

BEDRIJFSKUNDIGEN INFORMEREN BEDRIJFSKUNDIGEN**NOBO****VIJFDE ONDERZOEKDAG 1991**

Enschede,
28 november 1991

Prof. Dr F.A.J. van den Bosch, Dr T. Elfring, Dr P. de Wolf
Faculteit Bedrijfskunde/Rotterdam School of Management
Erasmus University Rotterdam

The Competitive Advantage of Nations

The importance of the national environment for strategic management in the EC

0. Summary

In this paper we investigate the usefulness for strategic management of Porter's framework of analysis of the competitive advantage of nations in particular regarding the importance of the changing national environment within the EC. It appears that Porter's framework - supplemented with contributions from the Industrial Organization field and with special attention to the growing importance of the service sector and the particular characteristics of services - can indeed contribute to our understanding of the importance of the national environment within the EC for strategic management. However, much research has to be done. In this connection, the paper proposes a few key questions for further research.

1. Introduction

The continuing process of economic integration of the European Community (EC) has important implications for the analysis of business environment and strategic management. Basically two options can be discerned. On the one hand this process means a diminishing role of the national environment. On the other hand, by removing all internal barriers with respect to goods, services and factors of production, remaining differences between national environment can become more important. And so the influence on the competitive succes of firms and strategic management. In this paper we investigate the potential contribution of Porter's (1990) framework for analysing the importance of the national environment for strategic management in the EC. In this paper we give a short overview of a research project in progress devoted to the above posed question. We focus here primarily on relevant research questions and issues and not on results or findings.

To evaluate Porter's contribution we pay attention to the Industrial Organization literature, because in this field the explanation of the performance of industries plays a central role as well. The analysis of the service industries is a relatively neglected area within the Industrial Organization literature. This is remarkable seen the fact that the service sector has expanded substantially in the last decades and for most companies services dominate both the value chain and value system. On the contrary Porter (1990) devoted attention to the issue of national competitive advantage in services. To evaluate his contribution we confront Porter's framework with the service sector literature.

Theoretical frameworks for analyzing the national or macro environment are still in its infancy (Fahey et.al., 1986). If Porter's (1990) theoretical framework could contribute to

answer the above posed question, it means a strengthening of the existing body of knowledge in this field.

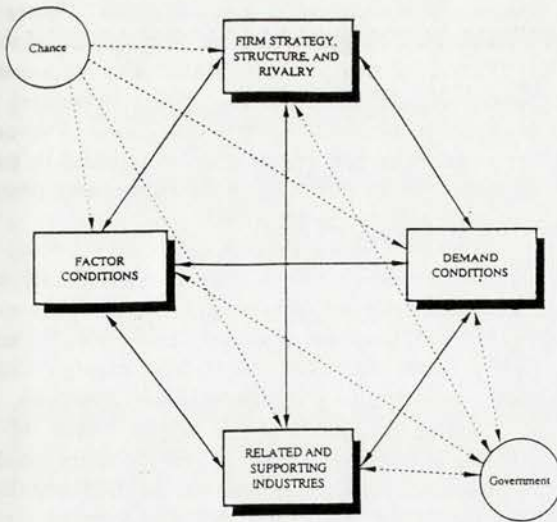
2. Determinants of national competitive advantage: Porter's framework

Although different approaches or opinions about the role of the national environment for the competitive strategy of firms exist (e.g. Ohmae, 1990), in this paper we restrict ourselves to the contribution of Porter (1990) with respect to our research question. This means that we pay attention to his analytical framework for getting grip on the national environment. But do not discuss his by others criticized stages of national competitive development framework (e.g. Thurow, 1990).

Porter (1990) criticizes existing explanations of the international competitive position of nations. These explanations stress mainly the importance of comparative advantage of nations with respect to factors of production. However, the international mobility of these factors is increasing and leads to "fleeting advantages". Moreover, in the existing explanations a role for firm strategy is missing. According to Porter the behaviour of firms must become integral to a theory of national competitive advantage. That is why Porter proposes as the central question to be answered: "Why do firms based in particular nations achieve international success in distinct segments and industries?" (Porter, 1990, p.18). This question introduces the role of the national environment for the competitive position of industries and firms.

To answer this question, Porter proposes a framework of analysis consisting of four determinants. With the aid of this framework he tries to explain the above mentioned role of the national environments (see figure 1). Factor conditions are the nation's position in factors of production. The nature of home demand for the industry's product or service is labeled as demand conditions. The determinant related and supporting industries deals with the presence or absence in the national environment of such internationally competitive industries. The conditions governing how companies are created, organized and managed as well as the nature of domestic rivalry form the fourth determinant. Two additional elements are added to this framework: chance (exogenous influences) and government. Porter chooses explicitly not to consider government as the fifth determinant. Porter considers his framework as a dynamic system of mutually reinforcing determinants and calls this system "the national diamond".

Figure 1: The determinants of national competitive advantage



Source: Porter (1990), p. 127

3. Industrial Organization and Porter's conceptual framework

In this paragraph a number of remarks will be made on the links between the theories of industrial organization and Porter's conceptual framework. There has been many critics on the so-called Structure-Conduct-Performance paradigm, being too static, not capable of coping with the dynamics of technology and being too rigid by stressing the dominant one-direction causal linkages running from elements of structure via aspects of conduct to indicators of industry performance. Maybe the structural approach gave too much emphasis on cross-sectional research to the relations between market concentration and various indicators for entry-barriers with industry performance indicators (profitability), although it must not be forgotten that also changes in concentration were related to changes in prices (conduct), price-cost margins (performance) in many existing time-series studies.

The role of demand factors or business cycles was never denied but reflected in other variables, or regressions were performed for different periods, thus taking account for differences in macro-economic condition during time. Even a few examples of studies where indicators for innovation (treated as a performance indicator) are related to indicators of market structure (market concentration and special entry-barriers like the degree of patent protection) will not meet the critics of the dynamic schools. The dynamic market theories, neo-Schumpeter variants or evolutionary variants (Nelson & Winter, 1982), try to understand the processes of innovation and economic evolution in mutual interdependent models. Their endogenous approach of technology in their theories is indeed quite different from the structuralist approach.

In his latest book, Porter (1990) tries to explain the differences in performance possibilities (competitive advantages) of the same industries between different countries, thereby referring to differences in national environments as additional relevant factor. But as we have seen these differences in industry performance indicators are also the subject of many studies in industrial organization, but of course always in relation with explanatory variables in terms of market structure and/or market behaviour (or market strategies). An interesting question could be whether some of the by Porter given illustrations of revealed competitive advantages of an industry in a particular nation can also be clarified in terms of the classical elements of market structure, in combination with factor and demand conditions and the role of industrial policy and competition policy.

Porter's way of looking to the mutual interdependence of diamond determinants with competitive performance and strategic options seems to integrate the main concepts of industrial organization (in particular Bain's (1968) structure concepts: economies of scale, product differentiation and barriers to entry) with the main concepts of strategic choice literature, thereby stressing the dynamics and avoiding a deterministic approach, but instead working with a rich scala of illustrating cases. Porter's upper corner of his diamond, called Firm Strategy, Structure and Rivalry (see figure 1) might correspond to the combination of market structure and market conduct elements of the SCP-paradigm. Porter's special attention to rivalry gives almost the suggestion that this type of market behaviour is presupposed, whereas in industrial organization literature much attention is paid to the study of concentration movements, oligopoly behaviour and dominant market behaviour. Because of the negative efficiency and welfare effects of these kinds of market behaviour, government competition policy was needed to push back oligopoly or monopoly positions and try to restore conditions that promote competition or rivalry.

As an important objective of the European Community can be considered the creation of a Common Market for European consumers and suppliers. The intermediate aims are the promotion of the mobility of factors of production by means of abolishing mobility barriers between the borders of member states and by means of improving the competitive structures of markets and industries. During the earlier stages of the economic integration process, the individual member states will still function as independent economic units and thus shape different national industry environments by means of macro-economic policy, industrial policy and different constraints on business behaviour, for instance via different competition laws besides the already existing Community laws, that are only applicable to borderpassing transactions. When however economic integration comes to maturity, the importance of national environment will become less for all harmonized policy instruments that are relevant -direct or indirect- for the competitive structure, the business behaviour and the market performance of firms, but instead the Community opportunities and constraints will form the New Environment for firms in the whole Common Market.

By removing all artificial differences between the environments of member states as a consequence of a succesfull harmonisation of important economic regulations concerning the competitive conditions of firms, the real competitive advantages will appear. The research issue at stake is whether these remaining differences with respect to competitive advantages between EC member states will fit into the structural determinants of Porter's framework. A related research question is whether the scope of management decisions of firms in certain industries will change from national to European Community environment faster than in other industries. It is interesting to see which items of the harmonization

policy are relevant for which industries and which changes in competitive structures and competitive advantages may be expected as a result of these changing items in the environment.

4. Porters framework and the service sector literature

The service sector is not very well covered by the industrial organization literature. Porter (1990) however, has devoted a chapter to the analysis of the service sector. What can we learn from the application of the framework of Porter to the service sector is the central issue here. Does it bring in new elements compared to industrial organization concepts and to specific research on the strategy of service firms? And what is the importance of the national environment for services?

The diamond framework and services

The framework of Porter has been applied to examine the competitive advantages of services. All the four determinants are of importance to the national competitive advantage. The factors on competitiveness mentioned in the literature (see for example Heskett, 1986) on the management of service firms do fit into the framework of Porter. It seems that his main contribution is the integration of the factors involved. When we look at two recent studies, by Enderwick (1990) and Roach (1991) on the competitiveness of Japanese and American service firms respectively, the same factors are found as put forward by Porter. We will address two issues which need a more thorough analysis than is done by Porter. The first is that he only to a limited extent adds concepts or methods which can be used to gain insight into the relative importance of the determinants of national competitive advantage for particular services. A possible fruitful approach to that issue is to assess the impact for typical characteristics of services on the determinants of competitive advantage. For example, service firms compared to manufacturing companies are not so much producers but more often users of technologies. The use of technology in the service delivery system tends to be easily imitated. One reason is that a new way to use a technology is rather difficult to protect from imitation by patenting. Thus although technology in services becomes increasingly important (Quinn, 1990 A), it is for firms relatively difficult to gain competitive advantage from it.

The second issue relates to the distinction between services to consumers and services to other producers. The latter group does support the production in other industries and the distribution of its goods. Thus those services can be subject on the one hand of the analysis of the Porter framework and on the other hand be part of that framework, i.e. the lower part of the diamond (see figure 1). There can be discussion about the interpretation of a supporting industry. Some authors on services (for example Quinn, 1990) claim that services not just support other industries but they are crucial and the main determinant of the competitiveness of the majority of industries. Most strategies of succesful companies rest primarily on adding value through service activities. Research, marketing, distribution and communication are some examples of services functions which have been central to the success of companies such as Apple, Glaxo, Ikea and Unilever.

Porter underestimates the role of rivalry in the development of service functions. In an increasing number of cases companies have a choice between make or buy of service

activities. In a situation of largely in-house provided services, the production of services can be characterized as some kind of monopoly. Presently the opportunities to contract-out force in-house departments to compete. Nevertheless contracting-out is likely to continue because in-house departments often do not have the necessary scale or can not accomplish economies of scope. These factors have been important to create efficient value chains and value systems for service companies, however, the mechanisms behind their operation are not very well understood. In this field more research is needed because the international competitiveness of services becomes an increasingly important element in the national environment.

Importance of the national environment

The nature of services often requires interaction between producer and buyer. As a result service companies are often located close to their clients. Consequently large companies in services often have a multi-unit structure. Hundreds or even thousands of units are no exception. The requirement to be close to the client and thus the market implies that service companies are likely not as foot-loose as manufacturing firms. The possibilities for service companies to produce in one place and export to another are limited. Although for some services we can see that clients travel to the service provider (for example health services) and in other cases the provider travels to the client (sometimes in engineering services). When services indeed increasingly dominate the value chain in most companies and in addition they are not as foot-loose as manufacturing companies we can conclude that the national environment becomes more important. This has consequences for the organizational structure and strategy of firms who provide their services locally and also for the transnational service companies in the EC.

5. National environment as competitive advantage?

Related to the existing literature in this field of macro environmental analysis for strategic management Porter's (1990) contribution can be considered as a step forward. We can distinguish at least two elements. Firstly his approach integrated findings stemming from different fields as Industrial Organization and Strategy literature of the service sector. Secondly as a result of this integrating effort a more analytical framework for the analysis of the determinants of the national environment is offered. It is possible that these mutually interacting determinants become more important within the EC. This could have important implications for the strategic management of the portfolios of businesses of companies within the EC, especially with respect to the choice of the home base of these businesses. However, much research both theoretically and empirically has to be done before strategic management can benefit from the findings of the proposed research questions.

Literature

- Bain, J.S. (1968), *Industrial Organization*, 2nd ed., New York, 1968
- Enderwick, P. (1990), "The international competitiveness of Japanese service industries: A cause for concern?", *California Management Review*, summer
- Fahey, L. and V.K. Narayanan (1986), *Macro environmental analysis for strategic management*, West Publishing Company, St. Paul
- Heskett, J. (1986), *Managing in the service economy*, Harvard Business School Press
- Jong, H.W. de (1988), *The Structure of European Industry*, 2nd ed., Kluwer Academic Publishers, Dordrecht
- Nelson, R.R. and S.G. Winter (1982), *An Evolutionary Theory of Economic Change*, Cambridge Mass.
- Ohmae, K. (1990), *The Borderless World, Power and Strategy in the interlinked economy*, Collins, London
- Roach, S.S. (1991), "Services under Siege - The restructuring imperative", *Harvard Business Review*, September-October
- Porter, M.E. (1990), *The competitive advantage of nations*, London
- Quinn, J.B. et al (1990 A), "Technology in services; rethinking strategic focus", *Sloan Management Review*, Winter
- Quinn, J.B. et al (1990 B), "Beyond products: services-based strategy", *Harvard Business Review*, March-April
- Thurow, L.C. (1990), "Bookreview", *Sloan Management Review*, p. 95-97