

Conditions and constraints for images of chains

Caring for the environment as a motivation for starting up and developing chain management: an organization-interaction approach

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Only 'new images' can lead to 'new behaviour' and only 'new behaviour' can lead to a 'newer image'. [1]

Introduction

The chain debate is conducted from a behavioural and performance point of view. This debate focuses in particular on how chains themselves behave (description, categories or types of chains), how they should behave (chain modelling) and on the performance of chains. These topics deal with chains in function. Here we will focus on chain management as a result of organizational change. What tends to be overlooked in the chain development process are the various conditions and constraints under which the idea, an image of chain, is born and can be developed, to solve problems individual companies can not solve, or ones which can be solved in a more efficient way in the organizational setting of a chain.

In this paper we will describe the influence of conditions and constraints on the way managers define the organizational setting in which they want to solve a problem. Two images of organizational setting will be distinguished: the image of chain and the image of company. Moreover, these images will be connected to the factual behaviour of managers solving a company problem. This analysis gives insight into the influential conditions and constraints under which managers construct their image of the organizational setting, and within which problems are to be solved.

The origins and development of an image of chain will be examined by means of a case: the development of environmental care within companies or in a chain perspective. The research-project on which this paper is based, was carried out in the food- and luxury food industry in 1994. From a total group of 1456 companies, 239 returned the questionnaire about the situation of the company and the environmental measures they had taken.

From the perspective of the companies we will distinguish 'inside' (section 3) and 'outside' (section 4) conditions and constraints. Revealing under what conditions and constraints individual companies will tend to

develop an image of chain to solve their environmental problems, will be the main focus of section 5. At the end some implications will be discussed for the change from an 'image of company' to an 'image of chain'.

1. Images and acting

Environmental care is a problem that individual companies can take care of solitarily, but which can gain from some efficiency-advantages in a chain perspective (see Van Sonsbeek et al, 1994, 47). It is up to the management to decide in which organizational setting they wish to solve environmental problems. Under the influence of conditions and constraints they develop an image of an organizational setting in which the problem should be solved. Two images will be distinguished: the image of chain and the image of company.

The image of an organizational setting can be looked upon as a paradigm, an organizational perspective which is shared by Pfeffer (see Neuman, 1995) and Morgan (1986). "A paradigm is a way of doing things, a way of looking at the world. A paradigm is a technology, including beliefs about cause-effect relations and standards of practice and behaviour, as well as specific examples of these, that constitutes how an organization goes about doing things" (See Neuman, 1995). If a manager develops, for example, an image of chain, he has a theory that this organizational setting contributes to the solution of his companies' environmental problem.

The construction of such an image is a process in which internal and external conditions and constraints play a role. It is of importance to see how external conditions and constraints influence the organization through the mediation of important members (= outside-in) and which implications it has on the internal organization (compare Berger and Luckman, 1976). Outside-in influences and their impact on the internal organization can evoke actions from organizations directed at influencing their strategic environment (= inside-out). The reason for the need for such an outside-in, inside-out approach, is explained by Fahey and Narayan (see Neuman, 1995, 33). They state that the outside-in perspective, will eventually lead to an inside-out position, due to the fact that the long-term developments have to be translated into mid-term and short-term consequences for the organization. On the other hand, from an inside-out perspective, organizational measures can be derived which require an outside-in look. This means that a combination of the outside-in and the inside-out approach can lead to the ability to identify new and yet unknown influences, possibilities, which are relevant to the organization.

The combination of inside-out and outside-in influencing is called the organization-interaction approach. The main assumption of this approach is that organizations do not only react to societal developments and different pressures (regulation, publicity), but also aim at influencing their external environments (suppliers, persuasion of policy makers, market manipulation) and with this objective initiate changes (Neuman, 1995, 32).

In this study, the organization-interaction approach is suggested to gain insight into the question of why a company chooses or does not choose for

chain management. We propose that if in the perspective of managers the right external and internal conditions and constraints are present, they initiate changes in their strategic environment, in other words: initiate chain management.

In our research we distinguished the following inside and outside conditions and constraints. These conditions and constraints are presented as perceptions of managers or are actual decisions of managers:

- inside

the perception of margin of profit, perception of the importance of environmental pollution caused by the company and matters of the companies' policy, such as motives for giving attention to environmental care, measures taken to stabilize or enlarge the margin of profit and specialization within the company (in relation to financial resources).

Margin of profit and financial resources are selected because of the financial opportunity they provide to enhance environmental care. The policy of the company gives an insight into how management decides in matters of concern.

- outside

The perception of the governmental environmental policy.

This item has been selected because managers' perception of the clarity and continuity of governmental policy influences the strategic choices they make (Tosserams, 1991): defensive (looking for solutions within the company) or initiating (looking for solutions in a chain of companies).

These inside and outside conditions and constraints give way to a construction by managers of a certain image of the organizational setting in which they think they can solve their environmental problem. The presentation of this image will be followed by the factual behaviour of managers: the actual environmental measures implemented by management.

2. Inside conditions and constraints

To gather information about inside conditions and constraints we looked at the following aspects: margin of profit, environmental pollution, size of the company, policy (motives) and measures.

Only a small number of companies in this sector perceives that their **margin of profit** is not under pressure (4.2%). An important part of the respondents (67%) state that their margins are heavily under pressure. These answers were expected. The agri-sector is confronted with a structural lack of competitive. This leads to, in as far as Europe is concerned, displacement (Kearney, 1994).

The respondents were asked what kind of **sources of environmental pollution** were a problem in their view. From the 233 respondents on this topic in the questionnaire, 44% cites noise nuisance, 39% water pollution and 46% odour nuisance as one of the most important sources of environmental pollution in their company. These sources are directly related to the actual production-process. Thus the environmental pollution in the food- and luxury

food industry is, in the manager's view, strictly induced by processes. Side-effects of the production-process, such as soil pollution (11%) and the use of ingredients which cause danger to the environment (6%), lead to problems in only a minority of cases.

The possibility of specialization within the company is indicated by the size of the company in terms of sales. We learned that companies with higher sales specialize in the organizational structure for the sake of environmental care: in a unit or with an employee with an environmental remit. Moreover, we deduced from the answers that a minority (24%) of the respondents had an environmental coordinator. This means that in the **allocation of tasks and responsibilities** environmental care is not a priority.

To gain insight into the **policy of the company**, we selected the items presented in table 1. These items encompass motives and decisions of managers (measures taken and tasks and responsibilities). By means of these items we tried to gather information on priorities in the companies' policy. We asked specifically: what are the **motives of the management** for starting and developing environmental care? The respondents gave a ranking for each possible motive with respect of the perceived importance. The results are presented in table 1.

Table 1: *Motives for management starting and developing a policy of environmental care (225 respondents)*

Motive	Number of companies	
	important motive	unimportant motive
improve output	31	144
improve presentation	21	126
improve efficiency	30	103
improve quality	54	89
reduce environmental pollution	31	124
meet goals of governmental policy	99	54
integrate environmental care with other care systems	15	138
other motives	2	218

From table 1 we learn that meeting goals of governmental policy is the most important motive for managers starting and developing environmental

care. We also learned from the answers given that environmental care is integrated with other care systems. Moreover, environmental care is seen as part of the companies' strategy and, as such, has to be integrated within the existing production structure of the company. The integration only takes place if governmental demands in the environmental area are set and if environmental care enables the company to save on costs or to improve on quality. The companies' product-market combination and the investments are taken as given.

Profitability can be improved by taking cost-reduction measures or measures to enlarge sales. This positive effect on sales can be accomplished by enlarging the amount or improving the quality of the product. Enlarging the amount can be labelled as a defensive strategy. Product-innovation and penetration of new markets can be called offensive (long-term) strategies.

The respondents were asked to perform a ranking of possible measures to improve the margin of profit (see table 2).

Table 2: *Measures to stabilize or enlarge margins (232 respondents)*

Measure	Number of companies	
	highest priority	lowest priority
more production	81	62
improving efficiency organization	88	48
improving efficiency processes	45	70
improving efficiency purchase	41	100
productinnovation	42	102

From table 2 we can conclude that measures aimed at enlarging profitability are strategically defensive. Given the necessity of reducing the market pressure, priority is given to measures which fit the existing organization. The general impression is that management in this industry prefers measures that leave the existing organization in tact: so measures are taken that lead to more production and improved efficiency within the organization. Product-innovation is performed by a minority of the companies questioned. In line with this is the fact that the budget for research and development is not high in this sector of industry. These findings show the food- and luxury food industry can in this respect be labelled conservative.

Conclusion:

Inside conditions and constraints leave an overall impression of companies in the food- and luxury food industry focusing on inside, short-term measures. Managers have a strong defensive strategy to solve their problems.

3. Outside conditions and constraints

A global analysis of **governmental environmental policy** indicates that the main stream of the policy is directed towards environmental measures which stimulate internal environmental care (see Hagelaar, 1992). Examples of such measures are permits which a company has to have for the different kinds of emissions: water, air, etc., and the policy of stimulating internal environmental care systems.

In our research, managers' perceptions of governmental environmental policy is the outside condition. A demand for policy efficiency refers to the goals and the rules. When a company exactly knows what it is expected to do, it can take this into consideration in determining its short- and long-term actions.

The managers were asked to give their perception of governmental policy. The research data shows that a great number (66% of the 233 respondents) term the government's environmental policy **confusing**. About 33% sees this policy as clear.

If there is a lack of financial resources, an unclear governmental policy will lead primarily to changes in the existing organizational structure of production. Especially the smaller companies have problems which affect them in two ways. In the first place, it is hard for them, without an environmental coordinator, to get to know what the environmental demands stipulated by the government actually are. In the second place, it is hard for them to devise environmental measures that fit their financial situation. Lack of clarity will lead to a defensive strategy (Williamson, 1983, 40).

Despite the lack of clarity in governmental policy, 70% of the respondents experience some positive influences from governmental policy, such as: improvement of efficiency (36%), in the company's security (40%), in the level of hygiene (60%) and of their image in their strategic environment (30%). The governmental policy in question does not strongly stimulate backward and forward cooperation in the chain.

In addition to the perceived necessity of making governmental policy more clear (32%), about half of the respondents experience a need for a better linkage between the specific situation of the company and governmental policy. A minority of the respondents (7%) states that the speed at which changes have to be made is too high. Companies prefer governmental policy to be more directed at practical matters. Moreover, the implementation of governmental policy should be possible within demands for profitability and the existing structure of production.

Conclusions:

Given the fact that the food- and luxury food industry lacks the financial resources to implement structural changes, an unclear governmental policy will only lead to changes within the existing structure of production. Given the risk of long-term investment, lack of clarity leads to a defensive strategy.

4. Solutions to environmental problems: within the company or in a chain

Before we can conclude whether or not inside and outside conditions and constraints influence managerial decision-making about the organizational setting in which to handle environmental care, let us first examine how managers in the food and luxury food sector try to solve their environmental care problems.

Internal environmental care

To rank internal environmental care we took as a starting point the elements that in Dutch governmental policy are supposed to encompass an environmental care system (VROM, 1989; Evers et al, 1991, 46). Our aim was to see whether or not the measures that are taken in a company really count (see Heering, 1992): whether or not a company has an environmental coordinator is not a decisive factor, it is the influence of this employee on policy-matters with regard to the environment that counts.

A minority of the employees with an environmental task, receives a budget (24%) or can decide on environmental matters (40%). In cases where an independent task is involved, the implementation of that task is mainly committed to the internal control of physical streams and companies' security policies. It can be concluded from the research, that the implementation of environmental norms mainly takes place on the shop-floor. The elements of the environmental care system that companies tend to develop as described by the Dutch government, are the measurement and registration element (56%) and measures in the organizational setting (42%). However, as stated; the production process has not been changed. This can be explained by the lack of ability to innovate, the technical inflexibility of the production process in the agribusiness and the perceived low level of profit.

Environmental care in a chain perspective

As an indicator for chain management, we mainly looked at the possible coordination between the company and its suppliers and buyers in attempts to reduce environmental pollution. This backward and forward coordination is found to be implemented by a small minority of the respondents. This coordination is not a task of the environmental care coordinator. It is in the hands of top-management. Environmental care is of little consideration for strategic choices which are made on the supply side. A small minority of the

respondents (14%) cooperates on a structural basis with its customers to reduce environmental pollution. It appears that clients environmental demands on the product put in a very limited way (33%), or not at all (50%). In as much as clients do make environmental demands, these demands concern the recycling of garbage and packaging. A very small number of clients place environmental demands on the respondents' production process.

Conclusion:

Within companies of the food- and luxury food industry, managers take internally focused measures and rarely take external, chain-linked measures. Up to now this sector has been trying to reduce deficiencies under pressure from the government. In developing environmental care systems companies try to integrate this care system into existing quality assurance-systems. The part of an environmental care system which is best developed is called 'measure and registration'. This can be explained by the fact that measuring and registering streams of materials in a company is also an important element for quality assurance systems. It shows therefore that in the field of environmental care, managers show an internally directed policy.

5. Images of chains in reality

We conclude that environmental care is not seen as an opportunity by management. In our opinion, three conditions and constraints can explain this managerial point of view:

1. Outside condition: The lack of clarity in governmental policy. This leads to a defensive strategy. A company that experiences this will not invest in anything like environmental care.
2. Inside condition: A margin of profit that is under pressure. This eventuality influences investments negatively. The financial reserves are not sufficient to change the production process fundamentally. Companies reside to adjust the production process in a way that does not effect the existing structure.
3. Internally directed policy by the companies. This becomes clear if we look at measures taken in the individual companies, for instance measures to enlarge the margin of profit by cutting down on research development.

Under such conditions and constraints managers choose a defensive strategy. This means that they have an image of company to solve companies' problems. The conditions and constraints do not favour the solution in the other possible organizational setting: the image of chain. These conditions and constraints also influence the managerial image of the organizational setting in which they think environmental problems should be solved. If we look at the measures that are taken to reduce environmental pollution, we can conclude that, generally speaking, these measures are internally focused. The measures are forced upon them by government, and are (in most cases) complementary

to or are integrated with organizational activities, such as quality assurance. If there is an environmental coordinator, he plays a modest role in the company. Management of the environment takes in a modest position in the strategic choices that have to be made. Therefore, one can assume that the development of knowledge about and experiences with environmental measures will develop rather slowly in this sector.

In the food- and luxury food industry managers have almost no image of chain. Managers tend, in matters of environmental care, to take the image of company as their starting point in solving the problem. This means that companies see themselves as the main focus point in solving their problems, thereby ignoring the chain of companies in which they operate. Complementing to the image of company is the image of chain: the idea of an organizational setting in which problems are solved in cooperation with other companies. From a manager with an image of company one can expect fewer initiatives aimed at influencing other companies to solve the environmental problem cooperatively than from a manager with an image of chain.

6. Implications of changing images

We have seen that outside and inside conditions and constraints have an influence on the way managers define the organizational setting in which they think they can solve environmental care problems. This image influences the way in which managers take decisions, consider solutions and act to solve the problem. Therefore the image of the organizational setting (company or chain) is of importance when one tries to think about the possibility of implementing chain management in a sector.

Circumstances favourable to the implementation of chain management

In this paper it is argued that an image of chain, given the pressure on the margin of profit, can only be developed in at least fairly sound industrial sectors. Under such conditions individual companies are not solely centred on problems which are viable for their continuation. Having an image of company is understandable, but it hinders the perspective of the environmental problem as a common problem. The image of company is readily understandable because every company tries to survive in hard times and tries, by solving problems internally, not to become dependent on other companies. Because of this mechanism, companies focus more and more on their own situation and forget possibilities for solving problems that lie in their strategic environment. If, under bad financial conditions, a chain perspective is presented as a solution, the enforcement of such a solution will be much more difficult than in a more prosperous setting. Companies will have to change their image of company into an image of chain under circumstances that are, in the view of managers, more favourable for an internal solution.

Conditions which favour change of image

In line with conditions and constraints that influence the choice of an image, conditions are formulated under which it should be possible to change the image of company to an image of chain.

1 Time to learn

For the development of chain management it is necessary to innovate and to learn whether it is possible to diminish environmental pollution throughout the chain of companies. The problem in the food- and luxury food industry is that there is no time to learn about possible forms of chain management. In the first place companies have to solve urgent problems and secondly companies have to learn about chains. To solve these problems, there exists a clear need for financial back-up and information from the government on the issue of environmental care.

To create such conditions, some fundamental aspects such as the production- and the market structure of the sector have to be changed. It seems that environmental care in the food- and the luxury-food industry is primarily a financial issue. It costs money, so it should generate money. Fundamental changes should make this possible. A learning process should be started for instance by starting up some experiments with the aim of solving environmental problems in the chain.

2 Stability of the strategic environment

In this case a stable governmental policy is called for that can create a sound climate to invest in environmental measures. From the perception of the managers in the food- and luxury-food industry, there is no stability.

We conclude that there is a lack of stability in the food- and luxury-food industry: both with respect to time and to financial resources. If, under these conditions an attempt were made to implement chain management, this attempt could have the opposite effect from the one desired, that is driving companies away from each other. Under the conditions mentioned one might imagine that companies eagerly try to reduce uncertainty. To reduce uncertainty means solely to control all developments. This can result in a hierarchical steering attitude (Termeer, 1993). If all companies try solely to control the developments and take a hierarchical steering attitude, then an attempt to try to construct a chain in such a setting, can only result in a striving for power.

This means that chain management is a management instrument which, if enforced at short notice, should not be used to solve the acute problems of a group of companies.

Change of image means change in inside and outside conditions

Fundamental to the organization interaction approach is the conviction that outside and inside conditions and constraints have to change to initiate outside-in and inside-out actions.

About inside changes we can say that they can be shown in different aspects of the company. We have seen that an image of company is linked with internally-directed measures. An image of chain gives way to another kind of measure: measures based on agreements with others. The theoretical concept

of an image of an organizational setting combines the thinking and acting of managers of individual companies. In the table below some organizational implications of the different images are presented.

Table 3: *Implications of images*

Image of company	Image of chain
* the organization itself and its policy are central	* company is one of the companies which shape a common policy on relations between organizations and their strategic environment
* structure of the organization and of the production process are given: 'policy follows structure' strategy	* structure of the organization and production process are in discussion; 'structure follows policy' strategy
* defensive strategy	* offensive strategy: open to new ideas

A successful change from an image of company into an image of chain manifests itself in changes of the company in terms of management-style and policy-agenda. The change in image could lead to a change in internal and external management. Far-reaching changes focus on the production process (internal management) and on the relations with other companies (external management). In the case of 'development of environmental care', it is shown that an image of an organizational setting (company or chain) strongly influences the way one shapes one's own organization and one's strategic environment.

We want to make some concluding remarks. The organization-interaction approach stresses the linkage between thinking (images of organizational settings) and acting (outside and inside changes in the organizational setting) of individual organizations. Starting and developing chain management is thought to depend on an interaction between images of organizational settings which managers have and their inside and outside initiatives.

A few remarks can be made as a result of this investigation so far.

- a. Outside and inside conditions and constraints influence management images of organizational settings.
- b. Starting and developing an image of chain is a matter of interaction between adjusting the environment of the organization and adjusting the organization itself.
- c. 'Chain management' does not occur only between organizations but, and just as important, has implications for conditions within an organization.
- d. Changing an image of an organizational setting is brought about by the modification of conditions and constraints in the strategic environment of the company and changing conditions within the company.

We conclude that:

Chain management without an impact on structural internal organizational conditions is a cosmetic operation and will lead to no further development of chain management in that specific situation.

In the agri-business one can detect certain tendencies which favour chain management as a means to contribute to the solution of problems which occur in this sector, for instance the weak competitive advantage of the agri-business. A centre, the Agri-chain Knowledge Centre, has been founded specially to stimulate 'chain management' in the agri-business. From our research we learned that chain management is not an instrument that can easily be implemented in all situations. Furthermore, it has become clear that chain management implies changes in the internal as well as in the external management of companies: changes which take time and cost money. Our conclusion is that the applicability of the instrument chain management has its limitations. More in-depth and comparative research is needed into the conditions and constraints under which chain management can be implemented and developed. The interaction-organization approach is a useful theoretical perspective for distinguishing influential conditions and constraints to starting and developing chain management and for analysing where the organizational implications of the implementation of chain management are to be found.

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