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Published in:
Journal of Cleaner Production

Publication date:
2008

Document Version
Publisher's PDF, also known as Version of record

Available online at www.sciencedirect.com
ScienceDirect
Journal of Cleaner Production 16 (2008) 1462–1473
Journal of Cleaner Production
www.elsevier.com/locate/jclepro

The intermediary role of an industry association in policy-making processes: the case of the Dutch paper and board industry

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Received 4 April 2007; received in revised form 14 August 2007; accepted 16 August 2007
Available online 1 November 2007

Abstract

In the policy-making process concerning energy and environmental issues, cooperation between government and firms is a means to create a more efficient energy and environmental policy. Intermediary organizations can play an important role in this policy-making process. Aim of this study is to get insight into the role of one specific intermediary organization: the industry association. In this paper, we focus on the Dutch paper and board industry. Important policy themes for this industry are waste water, waste, and energy efficiency. We distinguished four types of governmental policy instruments: top-down regulation, interactive regulation, negative economic instruments, and positive economic instruments. We analyzed the role of the industry association in the policy-making process for all of these four instruments. The results clearly show different (relative) roles of the industry association in different steps of the policy-making processes and for different types of instruments.

Keywords: Policy-making process; Intermediary organization; Industry association; Dutch paper and board industry

1. Introduction

Despite attempts to reduce the environmental impact, we are still faced with environmental problems [1]. It is recognized that fundamental changes in industrial processes will be necessary for a transition towards a sustainable society [2]. However, it remains difficult for the government to set the ''correct'' policy that can bring about these changes. Specific knowledge is required to understand the innovative opportunities; whereas the industry does possess this knowledge, the government often does not [3]. It is argued that, in the policy-making process concerning environmental issues, cooperation between government and firms is a means to create more efficient solutions to environmental problems [4]. An intermediary organization can play an important role in this policy-making process. The roles of intermediaries in transition processes towards sustainable development have been discussed earlier [5]. The authors state that an intermediary organization can function as a broker between various parties. An obvious example of an intermediary organization in the process of policy development is the industry association. The industry association can bridge the government and individual firms in their formulation (and reaching) of objectives. As a consequence, it is interesting to learn more about the role of the industry association as an intermediary organization in the process of environmental policy-making.

During the last decades, a shift has occurred in the approach of the Dutch government [6–10]. Vermeulen distinguishes between three different strategies: (1) central management by means of coercion and incentives, (2) interactive management and internalization, (3) self-management [8]. Where the government used to apply the first strategy, the second strategy was developed in the 1980s. In addition, the third strategy has been used in the last decade. Due to the nature of these different policy strategies (from top-down towards more interactive policy-making), the relationship between government and industry

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doi:10.1016/j.jclepro.2007.08.004

is changing. Moreover, one would also expect to observe a difference in the role of the industry association. However, little is known about the (relative) role of the industry association in these policy processes. Therefore, the question of this research is the following: *what is the role of the industry association in the policy-making process, and to what extent is the relative role of the industry association different for various policy instruments?*

The approach in this paper is to map the activities of the industry association and the government in the development of environmental policy in the period 1980–2003. The Dutch paper and board industry is taken as the object of study since different environmental policy instruments are aimed at this sector and various environmental topics are important for this industry. The interests of the Dutch paper and board industry are represented by the Royal Netherlands' Paper and Board Association (Koninklijke VNP in Dutch). This industry association was willing to participate, thus giving us the opportunity to obtain detailed information about its actions, which was necessary to find answers to our questions. In this research, we focus on three environmental topics, related to the production processes of this industry: waste water, waste, and energy. For each topic, several mixtures of policy instruments were formulated. The development process of each of these instruments is analyzed in this paper.

2. Theoretical background

2.1. Intermediary organizations

An intermediary organization is defined by Van der Meulen et al. [11] as any organization that mediates the relationship(s) between two or more social actors. The two (or more) actors are not the same. Therefore, the term mediation implies that some kind of translation of meaning, results, and/or interests of activities or of the actors will be necessary [11]. This mediation is an added value to the relationship of the actors, justifying the existence of intermediaries [12].

Intermediary organizations have different roles and functions. Howells [13] provides a review of studies examining intermediaries and the intermediation process in innovations. An overview of intermediary roles and functions of consultants is provided by Bessant and Howard [14]. They focus on the role of consultants as builders of bridges in the innovation process. Consultancy firms can perform different bridging activities, such as articulation and specification of needs, selection of options, training and development, education and communication, localizing knowledge (sources), and building knowledge linkages [14].

Based on the roles that intermediary organizations perform, a typology of intermediary organizations is given by Van Lente et al. They distinguish: (1) Knowledge Intensive Business Services, (2) Research and Technology Organizations, (3a) Industry Associations, (3b) Chambers of Commerce, (3c) Innovation Centres, (3d) University-liaison Offices. In addition, they distinguish between vertical and horizontal intermediaries [5]. Whereas vertical intermediaries operate between state and private firms, horizontal intermediaries operate between research institutes and private firms. In this paper, we focus on public policy-making and the role of the industry association in bridging between the government and the industry. Therefore, we are dealing with vertical intermediaries. Industry associations have the following characteristics: they are independent organizations controlled and funded by their members, supporting the entire industry (non-profit) with various services [5].

The studies mentioned above implicitly assume that the role of intermediary organizations remains the same under different circumstances. We will contribute to this literature by adding the dimension of time; we will identify the role of intermediaries over time. Moreover, we assume that (and test if indeed) the role of the industry association, as intermediary organization, is different for different types of instruments. Therefore, we will now further discuss the various roles of an industry association in the policy-making process.

2.2. Intermediary organizations and environmental policy

In the case of environmental policy, which aims at identifying and controlling environmental problems, differences in interest between firms and government are clear. On the one hand, firms aim at minimal environmental costs. The government's aim, on the other hand, is to reduce environmental problems despite high investments. In the policy-making process, the intermediary organization can play a role in "bridging" these differences. However, as a consequence of these differences, firms and government have different expectations of the role of the intermediary organization. Whereas firms expect the intermediary organization to defend their individual interests, the government expects the intermediary organization to defend the interests of the group as a whole and it expects it to be willing to make concessions, if necessary [12]. Doorewaard refers to the paradoxical role of the intermediary organization. In the mediating process between firms and government, the intermediary organization can perform the following activities [12]: collection and distribution of information about problems of the target group and the government; proposition of solutions in the policy process, informing the target group and, finally, the participation of the intermediary organization may result in additional legitimacy for the policy instrument.

The development of a policy instrument can be described as a process. This process consists of several sub-processes or steps [15] and its application can be seen as a policy cycle. The following division into steps of the policy cycle will be used in this research: (1) Policy formulation, (2) Decision, (3) Implementation, and (4) Evaluation. (See also Fig. 1.) In practice, the different steps of the policy-making process do not need to be strictly divided. Sub-processes can take place at the same time, in a different order, or sub-processes can be skipped. The decision about the instrument, the second step, is defined in this research as the *moment* the instrument becomes valid, whereas the other three steps describe *time*

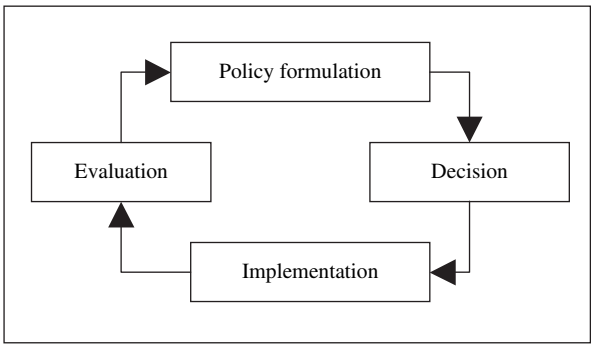

Fig. 1. The policy-making process.

periods. In these periods, stages, or phases, several activities will take place, some of which can be performed by the intermediary organization.

The Dutch government applied a variety of policy instruments to influence the behavior of firms [6–9,16,17]. Different classifications of instruments can be found in literature. However, in this paper we use the distinction between top-down regulation (command and control), interactive regulation, and positive and negative economics instruments (subsidies and taxes, respectively). Below, the different types of policy instruments and the relative role of an industry association in the policy process are explained in more detail. As little is known in literature about this relation, the description is largely based on our expectations of this relation.

2.2.1. Top-down regulation

The first category, top-down regulation, is described by Rothwell as "a standard imposed by the government, legally and administratively enforceable, that must be met, or as an absolute threshold of performance that must not be exceeded" [17]. In general, in the case of top-down regulation, it is to be expected that the role of an industry association will be limited. The role of the industry association is mainly to represent interests and to protect members against excessive regulation [18]. Therefore, we assume the role of the industry association to be largest in the first phase of the policy process, when the policy is formulated and the industry association tries to minimize the negative effects of the regulation on the industry. The government plays the leading role in the policy-making process. The expected behavior of the industry association can be characterized as reactive, defending the stakes of the industry.

2.2.2. Interactive regulation

Target group policy, covenants, or voluntary agreements are examples of interactive regulation. Covenants or voluntary agreements are defined by Glasbergen as "a more or less formal agreement between a governmental organization and a representative of the private sector with the intent of achieving national environmental policy aims on a voluntary basis". The relationship tends to be more cooperative when interactive regulation is used compared to top-down regulation [19]. With this type of regulation, the expected role of the industry association is also to elaborate on the objectives which were set in the negotiations [18]. In view of the fact that the industry association is involved in this first phase of the policy process, in contrast to reactive behavior of the industry association in the case of top-down regulation, we assume that the willingness of the industry to make an effort during the implementation and evaluation will also be greater. Therefore, supportive and evaluative activities are expected of the government as well as the industry association. Moreover, in the case of interactive regulation, the industry association is also involved in the second step (the decision). It is a joint agreement.

2.2.3. Economic instruments

Economic instruments are an attempt to promote allocative efficiency through monetary incentives [17]. With regard to the economic instruments, one can distinguish instruments that result in a higher cost price, such as levies and taxes, and instruments that result in a lower cost price or investment, such as subsidies [20]. To make this distinction obvious, the former group will be called *negative economic instruments* in this research, whereas the latter is called *positive economic instruments*.

If *negative economic instruments* are used, we assume the role of an industry association to be mainly reactive. As mentioned in the description of top-down regulation, the industry association will protect its members against excessive regulation [18] and will never initiate this type of instrument. In other words, if the economic situation of the industry changes or may change, an industry association will try to reduce the negative economic consequences to a minimum. It is to be expected that an industry association react to actions of the government. The possible "negative" effects of negative economic instruments are more visible than the possible effects of top-down regulation. This will provoke a more immediate reaction. Therefore, we expect the relative role of the industry association to be larger than in the case of top-down regulation, yet also to be mainly present in the first step.

With regard to *positive economic instruments*, we expect an industry association to try and maximize the benefits of the instruments. Therefore, it is possible that the industry association participates in the policy formulation. Besides, the association can be active during the implementation phase in order to stimulate the industry to make use of it. As a consequence of the instrument's positive aspect, one can imagine that the industry association to be more inclined to be proactively involved than in the case of negative economic instruments, where mainly reactive behavior is expected (see above).

The above is also visualized in Fig. 2, in which one can observe that we expect the relative role of the industry association to increase from top-down towards interactive regulation. Moreover, Fig. 2 shows that we expect the behavior of the industry association to be reactive for top-down regulation and negative economic instruments, and proactive for positive economic instruments and interactive regulation.

Finally, Fig. 2 shows for each instrument the steps in which the role of the industry association is expected to be largest.

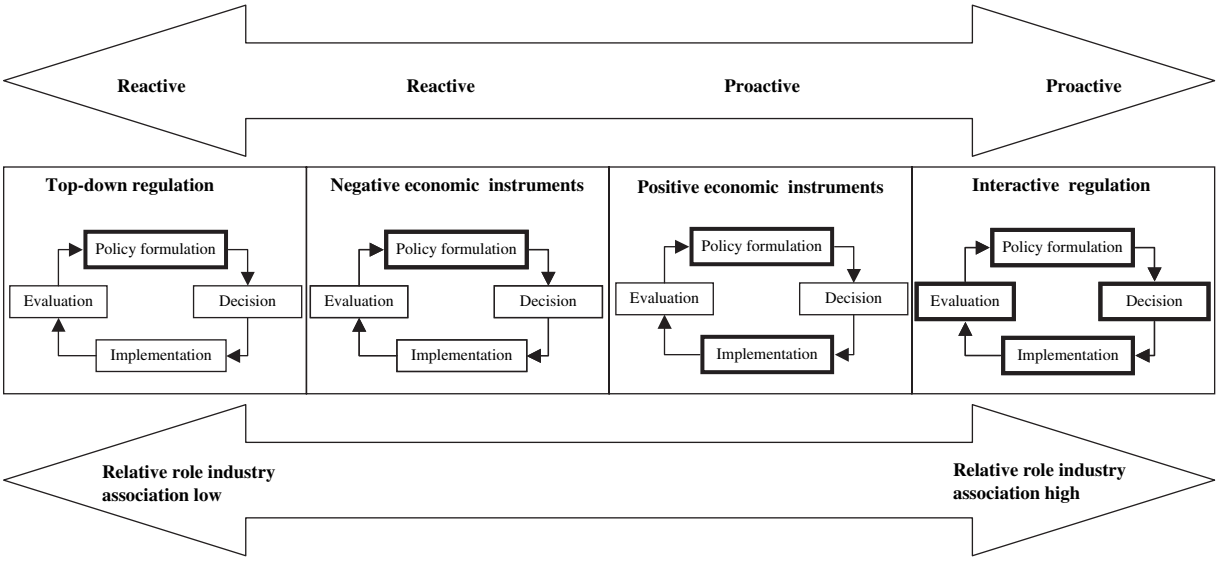

Fig. 2. Visualization of hypotheses. The steps of the policy process in which the relative role of the industry association is expected to be largest are highlighted.

3. Research design

As mentioned in Section 1, the Dutch paper and board industry is object of study. To create insight into the (relative) role of the industry association, several policy areas will be analyzed for the Dutch paper and board industry: waste water, waste, and energy. For each area, the development of environmental policy for the paper and board industry will be identified. Aim is create insight into the policy-making process. Therefore, we map events to shed light onto the process. We analyze the time period 1980–2003.

The events are distilled from archival data (see Section 3.2). For each event, the contribution of the government and the industry organization are determined, as well as the step of the policy-making process it concerns. The content of these events provides insight into the role played by the industry association. This content of events enables us to determine whether the behavior of the industry association is proactive or reactive. Proactive behavior of the industry association is its initiation of activities and its active participation in the policy-making process. This is contrary to reactive behavior, in which the activities of the industry association are focused on avoiding further regulation; its actions are reactions to the behavior of the government.

The relative roles of the government and the industry association will be determined by a strict coding of the events (see Section 3.1). To analyze the relative role of government and industry association, the following Eqs. (1a) and (1b) will be used:

$$\text{Relative role industry association} = \mathrm{RR_{IA}} = \left[\left(\sum \text{events}_{\mathrm{IA}} + \frac{1}{2}\sum \text{events}_{\mathrm{J}}\right) \Big/ \sum \text{events}_{\text{total}}\right] 100\% \tag{1a}$$

$$\text{Relative role government} = \mathrm{RR_{G}} = \left[\left(\sum \text{events}_{\mathrm{G}} + \frac{1}{2}\sum \text{events}_{\mathrm{J}}\right) \Big/ \sum \text{events}_{\text{total}}\right] 100\% \tag{1b}$$

where IA = industry association; G = government; J = joint.

The idea of Eqs. (1a) and (1b) is simple and logical: the relative roles of the industry association or the government depend on their contribution to the policy-making process. The joint activities are performed by the industry association as well as the government and are split among these two actors. However, one can also determine the relative roles of the industry association and the government in one step of the policy-making process. This can be determined in the following way:

$$\mathrm{RR}_{\mathrm{IA}_{\text{policy formulation}}} = \left[\left(\sum \text{events}_{\mathrm{IA}_{\text{policy formulation}}} + \frac{1}{2}\sum \text{events}_{\mathrm{J}_{\text{policy formulation}}}\right) \Big/ \sum \text{events}_{\text{policy formulation}}\right] 100\% \tag{2a}$$

$$\mathrm{RR}_{\mathrm{G}_{\text{policy formulation}}} = \left[\left(\sum \text{events}_{\mathrm{G}_{\text{policy formulation}}} + \frac{1}{2}\sum \text{events}_{\mathrm{J}_{\text{policy formulation}}}\right) \Big/ \sum \text{events}_{\text{policy formulation}}\right] 100\% \tag{2b}$$

where IA = industry association; G = government; J = Joint.

Logically, Eqs. (1a) and (1b) can be calculated for all different types of policy instruments (top-down regulation, interactive regulation, negative economic instruments, positive economic instruments); Eqs. (2a) and (2b) can be calculated for all different steps in the policy-making process (policy formulation, decision, implementation, and evaluation).

3.1. Operationalisation

Table 1 presents the operationalisation we used. All events are coded with the nominal categories 0–1, for it is quite difficult to weigh events [21]. In this study, each event that validly represents a concept is counted as 1.

3.2. Data collection

For the data collection we used documentation of the Royal Netherlands' Paper and Board Association (Koninklijke VNP)[1] and the Competence Centre of the Paper and Board Industry (KCPK). The focus merely on the data of the paper and board industry should not be a problem, since we are interested in the role of the association and we are looking at the *relative* role of this industry association for different types of instruments.

4. Results

Before we show and discuss the results of the (relative) role of the industry association in the policy-making processes, we will provide a short overview of the policy development for the different environmental topics in the period 1980–2004.

Fig. 3 shows which policy instruments were implemented by the Dutch government over time per topic. It becomes clear that this a genuine mixture of policy instruments. However, per topic some instruments are more dominant than others. With regard to waste water, levies (negative economic instrument) for dischargers are important, whereas in the case of waste, the top-down regulation (limitation landfill) is dominant. In the case of energy, interactive regulation has been important (Long-Term Agreements, Convenant Benchmarking).

4.1. Top-down regulation

Top-down regulation has been observed for all three topics. The activities and the observed behavior will briefly be discussed below.[2]

Table 1
Operationalisation environmental policy process

Category	Indicators
Policy formulation with regard to policy instrument *q* for topic waste water, waste, or energy. *Definition*: The activities of government and industry with the aim to formulate the policy	Written communication of government, industry, or both Meetings initiated by government, industry, or both
Decision on policy instrument *q* for topic waste water, waste, or energy. *Definition*: The moment the policy instrument becomes effective	Agreement in the Parliament Signing of policy instrument
Implementation policy instrument *q* for topic waste water, waste, or energy. *Definition*: The period after the execution until the instrument is replaced or expired	Reports concerning implementation of government, industry, or both White papers concerning implementation of government, industry, or both Meetings concerning implementation of government, industry, or both Monitoring reports government of government, industry, or both
Evaluation policy instrument *q* for topic waste water, waste, or energy. *Definition*: Insight into the extent to which and/or the manner in which the goals of policy instrument are realized	Evaluation report on the extent of realization of goals by the government, industry, or both Evaluation report on the manner, of the realization of goals by government, industry or both

Instrument *q* refers to top-down regulation, interactive regulation, negative economic instrument, or positive economic instrument.

4.1.1. Waste water: top-down regulation

In 1991, communication took place between government and industry association about the discharge of nitrogen and phosphorus. More specifically, the industry association responded to the government. More implementation activities took place between 1995 and 1997, when small adaptations of the licenses were being discussed. In addition, the government conducted an evaluation study in 1997, in which the bottlenecks were identified with regard to the WVO license procedure [22].

4.1.2. Waste: top-down regulation

For the topic of waste, two important instruments were the limitation of waste landfill in 1996 [23] and, eventually, the prohibition to landfill waste in 2001 [24]. The relative role of the industry association was small, only two events were observed. As a consequence of a limitation of the possibilities to landfill in 1983, the rejects in the recovered paper became a problem. This was mentioned by the board association [25], which can be identified as reactive behavior.

In addition to the decisions of the government concerning instruments (second phase of the policy cycle), two governmental events were observed. A report was written on the collection, prevention, and reuse of waste in 1989. The second event was the proposition of the Waste Consultation Organ

[1] On 28 May 2004, the Netherlands' Paper and Board Association (VNP) celebrated its centennial, receiving the designation "Royal" from the queen, thus becoming the Royal Netherlands' Paper and Board Association (Koninklijke VNP).

[2] For a detailed overview of the activities for the different types of instruments, one can contact the corresponding author (m.chappin@geo.uu.nl).

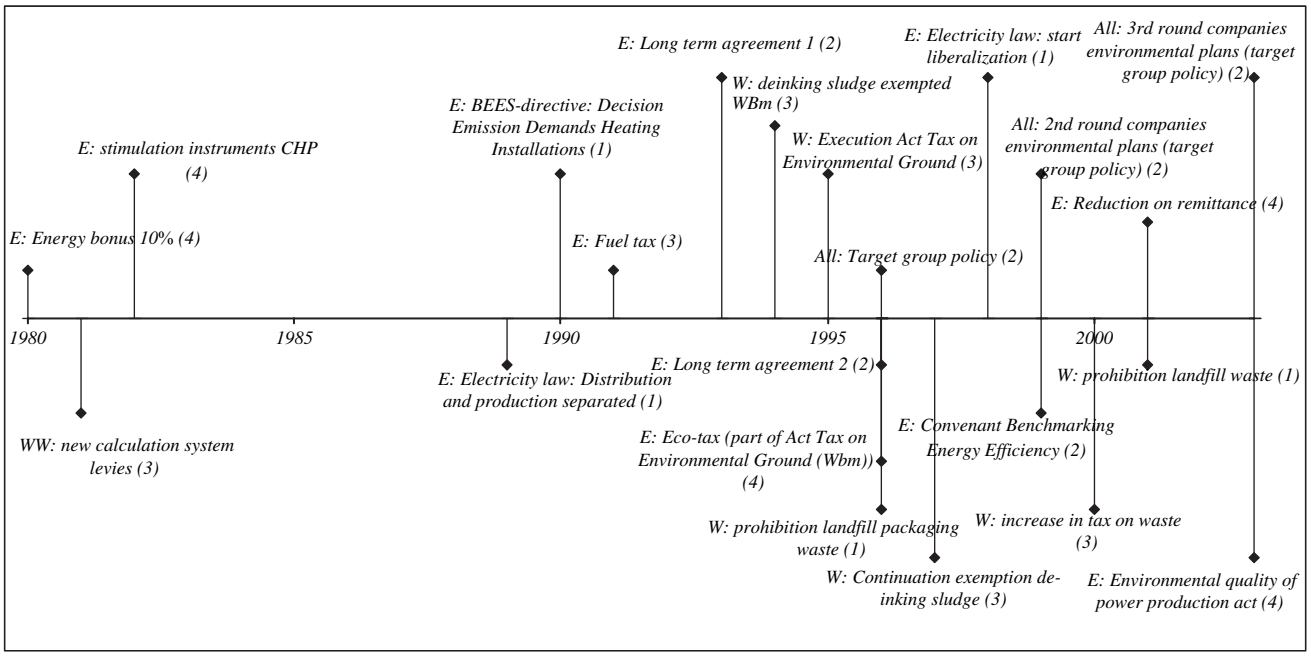

Fig. 3. An overview of the policy instruments in the period 1980–2003. 1 = top-down regulation, 2 = interactive regulation, 3 = negative economic instrument, 4 = positive economic instrument; WW = waste water, W = waste, E = energy, All = waste water, waste, and energy.

to have an accelerated introduction of the prohibition to landfill and to close the boarders with regard to waste, in order to prevent an overcapacity of waste incineration installations.

4.1.3. Energy: top-down regulation

Top-down regulation was used for the topic of energy as well. In 1989, the Electricity Act was executed and in 1998 this act was renewed. Among other things, this act dealt with electricity rates and permits. In addition, some directives were executed. In 1990, the Bees-directive (Decision Emission Demands Heating Installations = Besluit emissie-eisen stookinstallaties) came into force. The decisions about these instruments were attributed to the government. All other events we observed were initiated by the government as well. Before the introduction of the new Electricity Law in 1998, the government made a new design in 1996. Furthermore, in 1994, 1995, 1999, and 2000 the government published several reports with information about energy permits. Thus, we observed no actions whatsoever by the industry association.

4.1.4. Overall top-down regulation

Based on the above, we can conclude that most of the observed behavior of the industry association with regard to top-down regulation was focused on limiting excessive regulation. In that sense, it was reactive, which is in line with our expectations.

4.2. Interactive regulation

One interactive instrument, the Target Group Policy, is important for all three topics (waste water, waste, and energy). This instrument will be discussed first. However, for the topic of energy, more interactive regulation has been observed. Those results will be presented after the discussion of the Target Group Policy.[2]

4.2.1. All topics: target group policy

In the current Dutch environmental policy, an important interactive instrument is the Target Group Policy. The Dutch paper and board industry was and still is one of the target groups of this policy. In 1993, the Dutch paper and board industry and the government started the Target Group Negotiations [26]. The government as well as the industry association performed several activities in the policy formulation. The government published four reports and organized several meetings to provide the industry association(s) with information concerning the Target Group Policy. Some of these events preceded negotiations of the government and the Dutch paper and board industry. The industry association was mainly active by means of preparing the negotiation and informing its members.

These negotiations, the policy formulation phase, eventually led to the signing of the integral environmental target plan (IETP) by the industry and government in 1996. In this integral environmental target plan, targets were specified with regard to reducing air, water, and soil pollution, saving energy, cleaning up contaminated soil, and so forth [27]. Firms were supposed to develop a Company Environmental Plan (CEP). In this plan, the firm sets its own priorities. The CEPs need to be approved by an authority. The idea is that the sum of the individual contributions meets the objective for the sector. Every four years the CEPs need to be revised. The second round of CEPs started in 1999 [28] and the third round in 2003 [29]. With the start of the first round of CEPs, a meeting was organized with the government. Firms were supposed to report annually about their results. With regard to the implementation phase, the

industry association was given a key role in specifying technical requirements and monitoring results. The implementation of the target group policy was also supported by the FO-industry, an independent organization financed by the Dutch government [30]. In 1996, the industry association asked for the integration of the environmental reporting and in 1997, the government developed a standard design for the annual progress report [31]. Finally, the industry association organized several meetings in order to support the implementation. Summarized, we observe a proactive role of the industry association.

4.2.2. Energy: interactive regulation

In 1993, the VNP and the Ministry of Economic Affairs signed a long-term agreement (LTA) [26]. Objective was to increase the energy efficiency with 14% in the period 1989–1995 [32]. However, by 1991 they had already signed an intention statement to investigate the possibilities of energy saving. During the implementation of the long-term agreement, both the government (in 1995) and the industry (in 1994 and 1995) reported on the progress. The government also conducted several evaluations (1994 and 1995). Meanwhile, the industry association and the government were investigating the possibilities of a second long-term agreement. They organized meetings and the industry association conducted a survey among its members about the ''new'' LTA. As a consequence of the first LTA's positive results, a second LTA was signed in 1996. Objective was to realize an improvement of 20% in energy efficiency in 2000 compared to 1989 [32]. In 2000, an improvement of 22.9% was realized [32,33]. Also during this second LTA, progress reports were written by both the government (1996–2001) and the industry association (1996–2000). Moreover, an evaluation study was commissioned by the government.

A final instrument was the Convenant Benchmarking Energy Efficiency. In 1999, the Dutch paper and board industry decided to take part in this covenant [28]: an agreement between the Dutch government and the energy intensive industry. Aim is to be part of the world top with regard to energy efficiency in 2012, implying that a firm should belong to the world's best 10% [33]. Before signing the Convenant Benchmarking, the government and industry had several meetings in 1998 [34]. During the implementation of this covenant, the industry provided information about the approach and the government reported (2000 and 2002) on the progress. In 2003, the government made an evaluation of the first round of the Convenant Benchmarking [29]. Thus, in this case too we observe a proactive role of the industry association.

4.2.3. Overall interactive regulation

Based on the results discussed above, we can conclude that the observed behavior of the industry association was proactive in the case of interactive regulation. The industry association was actively involved in the policy formulation as well as in supporting the industry during the implementation phase. The industry association did not only react to governmental activities, it actually initiated activities as well. Also for this type of instrument, our expectations are met.

4.3. Negative economic instruments

Negative economic instruments are also observed for all three topics. These results will now be discussed.[2]

4.3.1. Waste water: negative economic instruments

Levies have been important for the topic of waste water. In 1980, modifications on the levy system were proposed by the government and in 1981, a new system was introduced. The industry association objected against these changes, but in 1983, the government decided to continue the levy. Once again, in 1985, new changes were proposed by the government to which the VNP reacted by sending a letter to the government. Finally, in 1994, an evaluation study was carried out by the government to get insight into the competitive position of the Dutch paper and board industry with regard to the WVO and the corresponding levies [35].

4.3.2. Waste: negative economic instruments

In 1995, the Act Tax on Environmental Ground (Wbm) was executed [36]. Already during the policy formulation, the industry gave clear arguments to counter the implementation of this instrument. As a result, the de-inking sludge was exempted from the Wbm for the period 1994–1997. At the end of this period, the industry asked for another period including a coarse rejects exemption. After an evaluation by the government in 1996, the exemption with regard to de-inking sludge was continued in 1997, yet coarse rejects were not tax exempted [36]. In 2000, the tax on waste increased.

4.3.3. Energy: negative economic instruments

Two important taxes (negative economic instruments) are the eco-tax and the fuel tax. The eco-tax was executed in 1996 and is part of the Act Tax on Environmental Ground (Wmb) [37]. The fuel tax has been raised since 1991 and is part of the Wmb since its execution in 1995 [37]. Firms with their own combined heat power-installations (CHP-installations) are exempted from the fuel tax in certain cases. In 2002, the VNP asked the government to exempt also the smaller CHPs from the fuel tax. Firms are now exempted from the eco-tax, as they participate in the Convenant Benchmarking. In 1997, when the second LTA was effective, the VNP objected against the eco-tax, because of the exertions of the industry by means of the LTA. However, at that time, the industry was not exempted from the eco-tax. Although some indirect grants were made possible by the government, it was not sufficient according to the industry.

4.3.4. Overall negative economic instruments

For each of the topics (waste water, waste, and energy) the industry association reacts to the government and tries to avoid regulation. Therefore, we can label the behavior of the industry association as reactive with regard to the policy-making process of negative economic instruments. This is in line with our expectations as set out in the theoretical framework.

4.4. Positive economic instruments

Positive economic instruments were only observed for the topic of energy. However, we focus on a subset of positive economic instruments. Some positive economic instruments stimulate research projects, but these instruments are not taken into account in this research due to limitations of data. Therefore, the number of observed events is small. The results will now be discussed.[2]

4.4.1. Energy: positive economic instruments

In 1980, an energy bonus of 10% was introduced and in 1982, several other stimulation instruments were introduced by the government; the energy bonus was increased, and investment credits were introduced. Finally, an arrangement for large-scale consumers was implemented. As a consequence of this regulation, self-generators received a reduction on the electricity tariffs. This latter instrument was also evaluated in 1982. The VNP was contented with this instrument and asked for an extension in 1982.

More activities were observed in 1994. At that time, there was some communication about possible cut backs in the availability of means for the stimulation of energy savings. Finally, two other positive economic instruments were introduced. In 2001, a regulation on the reduction on remittance was executed [33]. In 2003, the environmental quality of Power Production Act (MEP) came into force [38], providing for the valuation of electricity produced by CHP plants [38].

Overall, the behavior of the industry association was proactive (asking for an extension) as well as reactive (avoiding cut backs). The small number of events makes it difficult to draw unambiguous conclusions concerning the type of behavior (reactive versus proactive).

4.5. Relative role

Fig. 4 shows how the various events (n = the number of observed events) are distributed among government and industry association, for each type of instrument and for the different steps in the policy-making process.

We start discussing the relative role of the industry association in the different steps in the policy-making processes for the different types of instruments. With regard to top-down regulation, we observe a small relative role of the industry association. Moreover, the industry association only participated in the implementation phase. This latter observation was not according to our expectations, as we expected the industry association to react in the policy formulation phase. It is possible that industry interacts and consults with government on an informal basis and that the response from industry surveys and written government communications do not reveal the true nature of the interaction.

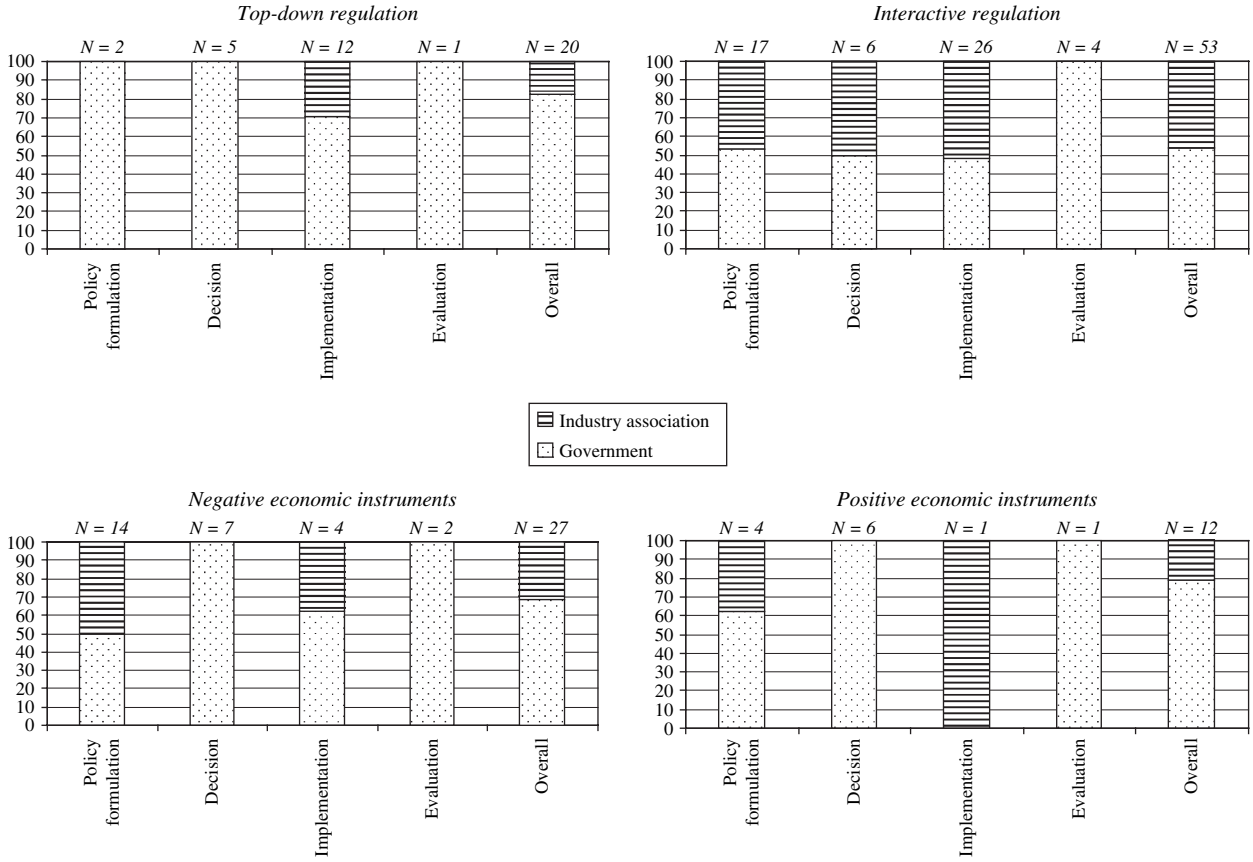

Fig. 4. Relative roles of government and industry association in the policy process of different types of policy instruments.

With regard to interactive regulation, we observe proactive participation of the industry association in different phases of the policy-making process. Only in the evaluation phase we did not observe any events in our time period. Thus, our expectations concerning interactive regulation are largely confirmed by the results.

With regard to negative economic instruments, the industry association's participation is largest in the policy formulation phase. This is according to our expectations. However, it needs to be mentioned that the relative role also turned out to be large in the implementation phase.

Finally, with regards to positive economic instruments, we see a proactive industry association in the policy formulation and implementation phase. This is indeed as we expected. However, it needs to be noted that the number of observed events is small for this type of instrument. Only 12 events were observed. Therefore, these results are slightly limited and generalization should be done with care.

We argued that the overall relative role of the industry association in the policy process is different for different types of policy instruments. We expected the relative role of the industry association to be the following (from smallest to largest relative role): top-down regulation, negative economic instruments, positive economic instruments, and interactive regulation. However, we observed the following distribution (from smallest to largest relative role): top-down regulation, positive economic instruments, negative economic instruments, and interactive regulation. It appears that the relative role of the industry association is smallest in the policy-making process of top-down regulation and largest in the interactive regulation policy-making process, as we expected. However, the relative roles for economic instruments are somewhat different from what we expected. According to our results, the relative role of the industry association is larger in the policy-making process of negative economic instruments, compared to positive economic instruments. However, we expected it to be the other way around. We already mentioned that the number of events for positive economic instruments is small and that, therefore, these results should be handled with care. It is hard to draw conclusions for this instrument on the basis of such few events. We can conclude that the results are in line with our expectations with regard to top-down regulation, negative economic instruments, and interactive regulation.

5. Discussion and conclusion

Objective of this study was to get insight into the relative role of an industry association in the policy-making processes of different policy instruments. Three topics of the Dutch paper and board industry have been analyzed: waste water, waste, and energy efficiency. Before we turn to the conclusions, several remarks need to be made. First, only one (well organized) industry has been analyzed. As a consequence, it is not possible to simply generalize these results for all industries. However, it still provides valuable insights into the work of an industry association. Second, with regard to the documents that were used, it needs to be stated that some documents were not available. However, as different types of documents described the same events, this drawback was reduced to a minimum. Third, we focused our data collection on the documentation of the industry association itself. Since we were interested in the role of this association and as we were looking at the relative role of the industry association for different types of instruments, this could possibly bias the outcome since government may have a different, and possibly more correct perspective on the role of the intermediary organization, especially in the policy formulation phase where undocumented, informal contacts were not recorded or reported. Finally, with regard to positive economic instruments, it was not possible to take into account subsidies with a specific focus on research projects, due to data limitations. This resulted in a small number of events that were observed for this type of instrument. As a consequence, the results for positive economic instruments are sensitive to change and should be handled with care.

Despite these limitations, the results offer interesting insights into the (relative) role of an industry association in policy-making processes for different policy instruments. It becomes clearly visible that the industry association plays a different role when different instruments are used. In that sense, this study contributes to the existing literature in which the roles of intermediary organizations are assumed to be quite static. Our study provides a more robust description of the roles of the intermediary organization.

We expected the relative role of the industry association to increase from top-down towards interactive regulation. Moreover, we expected the steps in which the role of the industry association is largest to vary for the different instruments. Finally, the behavior of the industry association was expected to be reactive for top-down regulation and negative economic instruments, and proactive for positive economic instruments and interactive regulation. Fig. 5 shows our expectations (A) in more detail as well as our observations (B). Our conclusions will be now be discussed per type of instrument.

In the case of *top-down regulation*, the role of the industry association is reactive and largest during the implementation. Yet, we expected the relative role to be largest in the policy formulation step. An explanation for this difference might be that the industry association did not timely realize what the consequences of new regulations implied, or perhaps they were simply not aware of the existence of new regulations. We do not know if this is indeed the case, yet we consider it a possibility. Finally, the relative role is smaller compared to the other types of instruments.

In the case of *interactive regulation*, the role of the industry association is proactive and large in all steps, with the exception of the evaluation step. Evaluation activities of the industry association were not observed. However, we do know that in 2004, the industry association published a report in which the results of the eight years of Target Group Policy were presented. However, due to the fact that the time period we observed was 1980–2003, this event was not taken into account. Finally, the relative role is larger compared to the other types of instruments.

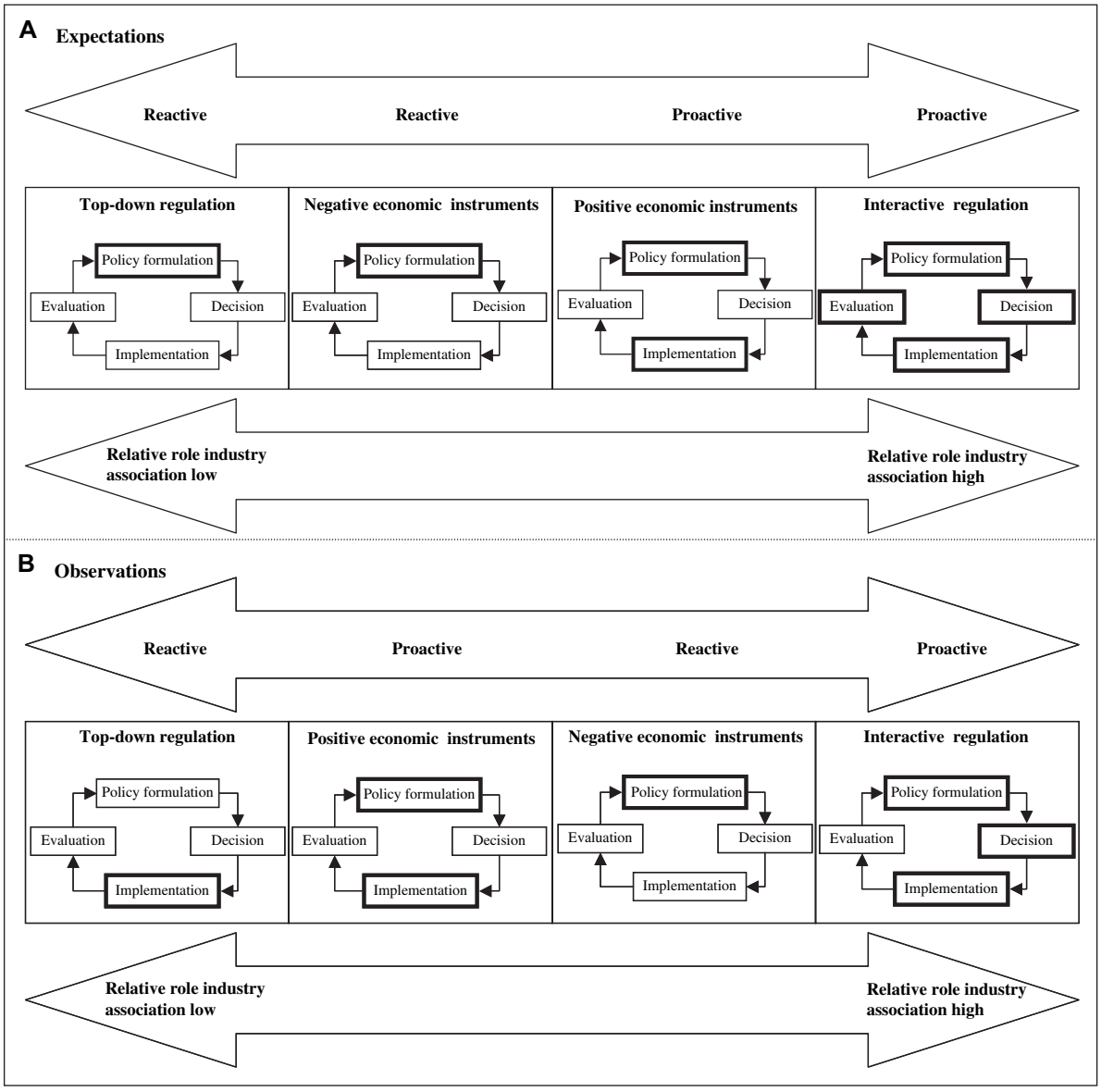

Fig. 5. Expectations (A) versus observations (B).

In the case of *negative economic instruments*, the role of the industry association is reactive and largest in the policy formulation step. Finally, the relative role is larger compared to top-down regulation but smaller compared to interactive regulation.

The case of *positive economic instruments* appears to differ somewhat from our expectations. As mentioned before, the small number of observed events causes some difficulties in the interpretation of these results. The behavior is neither necessarily reactive nor proactive. However, the industry association is active in the policy formulation phase as well as in the implementation phase, just as we expected (NB: here too, the number of observed events is small). Finally, the relative role is smaller than we expected. It was smaller compared to negative economic instruments. Concerning this type of instrument, it would be better for future research to focus on the entire set of positive economic instruments and not merely a subset, as we did in this research. If this is not possible, we propose it is preferable not to take this type of instrument into account.

On the basis of our results, we can conclude that there are clear differences in the role of the industry association for different types of instruments. However, we do not know if these differences also result in a change of policy effectiveness. Therefore, for future research it would be interesting to see if policy instruments in which the relative role of the industry association is larger and/or proactive, are more effective. Another challenge for future research is to focus on differences between events. In this research, we counted the events and treated them all equally. However, it is possible that some events are more important than others. It would be interesting to develop a measure for the ‘‘intensity of events’’. Our approach (a long time period and a retro-perspective analysis), made this impossible. However, a real time analysis might

enable this. In other words, there are still challenges left for future research.

Acknowledgements

We would like to thank the Royal Netherlands' Paper and Board Association, in particular Marco Mensink (nowadays working at CEPI) for his cooperation and comments on an earlier version of this research paper.

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