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**Cooperation and Organization in Decision Making:
a more Decisive Road Safety Policy?**
Results from a multiple case study in the Netherlands

Introduction

Mobility of goods and people is an important prerequisite for a good functioning of our society and economy. A large part of the mobility takes place on roads. Every day, billions of people move to work, school, sports or recreational places. They do so by foot, by car, on a bicycle or in another way. Also the transportation of goods generally takes place on roads. Mobility and transportation is not only a condition for our society, it also has negative consequences. The most important and most well known consequences are these in the field of the environment and road safety. The vast majority of the movements have a happy ending in terms of safety. But sometimes, mostly because of a concurrence of circumstances, things go wrong and an accident happens. In the most favourable situation, there is only material damage, but often an accident causes physical injuries or even death.

Every year, worldwide 1.2 million people die as a result of a crash accident. That is more than 3,000 people every day. 140,000 People get injured every day in a traffic accident. Besides human suffering, the costs of these accidents are high; US\$ 520 billion on an annual basis. It is expected that in 2020, these figures will have increased by 60% (Adams, 2004). Road safety is thus an important mondial theme. It was also the theme of the World Health Day 2004 on 7th April 2004: Road Safety Is No Accident. Not only does the World Health Organization state that traffic injuries can be prevented, it also mentions that the countries most successful at reducing the number of accidents, did so by engaging many different groups in society. Governments, society and industry worked together to achieve coordinated programmes for road safety. This remark of the WHO makes clear that an effective road safety policy is not only a matter of knowing what to do, but also of cooperation of important parties.

An effective road safety policy relies on sound and well-founded scientific research. But contrary to what is sometimes assumed, the outcome of research usually doesn't affect road safety policy directly, no matter how thorough the research may have been. In the process of developing road safety policy, the rationality of the decision maker repeatedly appears to differ from the rationality of the scientist. Not only objective information about for instance road safety measures plays a part in formulating policy, but the different interests of parties involved are at least as important. If the different interests are not weighed rationally against each other in these processes, the different interests of the parties involved will gain importance and be played off against each other. Especially in decisions about important projects, many parties with different interests are involved and depend on each other. The negotiations about these interests often put a stamp on the policy as much as the scientifically based information that is used.

Therefore, it is interesting to see how the decision making process should be organized so that the interests and the negotiations contribute to a good and decisive road safety policy. In this context, a decisive policy is effective, efficient, and ambitious. One of the examples of large and complicated decision making processes involving road safety, is the realization of the Dutch regional traffic and transport plans. In these plans, which were developed in 19 regions in the Netherlands, the traffic and transport policy for the next four years has been established. All regions are obliged to decide on such a plan once every four years. Accessibility, environment, public transport, goods transport, bicycle policy and road safety can be part of the policy in the plans. Road safety has thus to "compete" with other topics in this plan.

A multiple case study was conducted in order to study which factors promote and hinder establishing a decisive road safety policy. This issue was studied in six regional traffic and transport plans (RTTPs) (Bax, 2003). The study had an explorative character.

Theoretical context

The study of decision making processes in governmental organizations is viewed differently in the last decades. Allison (1971) saw decision making processes as a fairly rational process, in which the actors collected all necessary information and made a rational choice. He called this the "rational actor theory". In this theory the power for decision making is vested with the central actor, the governmental body that is officially in charge of making the decision. Although this seems a logical assumption, two main objections to this theory can be mentioned. First, decision making is generally not as rational as some theories suggest. It does not seem realistic that an actor is able to collect all relevant information for a policy decision. The costs of collecting literally all information would be disproportional. Simon (1957) therefore stated that rational decision making is always bounded, or subjective. The decision making is rational within given preconditions, amongst which the ambitions of the decision maker and the (in)completeness of information. Decision making is therefore more a process of "bounded rationality". This theory still assumes a central actor as decision maker, but places this in an uncertain environment.

A second objection to the theory of the rational actor is the assumption of one actor taking the decision in a decision making process. Lindblom and Cohen (1979) state that policy is not just the outcome of a decision making process, but the outcome of a political process. In Western democracies, governmental actors do not have enough power to realize policy goals without the help and resources of other actors. These can be other governmental bodies, but also non governmental organizations like interest groups or the business community. Actors therefore have to debate or negotiate with each other to achieve a policy. This interdependency between the actors makes them a "policy network" if they participate on a regular basis in the policy process. A policy network can be defined as: "a (more or less) stable pattern of social relations between interdependent actors, which take shape around policy problems and/or policy programmes" (Scharpf, 1978; Kickert, Klijn & Koppenjan, 1997). This definition contains the three major qualities of policy networks:

- They exist by the interdependency between the actors
- The various actors have each their own goals
- The contacts between the actors are not brief, but more or less lasting

Decision making in provincial and regional traffic and transport plans is a complex process. In the Netherlands, many parties are involved: regions, municipalities, the government, interest groups, citizens, police, the Public Prosecutor's Office, emergency services, etc. Moreover, a large number of issues are dealt with in RTTPs: accessibility, environment, public transport, goods transport, bicycle policy, etc. Road safety is just one of many subjects in the decision making. The problems that need to be dealt with are not simple and do not have standard solutions. Furthermore, the authorities, the necessary money, and the necessary knowledge for drawing up an RTTP are scattered among the various parties. For example, the national government is responsible for the regional rules and financing, the municipalities are responsible for cooperating with the policy, the police and Public Prosecutor's Office need to support the agreed safety policy, and knowledge organizations are responsible for providing the expertise. In other words: the parties are dependent on each other and together they constitute a network surrounding the decision making process.

Kickert, Klijn and Koppenjan (1997) state that, in such a situation, the various parties must cooperate in a network to initiate the policy. Because not all parties have the same (vested) interests and goals, this is not always straightforward and easy. Neither do all parties have the same possibilities to publicly promote their own interests: some parties have more personnel, money, expertise, or formal authority than others. Explicit guiding and rules are necessary to initiate cooperation, to activate the parties, and to settle the conflicts between parties that have different interests.

In this study, policy processes and decision making in a network are not only looked at in descriptive terms, but the study also links the policy process with the outcome of the process: the policy itself. Most network studies concern the question of whether the decision making process is effective or efficient. In this study the question is answered if a network approach results in an effective and efficient policy. Therefore the question is raised of which factors ensure that this complex decision making process leads to a decisive policy. However, what is a decisive road safety policy? In this context a decisive policy is defined as:

- a) one that is effective, that thus contributes to achieving the defined goals,
- b) one that is efficient, in which the benefits are higher than the costs,
- c) one that is ambitious.

Applied to road safety policy this means that with the measures in the policy plan:

- a) the goal of reducing the number of casualties will be achieved,
- b) the costs will not be higher than the benefits,
- c) there will be fewer casualties than there are now.

According to both the theory of Kickert, Klijn and Koppenjan (1997, and Klijn, Koppenjan & Termeer, 1997) and to previous research (Bax, 2001), two factors determine whether the decision making process results in a decisive road safety policy. First of all, the road safety interest must be forcefully promoted by one or more parties. If there are no such parties, the final policy will probably pay no attention to road safety. De Bruijn, Ten Heuvelhof and in 't Veld (1998) have elaborated this (and the following) factor(s) in more concrete organization principles. According to their theory, all relevant parties such as interest groups, citizens, research institutes, municipalities, police, public prosecutor, the Provincial Road Safety Board et cetera should be involved during the decision making. They also must have sufficient possibilities (are allowed to have access) and means (personnel, money, expertise) to convincingly present the road safety interests. Furthermore, the process manager uses the environment of the decision making process about road safety to gain support for the road safety interest and to urge the parties to cooperate. This can be done by inviting environmental groups to the decision making process, by negotiating with opponents of the intended road safety measures and by making contact with other policy issues in the RTTP or PTTP. Finally, the process manager also should invest in external authority, for example by involving the administration of the region in an early stage of the decision making process.

Next to the promotion of road safety, the structure of the decision making process must be well organized. According to De Bruijn, Ten Heuvelhof and in 't Veld (1998), there should be rules for inviting parties, the way in which decisions are made (for example in package deals to protect everyone's interest if possible), and dealing with conflicts (and the benefits of conflicts). The purpose of the rules is to increase cooperation between parties; after all one is dependent on each other. These rules can be drawn up and carried out by the decision making body itself, but, alternatively, an external bureau can be hired to do this. De Bruijn et al point out the delicate position of the decision making body, if this body is process manager and

decision maker at the same time. It plays a double role as independent process manager and as party with its own interests in the decision making process.

Apart from these two procedural factors, we would like to involve one factor that concerns more the contents of the policy: the use of information in the decision making process. Of course, the presence of information is a necessary, but not sufficient precondition. It happens that information is available, but is not used in the decision making process. There are four possible explanations for this mismatch between information supply and information use (Edelenbos, 2000). First, the information offered by researchers to policy makers has to fit in terms of content to the needs in the decision making process. This is often not the case. For a decisive policy, the information should not only contain of topics within the existing policy line, but also contain new topics. Second, the shape of the information also has to fit to the needs of the decision makers. It is possible that the jargon of the scientists and the policy makers do not correspond. But there are also other mismatches: quantitative versus qualitative information, oral presentations versus written information, verbal versus visual presentation of results etc. A third possible mismatch is the timing of the information: the data has to be available on time to influence the decision making process. Information is often presented too early or (more common) too late to decision makers. As a consequence, information has to be asked for in an early stage of the decision making, to be ready in time to be used. Last, the information has to be authoritative for the policy makers. This means that the assumptions behind the information are undisputed. The information for example has to come from a reliable source, such as a bona fide research institute.

Figure 1 illustrates the three factors related to decisive road safety policy.

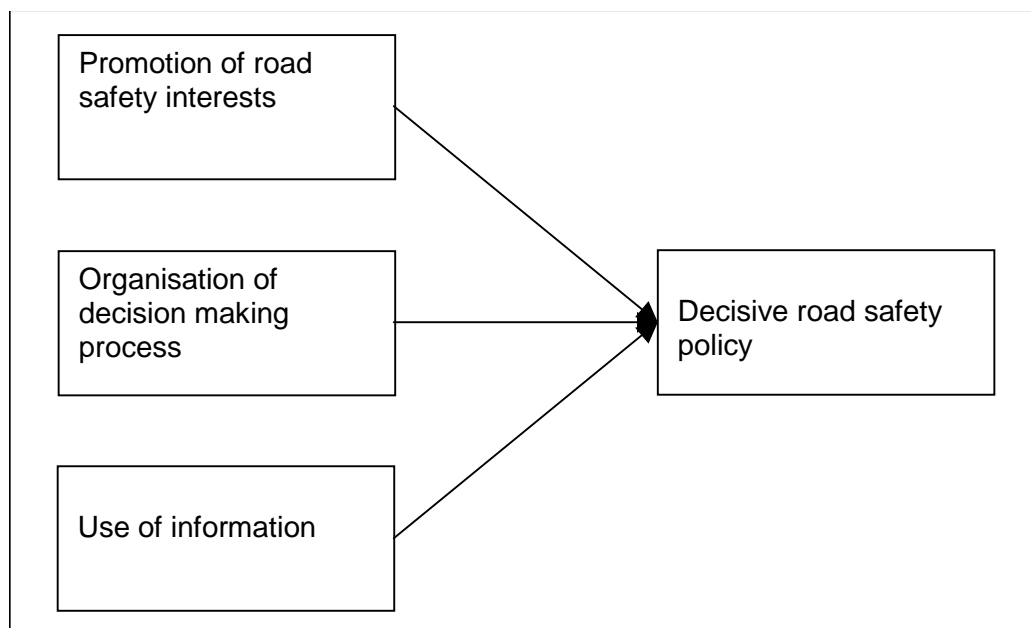


Figure 1: Scheme of factors relevant for a decisive policy

Case studies as a research method

For this study, the chosen research method is a multiple case design. A case study is the study of a social phenomenon, at one or more bearers, in a natural environment, using multiple data sources, describing multiple variables (Yin, 1994). Case studies are especially useful when the

subject is complex and has not been (often) researched before. This is the case in the present study: the decision making process is complex and these processes have not yet been investigated often. The explorative study aims to distinguish relevant factors which influence road safety policy and to find ways to operationalize the three theoretical factors mentioned above in a structured way. Therefore, a case study with qualitative methods is desirable. In this way researchers have the opportunity to investigate the subject intensively and profoundly.

In (multiple) case studies there are two problems. The first one is that, unlike studies with large numbers of observations, the robustness of the explanations of phenomena cannot be shown by falsification. Swanborn (1996), among others, maintains that testing causal relations is not possible because there are too few observations. Instead of looking for a "robust" explanation, one can look for a conclusion with a high degree of plausibility. A reasoning becomes plausible if it is logical and if there is empirical support (t Hart, 1985). The more empirical support, i.e. the more cases, the more plausible the explanation (Lijphart, 1971). For this reason a multiple case study design with six cases was chosen for this study.

A second problem with case studies is the generality or generalizability of the results. As far as the generalizability of research is concerned, it is better to compare case studies with experiments than with surveys (Yin, 1994). Case studies are not randomly drawn from a known population, as is the case with surveys, but from a theoretical approach (Kennedy, 1979 and Firestone, 1993). In case studies, therefore, statistical generalization is not possible. This is not so much caused by the small number of cases, but by the method of selection. True, however, is that the generalizability and validity increase if the population to be generalized is described as accurately as possible. The more cases studied, the better attainable the picture of the population for which the theory applies. The population must be defined using the relevant prerequisites under which the statements are made, for example in terms of place, time, and features of the cases.

Method

Operationalization of the three factors

As already stated, in this study the aim is to answer the question of which factors promote and hinder the establishing of a decisive road safety policy. The explorative study tries to distinguish these factors by comparing cases with and without a decisive road safety policy. Three factors which can create a decisive policy are investigated: the promotion of road safety interests, the organization of the decision making process, and the use of information. The three factors are operationalized into a number of measurable prerequisites. The decision making process must comply to these prerequisites to result in a decisive policy. The factors were made operationable on the basis of the organizational principles in the theory of de Bruijn, Ten Heuvelhof and in 't Veld (1998) and on the basis of a previous study (Bax, 2001). This concerned a study on the "big brother" of the Regional Traffic and Transport Plans: the National Traffic and Transport Plan (NTTP). Between 1997 and 2000, the making of this Plan was studied. In an exploratory and inductive way, prerequisites were looked at which had influenced the NTTP policy in a positive way. This way a large list has been developed. The RTTP study with its six cases investigated if, in a structured way, a distinction can be made between more and less relevant prerequisites, to shorten the above mentioned list.

As far as *promotion of road safety interests* is concerned, we expected that, for example, the following matters would contribute to a decisive policy. If the prerequisites are chosen on the

basis of the above mentioned theory, and * is added. The other prerequisites are selected based on the experience of the previous NTTP-research.

1. Sufficient money, personnel, and expertise for parties promoting road safety interests *
2. The organization of the administration of the region is in good order
3. All actors receive the same information about the decision making process *
4. Road safety is a top priority in the perception of the actors *
5. Participation in the decision making process of as many relevant parties as possible *
6. The involvement of the administration in an early stage of the decision making process *
7. If there is a separate subgroup for road safety, contact is made with other policy issues *
8. The Provincial Road Safety Board (PRSB) or the Traffic and Transport Board (TTB) are consulted in an early stage and on a regular basis about concrete policy texts *
9. Early negotiation with opponents of the intended road safety measures *
10. The use of conflicts by municipalities, PRSBs and water boards to achieve their road safety goals *
11. The involvement of the environmental movement in the decision making process *
12. Active participation of a platform for road safety interests, such as the PRSB or the TTB *

As far as the *organization of the decision making* is concerned, we expected a positive effect from the following factors:

13. Interest groups, citizens, research institutes, industry, and police are activated to join in the decision making *
14. Organization of the decision making process by an independent third party *
15. Parties with road safety knowledge actually writing the policy
16. Agreement of road safety with other subjects in the RTTP *
17. Interest groups for the environment and for bicycles are explicitly involved in the decision making *
18. Perceptions of actors are aligned with package deals *
19. Members of the Provincial Executive are involved in an early stage *

As far as the *use of information* is concerned, we expected that for example the following matters would contribute to a decisive policy. These prerequisites are based on the theory of Edelenbos (2000) (marked with *) and the previously mentioned study on the NTTP (Bax, 2001).

20. Information outside the existing policy line is used *
21. Information about other subjects than infrastructure and accident numbers is used *
22. Information of other non-governmental organizations is used *
23. Information older than 1 year is used *
24. Information is actively asked for in the decision making
25. If information is asked for, this happens in an early stage of the decision making *
26. Time for collecting information is given in an early stage of the decision making process *
27. Research institutes are involved in the meetings

Operationalization the decisiveness of the policy

The decisiveness of the road safety policy was already defined as an effective, efficient and ambitious policy. A policy is effective if the goals set in the policy are reached. For this, the goals of the policies in the regions were listed (number of casualties saved) and it was calculated if the measures in the policy led to the goals set by the regions. The efficiency was

measured by the relationship between the costs of the policy and the benefits. Therefore the costs of the measures were calculated and divided by the presumed number of casualties saved the policy would lead to, as calculated in the effectiveness. The ambition contained the study of the level of the goals of the policy, and the guarantees for implementation. For this last item, it was more specifically looked at the available budget and the mentioning of an implementation period in the policy.

The scores of the three criteria (effectiveness, efficiency and ambition) were converted and totalised. For the criteria effectiveness and efficiency a five-point scale was used, a three-point scale was used for ambition. A five-point scale gives a reasonable discrimination between the cases, without stressing the small differences too much. The three-point scale for ambition was used because of the three measure points for this criterion.

Relationship between the three factors and the decisiveness of the policy

As stated before, a distinction was made between regions with a high or low decisive road safety policy. The decisiveness of the policy will be used in this explorative study to make a distinction between relevant and less relevant factors or prerequisites. By comparing the cases with and without a decisive policy, we will discover which prerequisites were present in the cases with a decisive policy and which were not. This will give an indication about the relevance of the prerequisites. Of course the method used in this study is not a classical testing design. To prevent the researcher from prejudice, the examination of the three factors was conducted at an earlier moment than the examination of the decisiveness of the policy. Furthermore, a qualitative database program (MaxQDA) was used to classify the data fragments. In this way, a complete image of the data file was constructed, to prevent the researcher from biasing himself by using only his memory while analysing the data.

Selection of the cases

The selection of cases was not, as is generally the case, prompted by a theory, but by practical arguments. The population from which cases were selected, and for which was generalized, was already known beforehand: the decision making processes for RTTPs in regions in the Netherlands. Within this population, an inventory was made of which decision making processes had recently been completed. That yielded six regions, the provinces of Friesland, Flevoland, Limburg, and Noord-Holland; and the Arnhem-Nijmegen and the Twente Regions. These six cases were studied, being one third of the total of 19 regions. The six cases showed a good urbanisation and geographical spread. In all cases, the decision making took place between 1997 and 2000.

Methods of data collection

The data collection took place by means of retrospective open interviews with stakeholders in the regions, document analysis of minutes of meetings, (various versions of) policy documents, and a small telephonic questionnaire among municipalities and water boards in their role as road authorities. For the calculation of the effectiveness and the efficiency of the policy, the so called Regional Road Safety Explorer programme, developed by SWOV was used (Janssen & Wesemann, to be published). The various regions have calculated the effect and the costs of their policy with the help of this computer tool. The tool includes index numbers for the costs and the casualties saved per kind of measure.

Results: Decisiveness of the road safety policy

First of all a study was made of how decisive the road safety policy in the RTTP was in the various regions. We examined if the policy had contributed to the road safety goals that the six regions had set themselves (effectiveness) and whether the costs of the measures were

lower than the benefits (efficiency). We also examined how ambitious the road safety policy plans were.

All regions had the same goal: 30% fewer road deaths and 25% fewer injured in 2010, in comparison with 1998 (similar to the target set on a national level). To determine the effectiveness it is necessary to know the concrete road safety measures that the regions intended to take in order to achieve this goal. These measures were only briefly described in the RTTPs. All six contained a concrete implementation of these plans, using the Road Safety Explorer programme developed by SWOV (Janssen & Wesemann, to be published). Using this programme, every RTTP calculated how many casualties the road safety policy would have 'saved' by 2010. On average, the Arnhem-Nijmegen and Twente regions had the most effective policy; their policy can be expected to save the most casualties. The Friesland policy is the least effective. None of the six would fully achieve their goal with the intended policy: a reduction in the number of casualties of 71% to 92% compared to their goals will be achieved (Table 1).

The costs of the measures were also calculated in the Regional Road Safety Explorer. The ratio between costs and casualties saved, the efficiency, was highest in the Twente region, in the Arnhem-Nijmegen region, and in Flevoland. Friesland and Limburg were the least efficient. In Table 1, the efficiency is measured in 100,000 Euro per victim saved. The smaller the figure, the better the score on efficiency.

To judge the level of ambition of the road safety plans in the RTTPs, the goals that the six regions had set themselves were examined, and whether the implementation of the plans was guaranteed. It was tested if a budget and an implementation period for the road safety policy were mentioned. For every factor present, one point was awarded, so the maximum is three points. All six had set themselves the same goal; only Flevoland explicitly expressed its fear beforehand of not achieving it because of a more rapid than average increase in mobility in the province. Only Friesland and Flevoland mentioned a budget and an implementation period in their plans.

The scores on the three criteria for a decisive policy (effectiveness, efficiency and ambition) were converted to a total decisiveness score. For the criteria effectiveness and efficiency a five-point scale is used, a three-point scale is used for ambition. The points for effectiveness were divided between 70 and 95 percent effectiveness, for every 5% effectiveness, one point was rewarded. For efficiency, the five points were divided between 1.5 and 0.5 x 100.000 Euro per victim saved. For every 20.000 Euro less, 1 point was rewarded. The more points a region scores, the more decisive the policy is. As far as the decisiveness of their policy, the Arnhem-Nijmegen region, the Twente region, and Flevoland score a high total; the scores in Limburg, Noord-Holland, and Friesland are lower.

Region	Effectiveness		Efficiency		Ambition	Total decisiveness
	% of goal reached	Score on 5 point scale	100,000 euro's per victim saved	Score on 5 point scale	Score on 3 point scale	Score on 13 point scale
Friesland	71%	1	1.41	1	3	5 (Low)
Flevoland	87%	4	0.68	5	2	11 (High)
Limburg	86%	4	1.44	1	1	6 (Low)
Noord-Holland	90%	4	0.99	3	1	8 (Low)
Arnhem-Nijmegen	95%	5	0.68	5	1	11 (High)
Twente region	92%	5	0.67	5	1	11 (High)

Table 1: Effectiveness, Efficiency and Ambition

Results: Prerequisites for a decisive road safety policy

This leads to the following question: were there any differences in the presence of the prerequisites in cases with a high and a low decisive policy? We examined which prerequisites were present in the various regions, and compared this with the decisiveness of the policy. This will be presented different table 2. The prerequisites are considered to be relevant for a decisive policy when in the most cases (5 or 6) the prerequisite is present when the policy is decisive and vice versa. The prerequisites are considered to be less relevant when this is the case in 1, 2, or no region. In other situations, no conclusion can be drawn about the predictiveness of the prerequisites.

Region ↑	Flevoland	Arnhem Nijmegen	Twente	Limburg	Noord- Holland	Friesland
Decisiveness →	H	H	H	L	L	L
Prerequisite ↓						
1	+	-	-	-	+	+
2	+	+	+	+	+	+
3	-	-	+	-	-	-
4	-	+	-	-	-	+
5	+	-	+	-	-	-
6	+	+	+	+	+	-
7	-	X	+	X	X	X
8	+	+	-	-	+	-
9	-	+	+	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	+	+	-	-	-	-
13	-	+	+	-	-	+

14	-	+	+	-	-	-
15	+	-	-	+	+	+
16	-	+	+	+	+	+
17	+	-	+	-	+	-
18	-	+	-	-	-	-
19	+	+	+	+	+	-
20	-	-	-	-	-	-
21	-	+	+	-	-	+
22	-	+	+	-	+	+
23	-	-	+	-	-	-
24	-	+	-	-	-	+
25	x	+	x	x	x	+
26	-	+	+	-	-	+
27	-	+	-	-	-	-

L = Low decisiveness

H = High decisiveness

+ = Prerequisite is present

- = Prerequisite is not present

x = Not enough data or situation did not occur

Table 2: Presence of prerequisites

This means that the following prerequisites can be considered as *relevant* predictors:

- Prerequisite 5: Participation in the decision making process of as many relevant parties as possible
- Prerequisite 9: Early negotiation with opponents of the intended road safety measures
- Prerequisite 12: Active participation of a platform for road safety interests, such as the PRSB or the TTB
- Prerequisite 14: Organization of the decision making process by an independent third party

There are also prerequisites that can, on the basis of the table above, considered as *less relevant* predictors:

- Prerequisite 1: Sufficient money, personnel, and expertise for parties promoting road safety interests
- Prerequisite 15: Parties with road safety knowledge actually writing the policy
- Prerequisite 16: Agreement of road safety with other subjects in the RTTP

Conclusions can not be drawn for the other prerequisites mentioned in the table above. They gave an average score on their presence. Further research is needed on these topics.

Discussion and Conclusion

The findings of this study show that involvement of many parties in the decision making process and entering into early negotiation with opponents of road safety measures, are appropriate for a decisive policy. Delegating the organization of decision making to an external third party, such as an external bureau, and active participation of a platform for road safety interests, such as a Provincial Road Safety Board (PRSB) or Traffic and Transport Board (TTB), is also relevant for a decisive road safety policy. It makes, however, no difference if parties that advocate road safety interests do or do not have sufficient personnel, money, and expertise. This has no influence on the decisiveness of the final policy. The same

applies to the agreement of road safety with other subjects in an RTTP, as well as experts writing the road safety texts. Neither affects the decisiveness of the policy.

But what is the explanation of the fact that these last three prerequisites did not yield the result which was expected? No definite conclusions can be drawn from this study, but suggestions can be made; these can be tested in a future study. If we examine the prerequisites in greater detail, we can give the following, possible explanations.

The study shows that it does not make any difference if the interest groups have sufficient money, personnel, or expertise. A more detailed look at the various cases produces an explanation. In a number of cases, interest groups were not involved in the process at all, either because they were not informed in time by the province or regional authority that they could participate or because participation was not high enough on their list of priorities. They gave priority to cooperating in more concrete road safety plans. The participation of interest groups is of course a necessary precondition for studying the prerequisites properly: the presence of money, personnel, and expertise is only relevant if they participate in the decision making process.

It was also found that parties with road safety knowledge writing the policy, and the agreement between road safety and other subjects in an RTTP, do not contribute to the decisiveness of the policy. An explanation for the first prerequisite may be that the required road safety knowledge for a global plan such as an RTTP, is general and not specific. Specialist knowledge is more required for drawing up, for example, targeted road safety plans. An explanation for the second prerequisite may be that dealing with road safety as such in an RTTP is not a point of discussion, and that discussion may arise when dealing with the implementation and financing of measures. In these global plans, the implementation is not dealt with, and in most of the plans there is no financial paragraph.

And what can be said about the prerequisites which gave no clear result? It is obvious that further research has to be done on these items. But it is striking that in the factor 'use of information' no prerequisite at all gave a clear result. This will be partly a result of an operationalizing of the factor which was not distinguishing enough. On the other hand, it appeared to be very hard to collect reliable data about the use of information. Stake holders did not mention much information spontaneously in the open interviews, and a more direct way of asking in the interviews led to very broad and general answers. It was, for example, very hard to make a distinction between the information used in this particular studied policy process and in policy processes which run parallel in time.

As already stated in the introduction, research into decision making processes about road safety policy is at least as important as research into road safety measures. The explorative method used in this study appears to be a fruitful one in systematically determining prerequisites which are relevant for the construction of a decisive road safety policy.

As mentioned before, two problems arise when using multiple case studies as a method for research. The first is that the robustness of the explanations of phenomena cannot be shown by falsification. Instead of "robust" explanations, one can only look for a conclusion with a high degree of plausibility. The conclusions drawn in this study can also be only plausible. A second problem with studies of cases is the generality or generalizability of the results. The conclusions can only be generalized to comparable group of cases, which means in practice other regions and provinces in the Netherlands. Because one third of the total number of regions in the Netherlands was studied, the conclusions can be considered as representative for the remaining regions. This means that the outcomes of this study are interesting for Dutch policy makers.

Of course a large variety of other factors or external variables could possibly be of influence on the outcomes. Some external variables such as management changes in regional administrations, law alterations, changed economic circumstances, and calamities did not occur in the data collection time period. Other external variables such as the size of the region were not structurally studied.

Although set in a Dutch context, the method of study as well as the type of results obtained are considered useful in building knowledge on decision making processes. It appeared to be feasible to make a theoretical and practical connection between the network approach and the decisiveness of the policy as the outcome of the decision making process. In accordance with the theory of Klijn, Kickert and Koppenjan (1997), this study indicates that (aspects of) the promotion of road safety interests and the organization of the decision making process play a role in reaching a decisive road safety policy. Future studies will focus on the confirmation, or otherwise, of these conclusions on the national decision level, through the further study of the realization of the National Traffic and Transport Plan in the Netherlands.

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