maintain a secure niche in a relatively stable market environment. We try to protect our markets by offering high-quality, well-target services. We are not at the forefront of industry developments'. *Reactors*: 'We appear to have an inconsistent approach to our markets and services and are often indecisive. We are not aggressive in attacking new opportunities, nor do we act aggressively to defend our current markets. Rather, we take action when we are forced to by outside forces such as the economy, competitors, or market pressures'. One hundred and nineteen respondents answered the question. Prospectors comprised 5% of the sample, Analyzers 44%, Defenders 38%, and Reactors 13%.

The M&S strategic typology: The product manufacturing sample

Consistent with Pleshko and Nickerson (2008), respondents were asked to rate four questionnaire items on a seven-point scale ranging from [1] strongly disagree to [7] strongly agree in regard to the efforts of their firm in the marketplace. The four items were derived from the general descriptions of the strategy types. Specifically, the four scale items were: (i) the search for new opportunities drives our firm, (ii) we analyze every situation prior to taking action, (iii) we generally defend a secure niche in the marketplace, (iv) our strategies are often short-term reactions to the market. Firms were profiled on these four questions and then classified into groups using k-means cluster analysis. The cluster analysis suggested four strategy groups, and each firm was assigned to one of the groups based on minimum distances to the cluster means. Out of one hundred and thirty-

three respondents, 26% were classified as Prospectors, 26% as Analyzers, 29% as Defenders, and 18% as Reactors.

Organizational structure

The firms' structural dimensions were measured using a scale ranging from [1] not true to [5] true in the services sample and ranging from [1] to [7] in the products sample. The product sample scores were then multiplied by 5/7 to create equivalent scale ranges, with a possible range from [1] to [5] for all items. The nine items were subjected to factor analysis using principal components followed by a varimax rotation. This analysis resulted in four dimensions explaining 73.11% of the original variance: (1) formalization (FORM) - two items, (2) integration (INTE) - three items, (3) centralization (CENT) - two items, and (4) complexity (COMP) - two items. Summated scales were used for each of the four components to derive overall indicators of the structural dimensions themselves. With one more item than the other three dimensions, INTE scores were multiplied by 2/3.

Market-orientation

Consistent with Narver and Slater (1990), respondents were asked to evaluate their firm's MO activities on a seven-item scale, with response options ranging from [1] not true to [5] true. The seven items used to tap MO were subjected to factor analysis using principal components followed by a varimax rotation. The analysis resulted in two distinct MO constructs explaining 67.87% of the original variance. Four questionnaire items were identified as representing customer orientation, while three items represented competitor orientation. Consequently, summated scales were used to represent each of the two components: *customer-focus* (CUSTO) and *competitor-focus* (COMPO). The reliability of the scales, as measured by coefficient alpha was 0.812 for customer-focus and 0.789 for competitor-focus.

Firm performance

Ten identical questionnaire items were used in both samples. The questions compared the company's performance versus five baselines: competitors, goals, potential, previous years, and growth. Respondents were asked to rate their perceptions of their firm's performance using a five-item response scale ranging from [1] poor to [5] excellent. The ten items were subjected to a principle component factor analysis followed by a varimax rotation. This procedure resulted in two distinct dimensions explaining 70.78% of the original variance.

Each dimension was comprised of five questions and, as expected, one performance dimension represented perceived profits and the other represented perceived market share. Consequently, an overall indicator of market share performance, PSHARE, was constructed by summing the five market share questions. A reliability of 0.909 was found for PSHARE using coefficient alpha. Similarly, an overall indicator of profit performance, PPROF, was constructed by summing the five profit performance questions. A reliability of .877 was found for PPROF using coefficient alpha.

Richard A. Heiens holds the Walter F. O'Connell Palmetto Endowed Professorship in Marketing at the University of South Carolina Aiken. Dr. Heiens earned his Ph.D. in Marketing from Florida State University, and his research interests are in the areas of strategic marketing and consumer behavior. His research studies have appeared in a wide variety of academic journals, including the Strategic Management Journal, the Journal of Business and Industrial Marketing, the Academy of Marketing Science Review, the Journal of Strategic Marketing and the Journal of International Consumer Marketing. (RichardH@usca.edu)

Majdi A. Quttainah earned his Ph.D. degree in Management from Rensselaer Polytechnic Institute, Lally School of Management & Technology (USA) in 2012 and he is becoming an associate professor soon, of management in the College of Business Administration at Kuwait University. His research and teaching interests are corporate governance, corporate strategy, international management, entrepreneurship and supply chain management. (mquttainah@cba.edu.kw)

Larry P. Pleshko received his Ph.D. from Florida State University, 1993 and he serves as Professor of Marketing at Kuwait University. His research specializes in retail services and marketing strategy as related to firm performance. He has worked at universities in Australia, Saudi Arabia, the USA, United Arab Emirates, Kuwait and Jamaica. (larryp@cba.edu.kw)