

Independent Empirical Support for Porter's Generic Marketing Strategies ? A Re-analysis using correspondence analysis.

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Abstract

Many published studies have sought to identify distinct strategy approaches with the objective of assessing whether certain strategies yield superior performance. Empirically derived strategy clusters are sometimes contrasted to theoretically derived strategy schemas or typologies as a point of reference, for comparison and contrast, or to explain associations with dependent variables such as performance. In some cases this theory dependence of observation can be misguided if the typology used lacks validity or incorporates flawed assumptions. This paper re-analyses a published work where empirically derived strategy clusters were identified using the multivariate mapping technique of correspondence analysis. The analysis provides further insights into the relationships between the variables under study by allowing the distance between variables to be *seen* (visually). In this case, the technique shows how close or distant various business strategies are to one another. This is of interest because if quite similar strategies yield dissimilar performance levels, the implications are that either minor differences in strategy are extremely important; or unobserved factors are influencing the results. Conversely, if superior performance is associated with markedly different strategy, an implication for managers is to take very different approaches to strategy.

The paper concludes that the use of a well known generic strategy typology (Porter's (1980) generic competitive strategies) was of little use in interpretation of the clusters that were identified. Further, it suggests that Porter's (1980) generic competitive strategy schema does not describe/fit empirical reality, and provides no support for the notion that these generic strategies are routes to superior profit.

Introduction

In recent years several authors have undertaken empirical studies of competitive strategy in an effort to expand our knowledge of the links between strategy and economic performance. Some authors have approached this from an Industrial Organisation economics viewpoint (for theoretical tenets see Caves & Porter (1977)) and have focused on a single industry, for example, Cool & Schendel (1987) and Hatten & Schendel (1977). Such research has advanced the notion of "strategic groups", groups of firms within a single industry which display similar conduct along key strategic dimensions, such as scope and resource commitments. Authors such as Douglas & Rhee (1989) have examined businesses across industries using a still relatively restricted range of theoretically derived variables such as marketing tactics, market scope, and business synergy and identified 'clusters' of firms with broadly differing strategies. Other approaches have endeavoured to identify or validate *a priori* strategy frameworks such as those of Porter (1980), examples being Dess & Davis (1984) and Miller & Freisen (1986).

Other authors have taken a broader view, preferring to utilise a wide range of strategy elements in measuring the broad strategies of firms in diverse operating environments, for example Wong & Saunders (1993). Such endeavours are clearly more empiricist, with their measurement of a larger number of strategy variables and reliance upon cluster analysis rather than grouping firms according to any theoretically based ideal/extreme types. However, the choice of which strategy variables to measure have inevitably been theory driven or at least vaguely influenced by theory; even PIMS which collects a vast array of data is based on an Industrial Organisation/Business Policy *industry structure - business action* model. This paper analyses an important study of this type, that of Hooley, Lynch, and Jobber (1992). These authors gathered responses from 616 single business companies on five key marketing strategy variables, taken from O'Shaughnessy (1984). These were:

Marketing Objectives: defensive, hold or prevent decline

Strategic Focus: expand market, win share, or focus on internal productivity.

Market Targeting: whole market, selected segments, or individual customers

Quality Positioning: quality higher, the same, or lower as competitors

Price Positioning: above, the same, or lower than competitors

Using Ward's hierarchical method of cluster analysis, Hooley et al identified five Generic Marketing Strategy (GMS) clusters. In addition to this, the type of market the firm operated within was examined. Variables relating to the newness or maturity of market, fluidity of competitive structure, and speed of change in customer needs were measured across clusters but not included in the cluster analysis. Performance was also measured, to be analysed later as a dependent variable, in terms of sales, market share and profits (relative to competitors and improvement over the last financial year).

Hooley et al presented the survey results in a series of tables detailing percentages of firms corresponding to the strategy or market description across each cluster. The tables of percentages are shown below.

Table 1

Variable Measured	GMS 1	GMS 2	GMS 3	GMS 4	GMS 5
	%	%	%	%	%
Marketing Objectives					
Defend	1	15	13	4	89
Steady Growth	17	68	68	92	4
Aggressive Growth	82	17	19	4	7
Strategic Focus					
Expand Market	39	40	25	48	17
Win Share	54	47	61	41	12
Cost reduction/productivity	6	13	14	11	71
Marketing Targeting					
Whole Market	48	18	5	0	20
Selected Segments	27	59	61	67	21
Individual Customers	24	22	34	32	51
Competitive Positioning					
a) Quality relative to competitors					
Higher	69	79	1	100	44
The same	29	18	98	0	55
Lower	3	3	2	0	3
b) Price relative to competitors					
Higher	15	88	5	0	5
The same	62	0	89	100	79
Lower	23	13	7	0	17
Market Growth					
New and growing	60	40	37	56	30
Mature and stable	28	46	49	33	43
Competitive Structure					

Variable Measured	GMS 1	GMS 2	GMS 3	GMS 4	GMS 5
	%	%	%	%	%
Fluid	35	25	23	29	18
Speed of change in customer needs					
Rapid	39	30	23	35	31
Approach to new product development					
Imitate competitors	16	20	34	18	24
Lead the market	69	67	44	59	39
Role of marketing in strategic planning					
None	4	6	9	6	21
Major	50	44	34	37	25
Approach to competition					
Ignores it	14	12	6	9	10
Takes on any	73	65	60	56	53
Avoid it	14	23	35	35	37
Approach to taking risks					
Moderate risks	53	59	71	68	59
Performance improvement over last financial year					
Better sales	75	62	65	65	47
Better market share	57	44	38	36	20
Performance relative to major competitors					
Better profit	40	39	29	19	26
Better sales	51	39	25	22	14
Better market share	47	31	24	22	15

Further Analysis

Large tables of frequencies such as the above are always difficult to interpret. The aim is to determine which strategy variables distinguish between the GMS clusters. Typically this interpretation is arrived at by looking at a number of strategy variables (rows) and comparing the clusters percentage scores across the columns. This "eyeballing" approach to make meaning of the tables is quite normal but places considerable demands upon the researcher and later readers (Sharp, 1995). It also has the deficiency in that some clusters score relatively highly (lowly) on all or many strategy variables. Looking across a row it may be seen that a cluster achieves a greater (lesser) score than the other clusters on one particular variable but this is not to say that

this variable particularly distinguishes that cluster from the others, because that cluster typically scores higher (lower) than the other clusters on all/most variables. A means of avoiding this problem will be discussed later in the section on correspondence analysis.

Hooley et al's descriptions, (based on a simple eyeballing approach) of the firms who made up each cluster (generic marketing strategy) were along the following lines:

GMS 1: aggressive growth goals, often through market share gain or total market expansion. Aim at the whole market ...marketing of high quality products at similar prices.

GMS 2: steady sales growth either through market share gain or market expansion. Selected segments are targeted through higher quality products at higher prices than competitors.

GMS 3: steady sales growth pursued ... by focusing on selected segments or individual customers. Positioning is average quality at average prices.

GMS 4: steady growth goals with a focus on total market expansion or winning share by targeting selected segments or individuals. High quality positioning at same prices.

GMS 5: defensive strategy achieved through a focus on cost reduction or productivity improvement. Very selective targeting with similar or higher quality at similar prices.

In addition, Hooley et al endeavoured to categorise the strategy clusters in relation to Porter's (1980) generic strategies. Their comments on each respective strategy cluster were as follows:

GMS 1 ...clearly this is a differentiation strategy (Porter, 1985)

GMS 2 ...This strategy resembles the focused differentiation strategy of Porter (1985)

GMS 3 ...this most closely resembles "stuck in the middle"

GMS 4 ...again resembles the focused differentiation strategy of Porter

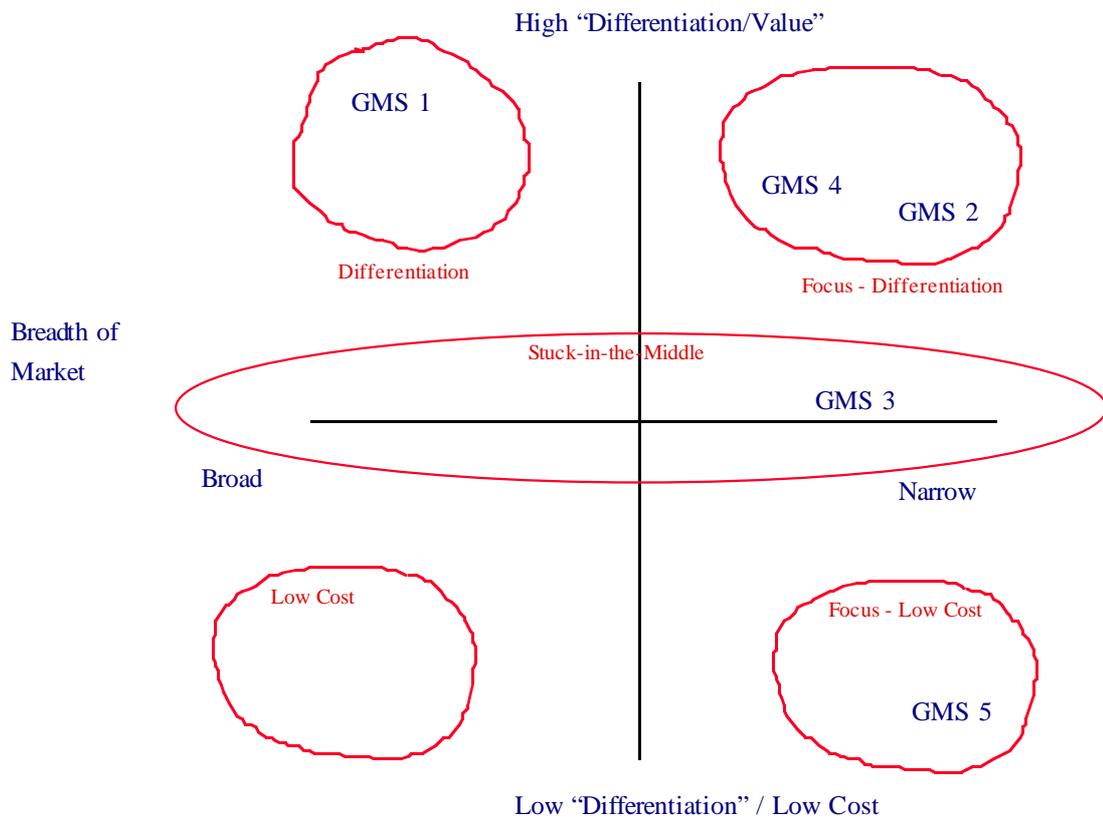
GMS 5 ...*This strategy is similar to that of focused cost leadership*

Porter's strategy of overall cost leadership and broad market focus does not appear to be represented but this would be expected. Porter said there can (or should be) only one such firm in an industry or even none. In a five cluster solution, even one based on many industries it is not unreasonable to expect that such firms, if any even existed, might be subsumed into another cluster - most likely GMS 5.

The Philosophy of Science literature highlights the tendency of scientists to explain or interpret phenomena using some prior theory about what sort of things the world contains (Chalmers, 1976, Doyal and Harris, 1986). This theory dependence of observation affects not only scientists' choice of which things to measure but also their interpretation of that data once collected. In this case, Hooley et al have suggested that the clusters they identified resemble theoretical types suggested to be routes to competitive advantage. However, is this portrayal using such hypothetical types valid or even useful? A small body of revisionist literature has emerged which casts doubt on the validity of Porter's scheme (Hendry, 1990, Sharp, 1991, Speed, 1989). One of the criticisms mounted has been that the types are not delineated by a common dimension (Sharp and Dawes, 1996), a prerequisite for a valid classification scheme (Hempel, 1965). If such criticism is valid it would not be expected that endeavours to match observed strategy clusters to Porter's types would be possible because the variables do not reflect parameters which truly distinguish business or marketing strategies.

Hooley's interpretation of the GMS clusters using the Porter dimensions can be illustrated graphically. Such a graphical illustration utilises two of the important dimensions upon which Porter based his strategy scheme. The first of these is the breadth of the product market served; Porter wrote that "the {focus} strategy rests on the premise that the firm is thus able to serve its narrow strategic target more effectively or efficiently than competitors". The second is the extent to which the firm either differentiates in order to reduce monetary price sensitivity (a differentiation strategy) or relies on achieving low costs of operations (a low cost strategy), the outcome of which has been widely interpreted as offering low prices to customers (Sharp, 1991). While Porter was not consistent in explaining whether low cost meant low price, the example he provided in Porter (1980), of a crane manufacturer (Harnischfeger) was of a firm offering a low monetary price offering. On this basis the following graph shows the position of Hooley et al's clusters according to the descriptions in that work.

Chart 1



The preceding illustration shows GMS 1 with a broad market scope and high degree of differentiation. GMS 2 and 4 are situated quite close together, as both are “focused differentiation” perhaps providing a theoretical justification of a smaller cluster solution than five as utilised by Hooley et al. GMS 3 has a narrow market scope but is described as being “stuck in the middle” with neither clear differentiation or low costs/prices. Lastly, GMS 5, the “focused cost leadership” strategy is at the lower end of the vertical axis.

This paper suggests that this interpretation of the GMS clusters according to the Porter typology is misguided and that the relation between the generic strategies Hooley et al revealed bear little resemblance to the explication provided. This assertion is based, in part, upon a reanalysis using the technique of correspondence analysis which provides a useful way of showing visually the spatial relationship between the GMS clusters.

Correspondence Analysis

Correspondence analysis provides a means of analysing tables of categorical data in order to determine the relationships between the variables of interest and has the advantage of making it considerably easier to *see* the relationship between a large number of variables.

It is a relatively recently developed multivariate statistical technique introduced by French statisticians (Benzecri, 1969) with later notable work being done by Greenacre (1984), a South African statistician, and American marketing scientists Carroll, Green and Schaffer (1987, 1986). Correspondence analysis can produce a two-dimensional display of complex multi-variate non-metric data. It has a number of advantages over more traditional techniques utilising principal components analysis and discriminant analysis, particularly since these techniques were developed to deal with metric, rather than categorical, data.

One of the major benefits of correspondence analysis over discriminant analysis is that it can show the relationship between all variables in the analysis. Discriminant analysis captures the relationship between independent variables and a dependent variable but not the relationship between the independent variables. Principal components analysis has an important assumption that the data is metric and normally distributed, and it can not be used to display the relationship between dependent and independent variables simultaneously. In summary, correspondence analysis provides a multivariate representation of interdependence for non metric data which is not possible with other methods (Bendixen, 1996, Hair, et al., 1995).

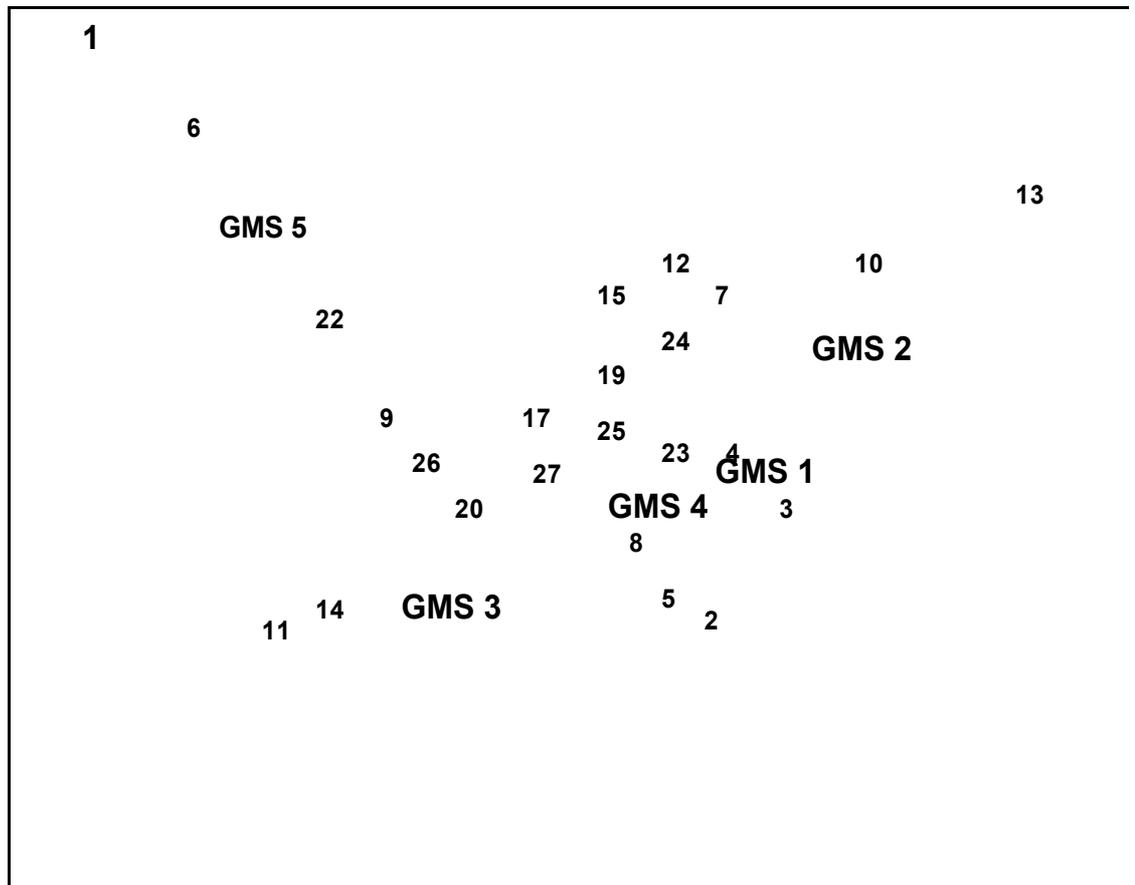
Particularly relevant to this paper is the way that correspondence analysis, due to its multivariate nature, can reveal relationships that would not be detected in a series of pairwise comparisons (Hoffman and Franke, 1986). As part of a series of tests for validity, Hooley et al utilised significance tests across the rows of the data matrices with the strength of differences between clusters being determined from visual analysis, again across rows. Each cluster was compared to others on a particular attribute, for example, *emphasis on segments* or the *whole market*. In comparison, correspondence analysis simultaneously captures the relationship between, to continue the example, *emphasis on segments* and all other strategy attributes and their impact on distinguishing the clusters. As a consequence the relative differences between the clusters, as determined by the attributes, can be visually appraised in terms of distances between the cluster names on the two dimensional correspondence map. Likewise the distance between attributes indicates their relationship to one another in determining the

difference between the clusters. These distances are often referred to as chi-square distances because correspondence analysis relates the frequencies for any row/column combination to all other row/column combinations based on marginal frequencies, a procedure which yields a conditional expectation very similar to an expected chi-square value (Hair, et al., 1995).

In order to use correspondence analysis on the Hooley et al data each of the percentages in the tables of frequency was converted back into actual frequencies. Analysis was undertaken with CGS plots (see Carrol, Green and Schaffer (1987, 1986) which allows interpoint distances to be read directly in order to infer similarity or dissimilarity between the clusters. The appropriateness of this approach was checked via comparison with the actual data table and with the traditional French plot (Herman, 1991). The results are presented here as CGS plots with varimax rotation. All analyses did a reasonable, though not outstanding, job at capturing the data in a two dimensions (measure of fit being 0.67). Variance accounted for was X axis = 0.42 and Y axis =0.25.

Chart 2 incorporates the variables concerning marketing strategy, with a legend describing the figures on the map.

Chart 2



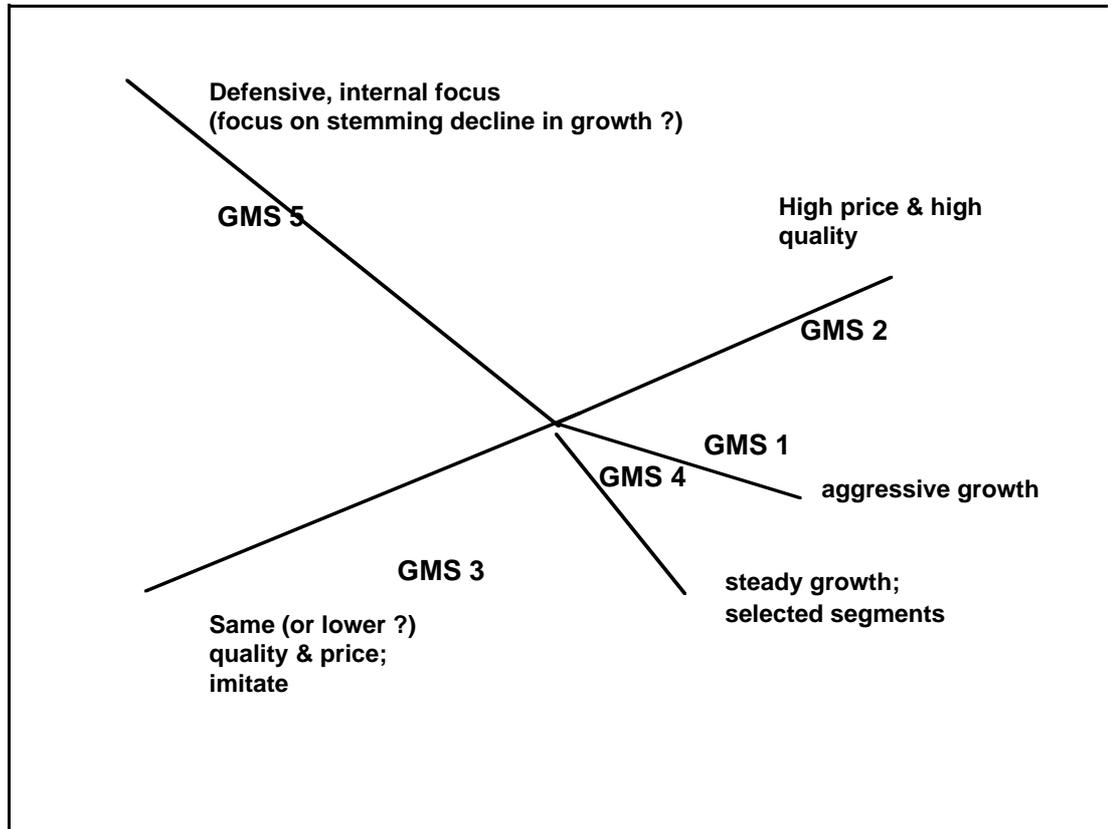
(n.b. the oversize "1" in top left corner signifies its true position lies further beyond the map.)

- GMS 1 Generic Marketing Strategy 1 (note: read exact point at leftmost point of "G").
 GMS 2 Generic Marketing Strategy 2
 GMS 3 Generic Marketing Strategy 3
 GMS 4 Generic Marketing Strategy 4
 GMS 5 Generic Marketing Strategy 5

- | | | | |
|----|----------------------|----|--------------------------------------|
| 1 | Defend | 15 | Lower Price |
| 2 | Steady Growth | 16 | New Growing Mkts |
| 3 | Aggressive Growth | 17 | Mature Markets |
| 4 | Expand Market | 18 | Fluid competitive structure |
| 5 | Win Share | 19 | Rapid change |
| 6 | Cost Reduction | 20 | Imitate competitors |
| 7 | Whole Market | 21 | Lead the market |
| 8 | Selected segments | 22 | No Marketing role in strat. planning |
| 9 | Individual Customers | 23 | Major Marketing role |
| 10 | High Quality | 24 | Ignore Competition |
| 11 | Same Quality | 25 | Take on any |
| 12 | Lower Quality | 26 | Avoid competition |
| 13 | High Price | 27 | Moderate Risks |
| 14 | Same Price | | |

Chart 3 shows the Generic Marketing Strategy perceptual positions with key discriminating variables.

Chart 3



Interpretation

The correspondence maps clearly show the closeness between GMS 1, *high value positioning* and GMS 4, *selective targeting with high quality/same prices*. This pair of clusters are situated somewhere in the middle between GMS 3 *same quality same price* and GMS 2 *selective targeting, premium positioning*. All these strategies are distant from the *defensive, internal orientation* of GMS 5.

Chart 2 shows that GMS 1 and 4 are quite similar strategies, although GMS 1 exhibits higher rates of success. This difference is possibly attributable to GMS 4 being positioned closer to “*winning share*” (see (5), chart 2), possibly difficult against

entrenched competitors. This contrasts with GMS 1 which appears more associated with “*expand the market*” (4). The chart clarifies Hooley et al’s dual observations that GMS 1 is oriented to new markets but that both GMS 1 and 2 emphasise growth markets.

This raises the issue that growth as a success measure will bias results to growth oriented firms. Researchers such as Douglas & Rhee (1989) have identified deliberate “niche”, or small share strategies, so perhaps “growth” should not necessarily indicate “success”. The use of a focus on growth as an independent variable when growth itself is used as a dependent variable is an issue worthy of further debate and investigation.

Re-interpreting The relationships To The Porter Types

Bearing in mind the less than complete fitting of the data to the two dimensions, the correspondence maps are still very different to the graph constructed from Hooley et al’s interpretation using Porter (chart 1). Hooley et al’s description suggested that GMS 1 (the “broad differentiation” strategy) would be quite distinct from GMS 2,3, and 4. The correspondence map shows that GMS 1 is not as distinct as originally suggested, and contrary to Hooley et al’s explication, GMS 2 and 4 (both supposed to be “focus-differentiation” strategies) are somewhat less similar than was originally suggested. The GMS 5 cluster (supposedly “focus-cost leadership”), rather than being situated on a roughly parallel axis to GMS 2,3, and 4 as suggested by the imagined “high differentiation/low cost” continuum, is orthogonal (at least in the two dimensions used) to the other four generic strategy clusters; thus showing no correlation (Bendixen, 196) rather than the expected negative correlation. Indeed, rather than being a route to competitive advantage, as would be suggested by Hooley et al’s suggestion that GMS 5 resembled a focused cost leadership strategy, GMS 5 rates poorly on most of the performance variables used in the study (yet is not “stuck in the middle” as Porter’s framework would suggest poor performers should be). Lastly, GMS 3 is shown to be not “stuck in the middle” between any high differentiation and low cost/price endpoints, but rather at the end of a high price/high quality and same price/same quality axis.

Further evidence of the lack of usefulness of the Porter types in interpreting the results concerns the clusters’ value positioning. Hooley et al labelled the GMS 1 cluster “high value positioners” meaning that these firms produce high quality goods but are less likely to charge high prices, and may even charge lower prices - thus offering high value to customers. Chart 3 shows this more clearly. GMS 1 and GMS 4 are approximately in the “middle” between the high price/high quality strategy of GMS 2

and same quality/same price strategy of GMS 3. While the tables show GMS 4 displaying a higher incidence of superior quality than GMS 1, the number of GMS 1 firms who use higher prices pushes this strategy cluster toward the high quality/high price endpoints (10;13 chart 2). This shows that the label of *high value positioner* might be more appropriate for GMS 4 than for GMS 1. It also shows the interpretation of GMS 1 and 4 as instances of Porter's "differentiation" and "focused differentiation" strategies respectively, confounded the analysis, as these strategies are meant to result in superior profitability through higher prices (Porter, 1980, 1985). Both are shown to include similar or even lower pricing.

A methodological point of interest highlighted by the correspondence maps is the bipolar "quality" positions (note the question mark on chart 3 adjacent to GMS 3). It can be seen that the spectrum ranges from "high quality" to "same quality". This might be expected to instead be from "high" to "low". The frequency tables show very few firms reporting they manufacture goods of a lower quality than competitors - reflecting a problem with topic bias. Such bias is also evident in a similar study by Wong & Saunders (1993) in which over 70% of the sample of 90 firms stated they made goods of "superior quality" relative to competition. It suggests in some cases "superior" can be interpreted as "parity" because by definition, the incidence of "superior" should be less than that of "average" or "inferior".

This issue has implications for other empirical research utilising product quality as a primary indicator of differentiation. Examples are Miller (1986) and Miller & Dess (1993) who have operationalised differentiation primarily in terms of managerial perceptions of relative product quality. Such an operationalisation is problematic for several reasons. Firstly, this attribute, being a managerial rather than customer perception, and only one of numerous factors which may or may not distinguish products in the eyes of customers, is likely to inaccurately estimate the real degree of product heterogeneity. Secondly, if managers over-report their degree of product quality, and it appears that this does occur on occasion, this too will result in an inaccurate depiction of the state, or form, of product heterogeneity exhibited. Lastly, as has been argued, these measures are not measuring the extent of differentiation but merely product heterogeneity which is an incomplete measure.

To summarise the re-interpretation, it has been shown that the use of Porter's strategy types was of little use in the attempt by Hooley et al to explain the phenomena they identified, using what has been a generally accepted, though recently criticised, theoretical model of generic strategy. The respective proximity of the GMS clusters

bears no relationship to that suggested by superimposing Porter's strategies on the empirical data.

Further Discussion

This article has shown that the interpretation of observed phenomena by Hooley et al using accepted "theory" resulted in a description which poorly captured the real proximity of the strategy clusters to each other and their relationship to certain strategy variables. This reanalysis has been highly supportive of Hooley et al's (1992) overall findings but not of the interpretation of the empirical data as being supportive of the existence of Porter's generic competitive strategies. In fairness to Hooley et al they were equivocal on this point, which in itself is good justification for further analysis and an "outside opinion" as this paper has attempted to provide.

Finally, the paper has also illustrated how correspondence analysis can be a useful tool for marketing strategy research. Not only does it allow the presentation of large sets of categorical data in a format which makes interpretation substantially easier but it also due to its multivariate nature allows further insights to be drawn from the data. It is shown to be particularly useful in interpreting empirical clusters. In this case correspondence analysis allowed the direct comparison of the relative differences between generic marketing strategies in terms of the variables which defined them, and associated variables relating to market characteristics.

Further Replication Research

The work of Hooley et al identified strategy clusters which appear to explain performance differences across firms. However, the possible problem remains, despite precautions taken in the statistical procedures, whether such clusters do actually reflect reality, or whether they are statistical artefacts. Additionally, empirical identification of generic strategy types should be extended to different countries, to determine if these broad approaches to marketing exist widely or reflect unique country characteristics or conditions. Only replication and extension research can answer the question of just how *generic* these marketing strategies really are.

Cluster Validation

Hooley et al carried out useful tests for internal validity utilising chi-square and Cramers V to test the clarity of the clusters. They also used discriminant analysis to predict membership of one half of the sample from another half which added confidence to the cluster solution. However, other researchers have recently (e.g. Lockshin and Spawton, 1995) advocated additional tests for the external validity of clusters. For example, comparing the differences of related variables (variables not included in the cluster analysis) across clusters on the assumption that if the clusters did identify significant differences in the variables under study, this would be reflected in at least some differences in other related, or dependent, variables. Future work in identifying generic strategy clusters should utilise such external validity tests. Since the whole idea of empirical strategy research of this type is to identify strategy similarities across industry and environment, factors are required for validation which could be expected to alter according to generic strategy but not be sensitive to industry. Hooley et al identified clusters created from five strategy variables (objectives, strategic focus, targeting, quality, price). These clusters could be validated using, for example, managerial attitudes to growth, segmentation skills, and extent of distribution (the latter which may reflect selective targeting). Such an approach could also involve measuring the extent of agreement to summary descriptions of the strategy clusters identified, and sampling the same firms at a later time.

On a more specific note, one final area suggested to be fruitful for further research concerns the GMS 5 "defender" cluster. It has been mentioned this group had a reasonably high incidence of better profit despite poor sales and market share results. This could be due to successful "denominator management", reducing infrastructure and other expenditure to maintain acceptable ratios. It would be beneficial to revisit such firms at a later date to determine if this comparatively healthy profit position *vis a vis* marketplace performance has been sustained, or whether it has deteriorated further as the long term effects of reducing expenditure are felt. Which highlights the need for longitudinal work in strategy research.

References

Bendixen, Mike (196) *A Practical Guide to the Use of Correspondence Analysis in Marketing Research*, Marketing Research On-Line, Vol.1, no.1, p.16-36.

Benzecri, J. P. (1969) *Statistical Analysis as a Tool to Make Patterns Emerge from Data*, in "Methodologies of Pattern Recognition", Academic Press Inc.: New York, p.35-74.

Carroll, J. Douglas; Green, Paul E.; Schaffer, Catherine M. (1987) *Comparing Interpoint Distances in Correspondence Analysis: A Clarification*, Journal of Marketing Research, Vol.24, no.November, p.445-450.

Carroll, J. Douglas; Green, Paul E.; Schaffer, Catherine M. (1986) *Interpoint Distance Comparisons in Correspondence Analysis*, Journal of Marketing Research, Vol.23, no.August, p.271-280.

Caves, R.E.; Porter, M. (1977) *From Entry Barriers to Mobility Barriers: Conjectural Decisions and Contrived Deterrence to New Competition*, Quarterly Journal of Economics, Vol.91, p.241-330.

Chalmers, Alan Francis (1976) *What is this thing called science?* 1st ed. Queensland: University of Queensland Press.

Cool, Karel O.; Schendel, Dan (1987) *Strategic Group Formation and Performance: The Case of the U.S. Pharmaceutical Industry, 1963-1982*, Management Science, Vol.33, no.9, September, p.1102-1124.

Dess, Gregory; Davis, Peter S. (1984) *Porter's (1980) Generic Strategies as Determinants of Strategic Group Membership and Organizational Performance*, Academy of Management Journal, Vol.27, no.3, p.467-488.

Douglas, Susan P.; Rhee, Dong Kee (1989) *Examining Generic Competitive Strategy Types in U.S. and European Markets*, Journal of International Business Studies, no.Fall, p.437-463.

Doyal, Len; Harris, Roger (1986) *Empiricism, Explanation and Rationality*. London: Routledge.

Greenacre, Michael J. (1984) *Theory and Applications of Correspondence Analysis*. London: Academic Press Inc.

Hair, Joseph F.; Anderson, Rolph E.; Tatham, Ronald L.; Black, William C. (1995) *Multivariate Data Analysis*. Fourth ed. New Jersey: Prentice Hall International.

Hatten, Kenneth J.; Schendel, Dan E. (1977) *Heterogeneity Within an Industry: Firm Conduct in the U.S. Brewing Industry 1952-71*, *The Journal of Industrial Economics*, Vol.26, no.December, p.97-113.

Hempel, Carl G. (1965) *Fundamentals of Taxonomy*, in "Aspects of Scientific Explanation - And Other Essays in the Philosophy of Science", The Free Press: New York, p.505.

Hendry, John (1990) *The problem with Porter's generic strategies*, *European Management Journal*, Vol.8, p.443-50.

Herman, Steve (1991) *MCA+*. New Jersey: Bretton-Clark.

Hoffman, Donna L.; Franke, George R. (1986) *Correspondence Analysis: Graphical Representation of Categorical Data in Marketing Research*, *Journal of Marketing Research*, Vol.23, no.August, p.213-227.

Hooley, Graham J.; Lynch, James E.; Jobber, David (1992) *Generic Marketing Strategies*, *International Journal of Research in Marketing*, Vol.9, p.75-89.

Lockshin, Lawrence; Spawton, Anthony (1995) *Using Product, Brand and Purchasing Involvement for Retail Segmentation*, Second International Conference on Recent Advances in Retail & Services Science, Broadbeach, Australia.

Miller, A; Dess, G.G. (1993) *Assessing Porter's (1980) Model in Terms of Its Generalizability, Accuracy and Simplicity*, *Journal of Management Studies*, Vol.30, no.4, p.553-585.

Miller, Danny; Friesen, Peter H. (1986) *Porter's (1980) Generic Strategies and Performance: An Empirical Examination with American Data. Part 1: Testing Porter*, *Organization Studies*, p.37-55.

O'Shaughnessy, John (1984) *Competitive marketing: a strategic approach*.
Winchester, Mass: Allen & Unwin Inc.

Porter, Michael E. (1985) *Competitive Advantage*. New York: Free Press.

Porter, Michael E. (1980) *Competitive strategy: techniques for analysing industries*.
New York: Free Press.

Sharp, Byron (1995) *Business Orientations and Corporate Success: A
Correspondence Analysis of Wong and Saunders' Findings*, Journal of Strategic
Marketing, Vol.3, no.3, p.205-214.

Sharp, Byron; Dawes, John (1996) *Is Differentiation Optional? A Critique of
Porter's Generic Strategy Typology*, in "Management, Marketing and the Competitive
Process" (edited by Peter Earl), Edward Elgar: London.

Sharp, Byron M. (1991) *Competitive Marketing Strategy: Porter Revisited*,
Marketing Intelligence & Planning, Vol.9, no.1, p.4-10.

Speed, Richard J. (1989) *Oh Mr Porter! A re-appraisal of competitive strategy*,
Marketing Intelligence and Planning, Vol.7, p.8-11.

Wong, Veronica; Saunders, John (1993) *Business Orientations and Corporate
Success*, Journal of Strategic Marketing, Vol.1, p.20-40.