IESE Business School
University of Navarra

Working Paper
WP-10
August, 1975

ON STRATEGY AND STRUCTURE: ASSESSMENT OF A LINE OF RESEARCH

Eduardo Ballarín

IESE Business School – University of Navarra
Av. Pearson, 21 – 08034 Barcelona, Spain. Phone: (+34) 93 253 42 00 Fax: (+34) 93 253 43 43
Camino del Cerro del Águila, 3 (Ctra. de Castilla, km 5,180) – 28023 Madrid, Spain. Phone: (+34) 91 357 08 09 Fax: (+34) 91 357 29 13

ON STRATEGY AND STRUCTURE: ASSESSMENT OF A LINE OF RESEARCH

Eduardo Ballarín[1]

Abstract

This paper will try to develop a critical assessment of this research project only at the second level, i.e. the one that tackles the causal relationship between strategy and structure. As with any other piece of research, the present one can be evaluated in terms of its methodological rigor and of its contribution to the present theory. We shall undertake both tasks; in each specific case, some comments will be presented about the research procedures. However, primary interest will concentrate on the research's relevance for the body of knowledge that has been built up in the Harvard Business School's Business Policy group.

Note: This paper was written while the author was working towards a DBA degree at the Harvard Business School.

[1] Instructor, Strategic Management, IESE

ON STRATEGY AND STRUCTURE: ASSESSMENT OF A LINE OF RESEARCH

I) Introduction

The line of research that we are going to evaluate has been carried out in recent years within the Harvard Business School's Business Policy group. Drawing heavily on the work of Chandler[1] and Scott[2], a series of doctoral dissertations were written under the supervision of the latter.

The whole research project is developed on two different levels. In the first place, the project can be considered as a macro-study of the recent changes in strategy and structure that have taken place in specific environments: United States (Wrigley and Rumelt), United Kingdom (Channon), France (Pooley Dyas), Germany (Thanheiser) and Italy (Payan). At a second and deeper level, the aim of the research is to provide an empirical verification of the proposition "structure follows strategy", as formulated by Chandler and Scott. At the same time, several theses try to enrich the concepts of strategy and structure in order to make them operational for an aggregate type of research. A much more meaningful concept of diversification will be, for instance, one of the most interesting byproducts of this research.

This paper will try to develop a critical assessment of this research project only at the second level, i.e. the one that tackles the causal relationship between strategy and structure. As with any other piece of research, the present one can be evaluated in terms of its methodological rigor and of its contribution to the present theory. We shall undertake both tasks; in each specific case, some comments will be presented about the research procedures. However, primary interest will concentrate on the research's relevance for the body of knowledge that has been built up in the Harvard Business School's Business Policy group.

In order to evaluate this line of research as a piece of theory, we shall draw on some concepts used by Bower[3] to assess the relevance of the concept of strategy as a good theory for solving

---

[1] A. D. Chandler, Strategy and Structure, Anchor Books, New York, 1966.

[2] B. R. Scott, "Stages of Corporate Development" Unpublished paper, Harvard Business School, Boston, 1971. J. H. McArthur and B. R. Scott, Industrial Planning in France, Division of Research, Harvard Business School, Boston, 1969.

[3] Joseph Bower, "Strategy as a Problem Solving Theory of Business Planning". Harvard Business School paper 1967 BP 894.

non-programmable problems[4]. Those concepts are "metaphorical power" and "relevance in empirical terms". The questions that we should ask ourselves are:

a) Does this theory enrich our intuitive understanding of the problem? If we are trying to improve our capability for solving non-programmable problems, this requirement has special importance.

b) Does it help us to clarify the discrepancies between theory or assumption and fact? In other words: does it make our model more "complete" and/or "correct"?[5]

Advancing the consequences of our analysis, we propose that these two questions do not have a unique answer because there are two different concepts of "strategy" and "structure" pervading the whole research project. We shall see that each set of definitions of "strategy" and "structure" implies a different underlying model of the firm from a systems point of view. The contention that we shall be supporting in the following sections of this paper is that the model most often used throughout the research project exploits the communicative power of metaphor very well but is less satisfactory as an approximation to the real nature of policy formulation and implementation processes.

II) The basic framework: Chandler and Scott

Chandler's work[6] can be safely considered as the starting point of this research line. He shows how the pursuit of growth drives companies towards diversification; the complexity of the new system induces the change in structure[7]:

> The thesis deduced from the several propositions is then that structure follows strategy and that the most complex type of structure is the result of the concentration of several basic strategies. Expansion of volume led to the creation of an administrative office to handle one function in one local area. Growth through geographical dispersion brought the need for a departmental structure and headquarters to administer several local field units. The decision to expand into new types of functions called for the building of a central office and a multidepartmental structure, while the developing of new lines of products or continued growth on a national or international scale brought the formation of the multidivisional structure with a general office to administer the different divisions.

The key reason then for the structural change is the larger administrative burden that the diversification policy puts on the shoulders of top management. Decentralization appears as the only way of separating policy formulation from the day-to-day operations, allowing the chief executives the necessary time to concentrate on the former.

"Structure follows Strategy" is a statement of high intellectual appeal that pervades the policy implementation process, according to the framework developed by the Harvard Business Policy group. It is worth mentioning that this proposition is both normative and positive in Chandler's

---

[4] Bower uses the term "difficulty" to characterize a non-programmable problem.

[5] It is also worth noticing that the importance of making the model more complete or more correct varies depending on the type of problems we want to solve with it.

[6] A. D. Chandler, op. cit.

[7] A. D. Chandler, op. cit, p. 14. His underlining.

mind[8]. He usually points out some time lags in which structure does not follow strategy and wonders why. He sees two plausible answers to this query[9]:

> Either the administrative needs created by the new strategy were not positive or strong enough to require structural change, or the executives involved were unaware of the new needs.

But, he concludes that[10]

> Since expansion created the need for new administrative offices and structures, the reasons for delays in developing the new organization rested with the executives responsible for the enterprise's long-range growth and health.

The speed of the change is a crucial issue that, as we shall see, is often ducked in the research steps that will follow. But, in the four clinical studies in Chandler's, book we can see how this "time lag" often becomes crucial. The extreme reluctance of Irénée Du Pont to pursue the decentralization proposal is a case in point.

Our contention that Chandler's approach to policy implementation is a dynamic one can be reinforced if we notice that strategy and structure are defined as activities by him[11];

> (...) the planning and carrying out of such growth is considered a strategy (...) Strategy can be defined as the determination of the basic long-term goals and objectives of an enterprise.
>
> Structure can be defined as the design of organization through which the enterprise is administered.

In contrast, Scott's definition of strategy is closer to what Braybrooks and Lindblom[12] might consider a "synoptic approach" to policy formulation[13]:

> As we use the term, corporate strategy refers, first of all to a concept of how to compete in an industry or industries (...)
>
> Corporate strategy calls for a statement of specific goals against which progress can be measured.
>
> A sequence of conditional moves distinguishes a strategy from a more mechanical "program".

---

[8] Chandler sees decentralization as the century-long response to Schumpeter's prophecy about the decline of capitalism.

[9] A. D. Chandler, op. cit, p. 14.

[10] Ibid, p. 15.

[11] A. D. Chandler, op. cit, pp. 13-14, My underlining.

[12] David Braybrooks and Charles E. Lindblom, A Strategy of Decision. New York: Free Press, 1970.

[13] J. H. McArthur and B. R. Scott, Industrial Planning in France, Division of Research, Harvard Business School, Boston, 1969, pp. 115-116, Their underlining.

However, dynamism is added to the framework with the concept of strategic planning[14]:

> Strategic planning, as we use the term, refers to the process through which an explicit strategy is developed.

But, beyond the definitions of strategy and strategic planning, Scott's central theme is that the enterprise's strategy, as observed by the consciously adopted pattern of internal/external product flow transactions, determines the characteristics of its administrative structure. He developed a model of stages of corporate development[15] that is summarized in **Exhibit 1** of this paper.

The main difference between Scott's and Chandler's models is the emphasis in market contact as the key characteristic of the most advanced stage. Such a model is certainly calling for an operational definition of diversification. This is one of the tasks that will be taken up by Wrigley and Rumelt.

Leaving aside then those two different conceptions of strategy and structure, we can see that Scott's model complements Chandler's as an explanation of divisionalization moves. Taken together, both works form a twofold explanation of a divisionalization change:

a) Freeing corporate management for major policy-making and ensuring flexibility and initiative at the lower echelons.

b) Better management of each of the product lines in a firm which has a number of product lines. The divisionalized structure allows both more proximity to the field and a better measurement of each line's profitability.

III) The empirical research: Wrigley, Rumelt and Channon

Wrigley's thesis[16] tackles the question opened by Scott regarding the differences between multidivisional firms in regard both to the amount of diversification in product lines and the amount of autonomy given to divisions. His aim is to explain why divisional autonomy varies with diversification.

His thesis is a hypothesis-testing type of research that uses a random sample of 100 companies taken from the Fortune-500. The first problem was to find a definition of diversification that, even working at an aggregate level, had relevance from a strategic point of view. Avoiding the use of the Standard Industrial Classification (SIC), he defines the concept of "core skill" as an analytic criterion. These "core skills" must be understood as the necessary capabilities to compete within a chosen product-market area[17]. Computing the number of products linked to a common core skill, Wrigley establishes four strategic categories: Single Product (not diversified), Dominant Product (small degree of diversification), Related Product (larger degree of diversification around a common core skill) and Unrelated Product (diversification through

---

[14] Ibid, p. 117.

[15] B. R. Scott, "Stages of Corporate Development Part I". Unpublished Paper. Harvard Business School, Boston, 1971.

[16] L. Wrigley, "Divisional Autonomy and Diversification", Unpublished Doctoral Dissertation, Harvard Business School, 1970.

[17] The meaning conveyed by the term "core skill" must be familiar to everybody that has followed a Business Policy course by the case method. In each case where diversification is a major issue, the company's "core skill" must be evaluated as a means of getting closer to the problem's solution ("difficulty"?).

products, each requiring new core skills). Using a qualitative approach to study each case, Wrigley found the following distribution in the 1967 census of Fortune:

Category	Percentage of Firms in the Sample Falling in this Category	Percentage of Firms in Category Having Multidivisional Organizations
Single Product	6%	0%
Dominant Product	14%	64%
Related Product	60%	95%
Unrelated Product	20%	100%

Wrigley's typology is usually considered his most important contribution; it should be noticed, however, that the only thing he has done so far is to define the variables of the model that he tries to test by empirical procedures.

For Wrigley, the central purpose of his thesis is to consider whether the differences between multidivisional firms in the amount of autonomy given to divisions could be explained by differences in the amount of diversification in product lines. We have already seen the variables used to assess the diversification policies; the degree of autonomy is measured along the following lines[18]:

Definition of Divisional Autonomy

Positive

Source of Influence	
Goals	Management Development

Negative

Area of Independence		
Supplies	Product Strategy	Day-to-Day Operations

Three clinical studies are carried out to test the validity of the research proposition. General Motors, General Electric and Textron were analyzed as representatives, respectively, of Dominant Product, Related Product and Unrelated Product firms. The main managerial characteristics of each type, according to Wrigley's research, are summarized in a table reproduced in **Exhibit 2** of this paper. He concludes that the empirical evidence supports the validity of the research proposition, but subject to the condition of corporate and divisional competence; and does not hold for the major divisions of Dominant Product firms.

Wrigley's findings can hardly be considered as surprising by any practitioner familiar with the administrative practices of a divisionalized company. It should be noticed, however, that this is not a serious criticism for a doctoral dissertation if the researcher succeeds in finding a meaningful new explanation for a relationship already known in the world of business practice. Thus, we must consider if this is indeed Wrigley's case.

We have already applauded the methodological innovation in the measurement of diversification; this is a good step that makes the model more "complete". The system devised

[18] L. Wrigley, op. cit, p. VI-3.

to assess divisional autonomy appears to us to be less satisfactory. Wrigley's method consists of ascertaining the level (corporate or divisional) at which certain types of decisions are taken. This approach leaves aside a key aspect of every control system: its administration. Dearden[19] stresses that it is the control system's administration that makes it "tight" or "loose" rather than its formal characteristics[20].

Therefore, we conclude that the ingenuity shown by Wrigley in providing us with a new means of evaluating the degree of diversification does not have an adequate parallel when defining the implementation variables. We tend to believe that this might be a meaningful research task in the future.

Finally, it must be pointed out that the whole work is pervaded by an operational and simple concept of strategy, partly due to the type of research undertaken. Nevertheless, Wrigley himself implicitly admits that his approach to policy formulation is a static one. He tries to "dynamize" the concept of "core skill" by inserting it in the body of a series of product-market growth strategies developed earlier by Edwards and Townsend[21]; but, this attractive line for further development is not fully explored.

However, diversification is not a strategy in itself, no matter how sophisticated the definition provided is.

A more sophisticated definition of diversification is one of the research tasks undertaken by Richard P. Rumelt in his doctoral dissertation[22]. But his ultimate target is more ambitious: to relate strategies of diversification not only to organizational structures but to economic performance as well.

His first act is to carry out an ingenious enlargement of Wrigley's system of classification. The logical questions asked by Rumelt are: Does it matter the way in which the different businesses[23] are related to each other? and, does it matter to have a "core skill" that relates the company's products horizontally rather than vertically?

An affirmative answer to both question leads Rumelt to define three different classification ratios:

- Specialization ratio: The proportion of a firm's revenue that is attributable to its largest discrete product-market activity.
- Related ratio: The proportion of a firm's revenue that is attributable to the largest group of businesses that are related in some way to each other.
- Vertical ratio: The proportion of a firm's revenue attributable to all of the by-products, intermediate products, and final products of a vertically integrated sequence of manufacturing operations.

---

[19] J. Dearden, Cost Accounting and Financial Control Systems. Reading, Mass.: Addison-Wesley, 1973.

[20] Dearden offers the cases of Du Pont and ITT as paradigms of a "loose" and "tight" system, respectively. Fitting ITT in Wrigley's framework might be an interesting exercise.

[21] R. Edwards and H. Townsend, Business Enterprise, Macmillan, London, 1961, pp. 39-62.

[22] R. P. Rumelt, "Strategy, Structure and Economic Performance", Unpublished Doctoral Dissertation, Harvard Business School, 1972.

[23] Rumelt found the term "product" used by Wrigley to be too ambiguous. He replaces it with the term "business".

Using these ratios and a set of decision rules, summarized in a flow-chart reproduced in **Exhibit 3** of this paper, Rumelt defines up to nine strategic categories:

SINGLE BUSINESS

DOMINANT BUSINESS
- Vertical
- Constrained
- Linked
- Unrelated

RELATED BUSINESS
- Constrained
- Linked

UNRELATED BUSINESS
- Unrelated passive
- Acquisitive conglomerate

At the same time, the three organizational categories used by Rumelt are:

- Functional
- Functional with subsidiaries
- Product Divisions
- Geographic Divisions
- Holding Companies

Economic performance is measured with ten variables with which Rumelt seeks to determine the profitability and growth of the companies in the sample[24].

What were the research's results? According to Rumelt[25]:

> Our most important single finding was that the categories did separate firms into groups that displayed significant and consistent differences in financial performance.

Specifically, he asserts that[26]:

> (...) the firm's economic performance is more closely associated with the type rather than the extent of its product-market scope and with the way in which businesses are related to one another rather than their number.

In other words, good performance is highly correlated with what he calls "controlled diversity". Although the direction of the causal relationship is far from clear, as Rumelt himself admits[27].

---

[24] Rumelt uses Wrigley's sample with some minor modifications.

[25] R. P. Rumelt, op. cit, p. 225.

[26] Ibid, p. 227.

[27] Ibid, p. 230. His underlining.

> (...) controlled diversity is probably not the cause of high performance; it is rather that high performance eliminates the need for greater diversification.

In any case, the fact is that dominant constrained and vertical constrained were the best performers whereas dominant vertical and unrelated passive were the worst. But, at the same time[28]:

> The higher performing industries tend to consist of mostly Related business firms and Related business firms tend to try to belong to higher performing industries. Which came first?

The problem of distinguishing a "Strategy effect" from an "Industry effect" is not solved by Rumelt, leaving a question mark on one of the most interesting challenges faced by both the researcher and the practitioner.

The problem is compounded by the fact that the data may also allow the researcher to view strategy and structure as effects of performance rather than causes; a company with low profits may see a diversification move as the only means to improve its present position.

As far as the "Strategy → Structure" relationship is concerned, Rumelt points out again that diversification and divisionalization were closely related in the 50's and 60's, although he found some recent cases in which some divisionalization changes were implemented without a previous change in the degree of diversification. He then concludes that "structure follows strategy and fashion". As we shall see when looking at Channon's thesis, this has also been a common phenomenon recently in Europe. Rumelt stresses, however, that changes in profitability are due to changes in strategy rather than changes in structure.

The methodological assessment of Rumelt's work is bound to be somewhat similar to the one developed in the case of Wrigley. Wrigley's scheme for assessing the different diversification strategies is brilliantly enlarged by Rumelt, and we have to accept his contention that the model's effectiveness is more than doubled by the adoption of five additional categories.

We think that the analysis of organizational structure is also weak in Rumelt's work although he might argue that this is clearly a secondary issue in his thesis and he does not plan to go beyond ascertaining that divisionalization correlates very well with diversification.

In summary then, the methodological rigor of Rumelt's thesis is to be praised. Time and again, the main findings are an improved typology of diversification strategies. Our contention is that those new categories are not operational by themselves but they may well give the practitioner insight into the problem. If they do so, Rumelt's work can be positively assessed both in terms of its "metaphorical power" and its "empirical relevance"[29]. This correct use of these categories requires, however, that "diversification" be considered not as a strategy but as an outcome of a complex process in which several structural variables play an important role in the formulation of policies that provide the context where specific diversification moves take place.

----

[28] Ibid, p. 183.

[29] Rumelt's categories may even give a clue for finding the operational definition of "synergy" that Ansoff was unable to formulate.

We have finally selected Channon's thesis[30] as representative of those that apply the same framework in different national environments. These environments, then, come to play a more explicit role than in the kind of work analyzed above. Channon's book, for instance, is basically a study of British Industry that uses the Business Policy framework as the main conceptual tool. A comparative analysis of the advantages of industrial studies that use B.P. categories instead of – or in addition to – economic and/or sociological categories lies beyond the scope of this paper and we shall not carry it out[31]. However, it should be mentioned that the research project whose analysis we have undertaken here has made important contributions towards developing a set of B.P. concepts that are suitable for an aggregate type of analysis.

Channon's work closely follows Wrigley's methodology: using the diversification categories developed by the latter, the strategy and structure of 100 British manufacturing companies are examined over the period 1950-1970. In this case, the companies selected were the largest 100 manufacturing companies by sales volume, taken from the Times 500 list of 1969-1970.

From a methodological point of view, it should be noticed that Channon is not so narrowly centered on a single hypothesis as Wrigley. He tries to test a large number of hypotheses at the same time, making his thesis closer to an exploratory type of research. In our opinion, this may well be a more fruitful approach for this kind of research.

Channon's findings tend to confirm that multidivisional structures follow increased diversification as shown below[32]

100 largest United Kingdom Companies - 1970

Category	Computed (percent)	Percentage with, Multidivisional Structures by Class
Single Product	6	1
Dominant Product	34	25
Related Product	54	43
Unrelated Product	6	3
TOTAL	100	72

However, a simple visual comparison with Wrigley's findings (see page 7) suggests that the drive towards divisionalization has been not so strong in the United Kingdom as in the United States

We find here again a topic that, considered important by Chandler, was overlooked by subsequent research and reappears in Channon as a key problem to be explained. We are referring to the situations in which there are long lags between strategic change and structural change.

In his analysis of the shifts from one type of organization to another, Channon points out that[33]

---

[30] D. F. Channon: The Strategy and Structure of British Enterprise, Boston: Division of Research, Harvard Business School, 1973.

[31] However, we think that this is a very attractive issue to be explored.

[32] D. F. Channon: op. cit., p. 86

[33] Ibid, p. 87, My underlining.

> The adoption of a diversification strategy was associated with a change in structure from a traditional functional form of organization to either a holding company or multidivisional structure. The holding company structure was found to be initially the prevalent form of organization due to a lack of ability to innovate the more sophisticated control and planning mechanisms which form a necessary ingredient of a multidivisional system.

Along similar lines, he also emphasizes that[34]:

> One factor inhibiting the growth of both the diversification strategy and the adoption of the multidivisional structure appeared to have been an initially high percentage of family-controlled companies in the British population.

A central explanation of the slower pace of diversification, according to Channon, is the fact that family companies are still quite numerous in the United Kingdom We should recall that "family ownership" is not sufficiently explanatory in any possible meaning of the term "explain". However, if we accept -as we think we should- that this is a good clue for further research[35], a series of more operational questions have to be developed. Why are family groups interested in inhibiting the company's development? What means do they use to do this? How large is the opportunity cost foregone? Those are attractive research questions that require an answer that is less tautological than that offered by Channon,[36]

> (...) as the product-market scope of a company increases, it becomes more difficult for a family to maintain managerial control by the family. Thus, family companies might be expected to exhibit a narrow product range and those companies that diversify might be expected to change to a system of control by professional managers.

A stronger leadership may be the solution in Channon's mind[37]:

> For a successful transition there appears to be one vital ingredient, however, strength of leadership. The leadership function within the enterprise is vested with the legitimate power of the hierarchical position but those assuming the role do not necessarily make use of it. It is essential that the leader or leaders of the enterprise should use the power of the executive office in order to achieve a speedy and successful structural transformation.

However, this issue is only a secondary part of the central theme of Channon's work: Why do British companies seem to perform worse than American companies? Answering this question requires an analysis of those companies' decisional mechanisms[38]. This kind of analysis is partly carried out by Channon[39] and his major findings for Dominant and Related Product Companies

---

[34] Ibid, p. 88.

[35] Not only in the United Kingdom but on the Continent as well.

[36] D. F. Channon: op. cit, p. 77.

[37] Ibid, p. 242.

[38] As we shall stress in the following section, the "structure follows strategy" model tends to factor out those mechanisms.

[39] To carry out this study, Channon used a stratified sample of 25 companies out of the 100 companies selected previously.

appear summarized in **Exhibit 4** of this paper. In explaining the differences with the United States environment, Channon stresses that[40].

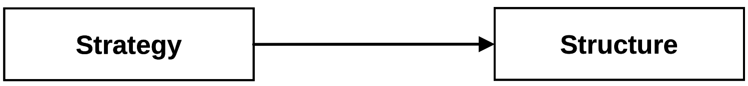
> (...) the lack of a variable reward system stood out, as did the lack of a corporate general management cadre.
>
> Later on, he details his criticism in the following way[41]:
>
> The divisional general managers were participating in the formation of central policy in a way that made monitoring and performance measurement difficult. The general officers of many corporations had not yet divorced themselves from the operations of the divisions in order to concentrate on their entrepreneurial role of strategic decision-making. In some corporations, transformation to a formal divisional system was incomplete, with parts of the business still run as a holding company, or specific functions, especially marketing, still centrally managed. Finally, there was little generation of internal competition between divisions to allow the enterprise to allocate its resources as a small, but highly effective, capital market.

In terms, then, of a theory of organizational learning, Channon's diagnosis is perfectly clear: most deficiencies in British industry stem from a lack of both intra-organizational conflict and conflict resolution mechanisms. This is the point of view from which we shall try to develop a global evaluation of the research project in the next and final section of this paper.

IV) Summary and Conclusions

Having completed our synthetic exposition of some selected pieces of the research project, we shall now proceed to formulate a global evaluation. We will be mainly concerned with the project's theoretical contributions, since we have dealt with its methodological aspects sufficiently in the previous sections.

The "structure follows strategy" proposition fulfills a basic requirement of a good theory: parsimony. It can certainly be represented in a diagram as simple as this one:



We are also willing to admit that this proposition has a high degree of "metaphorical power", i.e. it provides insight into the nature of the policy implementation problem. But where does this power come from? Bower suggests that a practical way of solving a difficulty could be finding "a puzzle form which corresponds in structure to our difficulty to a sufficient degree that the answer to the puzzle provides a prescription for the difficulty"[42].

We should now realize that if a fully complete definition of strategy – that is, a complete sequence of conditional moves – were possible, the policy implementation problem would not be a "difficulty" but a "puzzle". Our contention is that such a definition is not only impossible

---

[40] D. F. Channon: op. cit., p. 216.

[41] Ibid, p. 240.

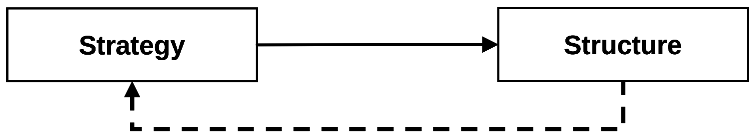
[42] J. L. Bower, "Strategy as a Problem Solving Theory of Business Planning", p. 4.

but undesirable as well if regarded as a desideratum by the company's management. In other words: the "difficulty" cannot be fully turned into a "puzzle". However, the proposition is still highly powerful if used as a framework or starting point for coming to grips with the problem, i.e. the "structure follows strategy" proposition has "metaphorical power" because it tends to provide a quasi-puzzle for solving the problem.

However, if the proposition is taken as a simplified but complete model of an organization's real behavior, the researcher may reach misleading conclusions. By abstracting the behavioral processes that take place within the system and assuming that changes in strategy will necessarily produce changes in structure, we are conceptualizing the organization as a stable system, in which the input/output relationships remain invariant.[43]

There is no doubt that the stable system is a poor model of a real organization. From here on, the argument we shall try to develop is that there are other types of systems that are much more suitable as a "correct" model of organizational behavior. Specifically, we believe that Ashby's concept[44] of the ultra stable system is a more accurate representation of the decisional processes that take place in an organization. As a matter of fact, Juan A. Pérez López[45] has recently argued that the concept of "ultra stable system" is still a poor model of organizational behavior. He proposes, as an alternative, the concept of "freely-adaptive system" in which every organizational action is evaluated at least with three different criteria. However, in the remainder of this paper, we shall be using the concept of "ultra stable system" not only as a goal in terms of organizational design but also as a model that fulfills the minimum standards of empirical relevance.

If we agree to conceptualize the organization as an ultra stable system, a second feedback loop is required and the former diagram must be complemented in the following way:



Clarifying the nature of the second feedback loop is not an easy task. Although some recent clinical studies – such as Bower's[46] – have shed some light on this process, we are more interested in exploring the functions that must be developed by this second feedback if positive learning is to be experienced by the organization. In Barnard's terms: how do we go about increasing the organization's efficiency?

Let us pick up the distinction – often found in the formal planning system literature – between goal and objective. "Objective" is considered an essential, fundamental, endless and timeless

[43] It should be noticed that this is only another way of considering the policy implementation problem as a "puzzle" since those are the only kind of problems that can be solved in a stable system.

[44] W. R. Ashby: Design for a Brain, London, Chapman and Hall, Second edition revised, 1960.

[45] Juan A. Pérez López, "Organizational Theory: A Cybernetical Approach" Unpublished Doctoral Dissertation, Harvard Business School, 1970.

[46] J. L. Bower, Managing the Resource Allocation Process, Boston: Division of Research, Harvard Business School, 1970.

continuing element of growth whereas "goal" is defined as a finite measurable portion of an objective[47].

If we adopt a definition of strategy as a set of goals in a conditional sequence, the only requirement on the system is to make the necessary structural changes to reach the set of goals that the company has decided to pursue at a specific moment.

However, if we decide to conceptualize the organization as an ultra stable system, the structure must simultaneously:

a) Ensure that goals are accomplished

b) Ensure that goals are consistent with objectives

It should be clear by now that what we are trying to understand is a process in which the system experiences "learning" through goal definition in the context of a set of objectives. Those objectives can be understood as "constraints" that reduce the problem of policy formulation to reasonable dimensions by reducing the amount of information that must be processed by the decision-maker[48].

It should also be clear that, in this context, "Strategy" and "Structure" appear as valid categories from an outsider's point of view[49], but somewhat misleading when we try to understand the dynamics of decision-making in an organization. If we take now a second look at the "structure follows strategy" proposition and analyze it as a positive proposition we shall see that its content is almost trivial: either structure follows strategy or the system will disappear sooner or later. The underlining is crucial if we think that "structure ought to follow strategy"; in that case, the relevant issue is not the process's inevitability, but the speed of the rate of change; in other words: the positiveness and speed of the learning process.

Therefore, research efforts should concentrate not on specifying the different structural devices that correspond to each stage of corporate development, but rather on improving our knowledge about how to manage the transition from one stage to another.

The former considerations have gone somewhat beyond an evaluational analysis of the research project; they are a set of thoughts about my own research interests that have been sparked from reading the different works commented in the two preceding sections. However, they also provided the grounds for evaluating the project's contribution to the B.P. body of knowledge.

---

[47] R. N. Anthony, J. Dearden and R. F. Vancil: Management Control Systems: Text, Cases and Readings. Revised Edition, Homewood, Illinois: Richard D. Irwin, 1972, p. 458.

[48] The process of redefining objectives has a different nature. Our contention is that objectives are redefined only in situations of crisis: we also think that, in those cases, Allison's Model I is more "explanatory" than Model II or III. See G. T. Allison, Essence of Decision: Explaining the Cuban Missile Crisis. Boston: Little, Brown and Co., 1972.

[49] And highly powerful in the classroom when a case describes a corporate strategy crystallized in a specific moment.

We have seen how the research project draws on Scott's definition of Strategy, which departs from Chandler's emphasis on the process to elaborate on Andrew's definition[50] by making it more operational, particularly by considering strategy as "a timed sequence of conditional moves". All the subsequent doctoral dissertations use an even more operational definition that appears summarized in a diversification category. Although it is often admitted that diversification is not a strategy per se, no further attempt to classify corporate strategies along different lines is carried out[51]. Even the concept of "core skill" has the important shortcoming of its static nature. Very little is said about the problem of large time lags in the policy implementation process.

The project line shows, however, excellent methodological innovations[52]; having dared to measure diversification using subjective judgments, the researchers could devise a typology that is consistent with the strategic dimensions of a diversification move. If we accept that a researcher makes a scientific classification when establishing relationships among the elements or units of the classification in such a way that the causal influences between "the whole" and "the parts" are made explicit, albeit with different "degrees" of certainty, we can safely affirm that Wrigley and Rumelt make a scientific classification where other researchers had only made a pure description. In other words: the typology developed by them is certainly valid and we can safely hope that it will be used in the future to further develop a theory of policy implementation.

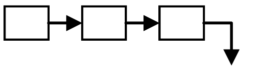
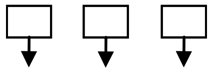
[50] "Corporate strategy is the pattern of major objectives, purposes or goals and essential policies and plans for achieving those goals, stated in such a way as to define what business the company is in or is to be in and the kind of company it is or is to be". K.R. Andrews The Concept of Corporate Strategy, Homewood, Illinois: Dow Jones-Irwin, 1971, p. 28.

[51] We must wonder however if there were any other alternatives, taking into account the type of research (aggregate, large sample,...) that the group had decided to undertake.

[52] Several theses of this research project won the Irwin Prize for the best doctoral dissertation.

Exhibit 1

Three Stages of Organizational Development

STAGE / COMPANY CHARACTERISTICS	I	II	III
1 Product line	1 Single product or single line	1 Single product line	1 Multiple product lines
2 Distribution	2 One channel or set of channels	2 One set of channels	2 Multiple channels
3 Organization structure	3 Little or no formal structure "one man show"	3 Specialization based on function	3 Specialization based on productmarket relationships
4 Product-service transactions	4 N/A	4 Integrated pattern of transactions  Market	4 4. Not integrated  Markets
5 R & D	5 Not institutionalized oriented by owner-manager	5 Increasingly institutionalized search for product or process	5 Institutionalized search for new products as well as for improvements
6 Performance measurement	6 By personal contact and subjective criteria	6 Increasingly impersonal using technical and/or cost criteria	6 Increasingly impersonal using market criteria (return on investment and market share)
7 Rewards	7 Unsystematic and often paternalistic	7 Increasingly systematic with emphasis on stability and service	7 Increasingly systematic with variability related to performance
8 Control system	8 Personal control of both strategic and operating decisions	8 Personal control of strategic decisions, with increasing delegation of operating decisions based on control by decision rules (policies)	8 Delegation of product-market decisions within existing businesses, with indirect control, based on analysis of "results"
9 Strategic choices	9 Needs of owner versus needs of firm	9 Degree of integration Market share objective Breadth of product line	9 Entry and Exit from industries Allocation of resources by industry Rate of growth

Source: B. R. Scott, "Stages of Corporate Development", Harvard Business School, 1971, p. 7.

Exhibit 2

Multidivisional Firms. Organization Models

Characteristics	Dominant Product	Related Product	Unrelated Product
Diversification	Dominant Product 70% + other products	Two or more related product lines	Two or more Unrelated Product lines
Product Flow	Mixed System: Dominant area: Integrated Other area: Open System	Open System with lines to Corporate office some units linked	Open System Divisions completely separate
Corporate Management and Staff	Corporate: large specialist staff for Dominant Product	Corporate: large specialist staff related to core skill	Corporate: small staff - control and legal only
Organization	Dominant Area Weak Division or Functional Other Area Divisional	Product Division plus Service Depts.	Product Division
Divisional Responsibility	Dominant Area Routine Ops. Other Area: Product strategy	Product strategy	Product strategy plus supplies
Resource Allocation	Dominant Area: Balance between units. Other Area: ROI	ROI	ROI
Control Performance measurement and Rewards	Dominant Area ROI Growth Market share costs. Other Area: ROI	ROI Growth Market share	ROI (Growth)

Source: L. Wrigley, "Divisional Autonomy and Diversification", Unpublished Doctoral Dissertation, Harvard Business School, 1970, pp. VI-32.

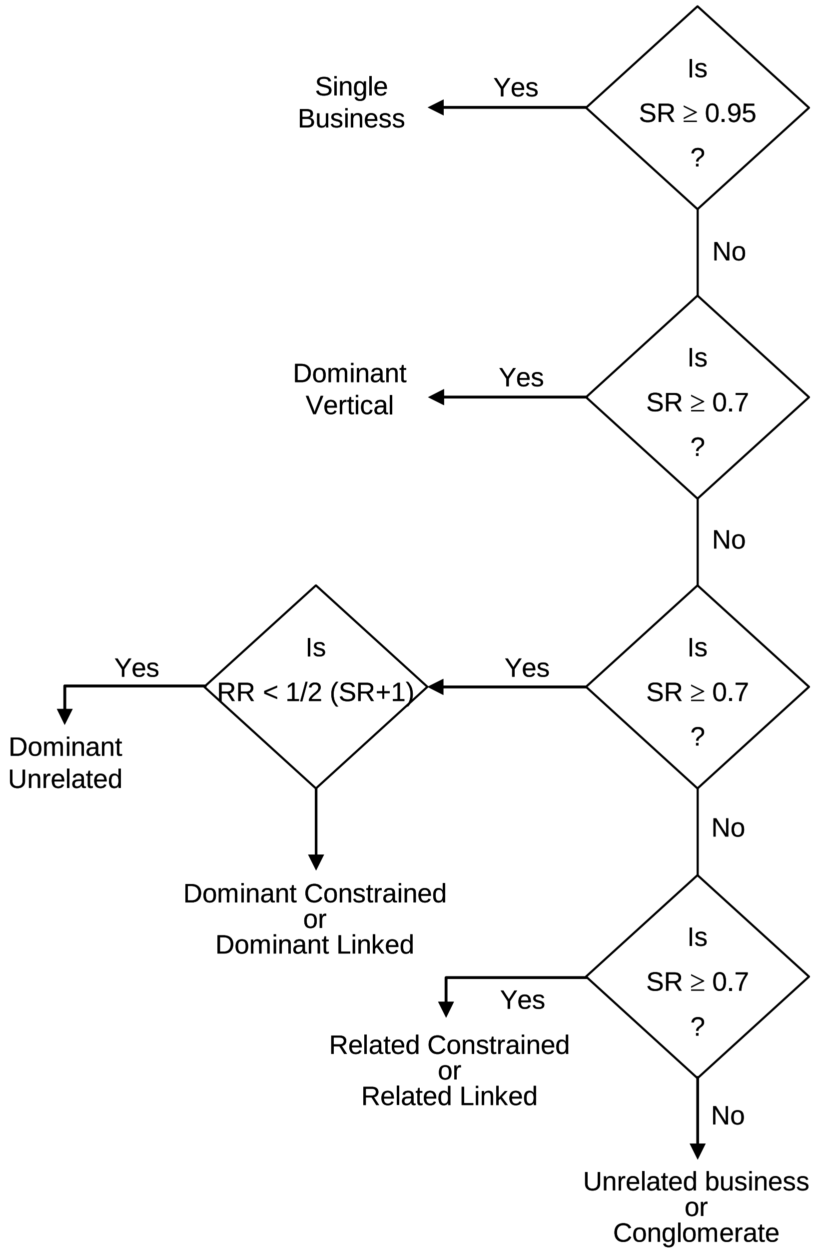
Exhibit 3

Rumelt's system of Assigning Diversification Categories

SR = Specialization Ratio

RR = Related Ratio

VR = Vertical Ratio



Source: R. P. Rumelt, "Strategy, Structure and Economic Performance" Unpublished Doctoral Dissertation, Harvard Business School, 1972.

Exhibit 4

The Observed Characteristics of British Dominant and Related Product Companies

Diversification Stage Characteristic	Dominant Product		Related Product	
	Integrated	Nonintegrated	Technical	Nontechnical
Organization Structure	Multidivisional		Multidivisional	
Research and Development: Type	Centralized	Decentralized	Centralized Institutionalized Search for New Products	Undeveloped
	Search Mainly for Improvements to Existing Product Lines			
Infernal Product Flow:				
Level	High	Low	Low	Moderate
Pricing	Imposed	Bargaining or Market	Bargaining or Market	Imposed or Market
Performance Measures	Return on Investment Return on Sales Costs		Return on Investment Market Share	
Rewards	Straight Salary Continuous Employment		Straight Salary Continuous Employment Few Bonus, Stock Option Schemes	

Exhibit 4 (continuation)

<table>
<tr><td rowspan="2">Control System</td><td colspan="2" rowspan="2">Annual Budget
Long-Term Financial Plans
Central Cash Accounting
Central Appointment of Top Executives
Capital Expenditure</td><td colspan="2">Annual Budget
Central Cash Accounting
Central Appointment of Top Executives
Capital Expenditure</td></tr>
<tr><td>Strategic and Financial
Long-Term Plans</td><td>Financial Long-Term Plans</td></tr>
<tr><td>Corporate Objectives</td><td colspan="2">Return on Investment Growth
Turnover Growth
Market Share Growth
Few Earnings per Share Growth</td><td colspan="2">Return on Investment Growth
Diversification
Market Share Growth
Few Earnings per Share Growth</td></tr>
<tr><td rowspan="3">Central Office Size Most Common Functions</td><td>Large</td><td>Small</td><td>Large</td><td>Small</td></tr>
<tr><td colspan="2">Finance and Corporate Planning
Accounting
Legal
Personnel</td><td colspan="2">Finance
Accounting
Corporate Planning
Legal
Personnel</td></tr>
<tr><td>Purchasing Line and
Staff Marketing
Research and Development
Production</td><td></td><td>Staff Marketing
Research and Development
Management development
Production Services</td><td>Acquisition</td></tr>
<tr><td rowspan="2">Division Responsibility</td><td rowspan="2">Operations</td><td rowspan="2">Dominant Product Operations
Other Products
Operations
Product Strategy
Product Market Scope</td><td colspan="2">Operations
Product Strategy</td></tr>
<tr><td></td><td>Product Market Scope</td></tr>
</table>

Source: D. F. Channon: The Strategy and Structure of Butish Enterprise, Boston: Division of Research, Harvard Business School, 1973. pp. 202-203.

Bibliography

Allison, Graham T. (1971), Essence of Decision, Boston: Little, Brown.

Anthony, R. N., J. Dearden and R. F. Vancil (1972), Management Control Systems, Revised Edition, Homewood, Illinois: Richard D. Irwin.

Andrews, Kenneth R. (1971), The Concept of Corporate Strategy, Homewood, Illinois: Dow-Jones-Irwin.

Ashby, W. Ross (1960), Design for a Brain, London: Chapman & Hall, Ltd.

Bernard, Chester I. (1968), The Functions of the Executive, Cambridge: Harvard University Press.

Bower, Joseph L. (1970), Managing the Resource Allocation Process, Boston: Division of Research, Harvard Business School.

Bower, Joseph L. (1967), "Strategy as a Problem-Solving Theory of Business Planning", Harvard Business School, BP 894.

Braybrooks D. and C. E. Lindblom (1970), A Strategy of Decision, New York: Free Press.

Chandler, Alfred D. (1962), Strategy and Structure, Cambridge: The M.I.T. Press.

Channon, D. F. (1973), The Strategy and Structure of British Enterprise, Boston: Division of Research, Harvard Business School.

Christensen, C. R., K. R. Andrews and J. L. Bower (1973), Business Policy. Text and Cases, Homewood, Illinois: Richard D. Irwin.

Cyert, Richard M., and J. March (1963), A Behavioral Theory of the Firm, Englewood Cliffs, New Jersey: Prentice T Hall.

Dearden, John (1973), Cost Accounting and Financial Control Systems, Reading, Mass: Addison-Wesley.

Edwards R. and H. Townsend (1961), Business Enterprise, Macmillan, London.

McArthur J. H. and B. R. Scott (1969), Industrial Planning in France, Boston: Division of Research, Harvard Business School.

Pavan, R. (1972), "Strategy and Structure in Italian Enterprise", Unpublished Doctoral Dissertation, Harvard Business School.

Pérez López, Juan A. (1970), "Organizational Theory: A Cybernetical Approach", Unpublished Doctoral Dissertation, Harvard Business School.

Pooley, G. (1972), "Strategy and Structure in French Enterprise", Unpublished Doctoral Dissertation, Harvard Business School.

Rumelt, R. P. (1972), "Strategy, Structure and Economic Performance", Unpublished Doctoral Dissertation, Harvard Business School.

Scott, Bruce R. (1971), "Stages of Corporate Development", Unpublished Paper, Harvard Business School.

Tannheiser, H. (1972), "Strategy and Structure in German Enterprise", Unpublished Doctoral Dissertation, Harvard Business School.

Wrigley, Leonard (1970), "Divisional Autonomy and Diversification", Unpublished Doctoral Dissertation, Harvard Business School.