OVERVIEW OF THE STAKEHOLDER CONSULTATION

EFFECTIVE REDUCTION OF NOISE GENERATED BY RAIL FREIGHT WAGONS IN THE EUROPEAN UNION

1.1 Scope of consultation and participants

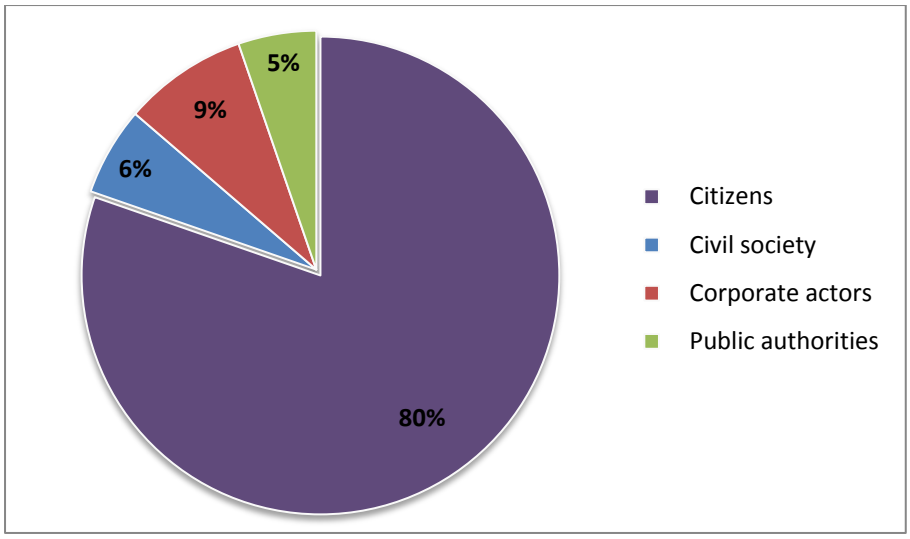
The target groups of this consultation included citizens, NGOs, the railway business community and their representatives (especially railway undertakings, infrastructure managers and wagon owners), industry associations, and academia, as well as public authorities concerned with the issue of railway noise.

The intention of stakeholder consultation is, in particular, to obtain the respondents' views on

- Extent of the rail noise problem
- Assessment of existing measures
- Relevance and impacts of proposed options

The online questionnaire received 712 responses from four main types of respondents; citizens, civil society associations, corporate actors and public authorities.

Figure I - 1: Breakdown of respondents (N=701)



In general, citizens as a group were overrepresented, counting for 80% of the responses (563 respondents). The rest of the responses came from a variety of stakeholders who could broadly be characterised as professionals: companies, associations of companies or citizens (i.e. NGOs of different types), academia, and public authorities from the national, regional or local level. For reasons of simplicity, and because the analysis needs subgroups of sufficient size, the different categories of professionals are compiled into three groups: civil society (i.e. answers from citizen or non-corporate groups), corporate actors (individual companies and associations of companies) and public authorities of all kinds. The detailed breakdown of the professional respondents can be seen in below. Academia is excluded from most parts of the analysis presented here, since only a total of four answers were received.

A few responses have been excluded from the analysis for different reasons, for example duplication. Approximately 70 citizens and 6 professional respondents were excluded from questions relating to the specific policy options and impacts, since they rated their own knowledge on the issue of rail noise as "low" or "very low". These excluded responses are however included in the analysis of questions regarding the extent of the problem, and others that do not require specific knowledge of rail noise.

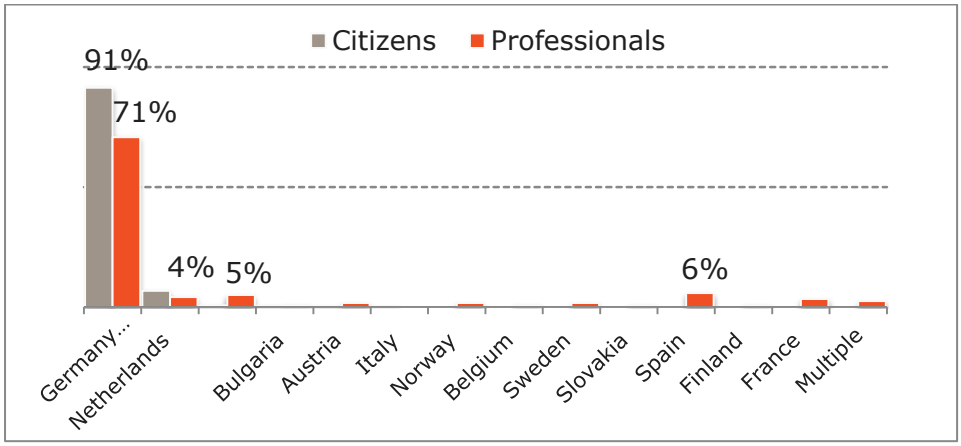
Table I - 1: Revised samples based on the exclusion of respondents with little knowledge about rail noise

	Total number of respondents	Rated own knowledge of rail noise as "low" or "very low"	% of total	Revised sample
Citizens	563	71	13%	492
Professionals	138	6	4%	132

In the subsequent analysis, the respondents are split into "Citizens" and "Professionals"[1]. The citizens are seen to express a part of the public opinion[2], while the professionals have been invited to participate in the questionnaire as a group with higher levels of technical and economic knowledge on the issue at hand.

The next graph gives an overview of the origin of the respondents, who have answered the survey.

Figure I-2: Breakdown of respondents by country (N=681)



Germany was greatly overrepresented amongst both citizen and professional respondents. The Netherlands and the UK together account for 10% of the professional respondents and Spain has provided 6% of responses, but aside from that, responses are widely spread across remaining EU/EEA member states. The explanation behind the strong German presence originates from three sources: greater awareness around the issue of rail noise in Germany, the mobilization by different groups to put it on the agenda, and to reflect that rail noise is mainly an issue for citizens in Germany.

[1] This is a somewhat coarse division, and that the "Professionals"-category represents a diversity of respondents. However such a grouping was needed to manage complexity. Where relevant, the views of the different categories of 'professionals' are brought out separately.

[2] The citizens have self-selected themselves into answering the questionnaire, and are therefore unlikely to be representative of the greater population

1.2 Scoring

Many of the questions in the survey were qualitative in nature, i.e. asking respondents to rank policy options on a scale from "Not appropriate" to "Very appropriate" or impacts on a scale from “Very negative” to “Very positive”. In order to compare these answers quantitatively, the responses have been converted to a numerical scale, according to the table below. This simple transformation of the data allows comparisons across policies and groups of respondents[3]. The responses marked "Don't know/ No view" were removed altogether.

Consequently, no extra weight is given to alternatives with a lot of very positive or very negative ratings, and a simple average is used when comparing different options.

Table I-2: Numerical Transformations of Qualitative Answers

Numerical value	Appropriateness	Importance	Impact
-	Don't know/ No view	Don't know/ No view	Don't know/ No view
1	Not appropriate	Not important	Very negative
2	Little appropriate	Somewhat important	Negative
3	Neutral	Important	Neutral
4	Quite appropriate	Quite important	Positive
5	Very much appropriate	Very important	Very positive

1.3 The views of citizens

The citizens that have responded to the questionnaire, experience rail noise as a very important problem in their area of residence. Two main points should be noted about the citizens' responses. First, rail noise is a problem that mobilizes public opinion which is especially the case in Germany. Secondly, the responses from this category cannot be generalized to the greater European public, but can mainly be used to examine the attitudes of citizens in strongly affected areas. As a consequence, the responses can only be generalized to the European population most exposed by noise pollution from rail freight, but not the general European population.

The following figures show that there seems to be great coherence in the replies of citizens, regardless of nationality. Notably, there is a clear consensus that noise is the greatest policy challenge for the rail freight sector, as it is shown in Figure I-3. Citizens all agree that freight trains are the most important source of rail noise, illustrated in Figure I-4. This section elaborates on how citizens experience the issue, and further substantiates the claim that there is a sample bias.

Applying the conversions from Table I-2 to the question "To what extent do you think the following objectives are important to be achieved in the future?" yields the results in Figure I-3 below. The transformation makes it easy to compare the replies of the different groups, in this case German citizens and others.

It is obvious from Figure I-3, that the replies of the large group of German respondents and the remainder of 'Other citizens' are quite similar. The small differences that can be seen are

[3] It is important to keep in mind that the scale applied here is a linear, i.e. a change from "Neutral" to "Little appropriate" amounts to the same as a change from "Little appropriate" to "Not appropriate".

of no statistical significance. The answers to the sources of rail noise are very similar on this point as well.

Figure I-3: Average, relative importance of freight policy challenges according to citizens (N=563)

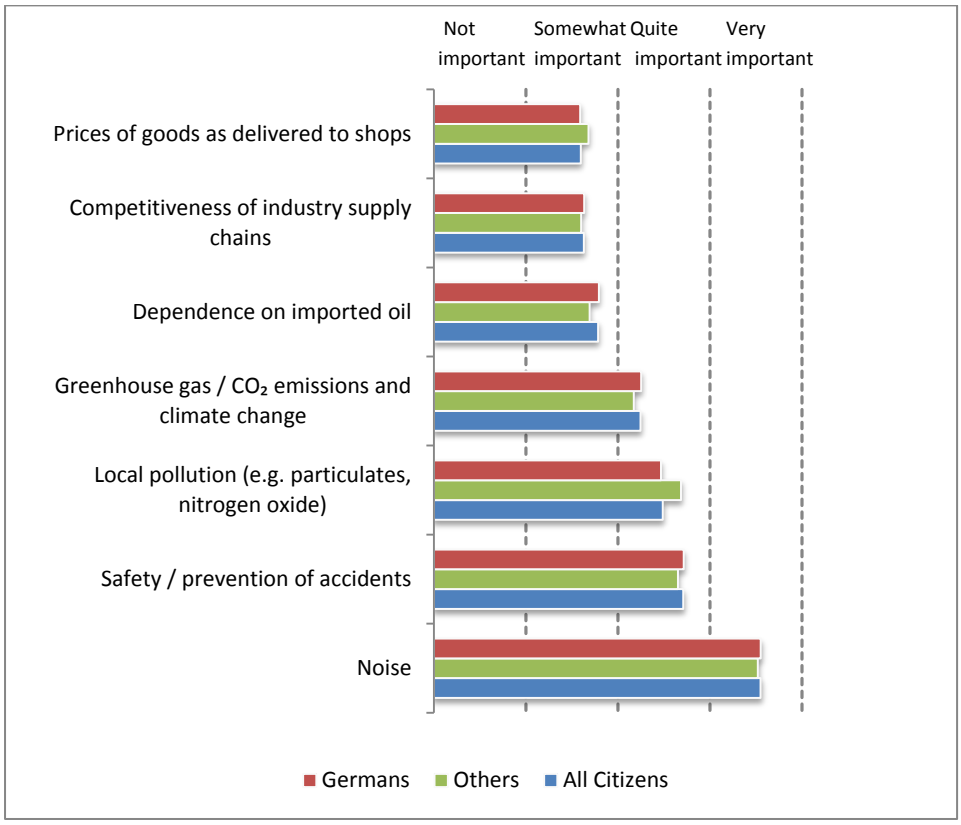
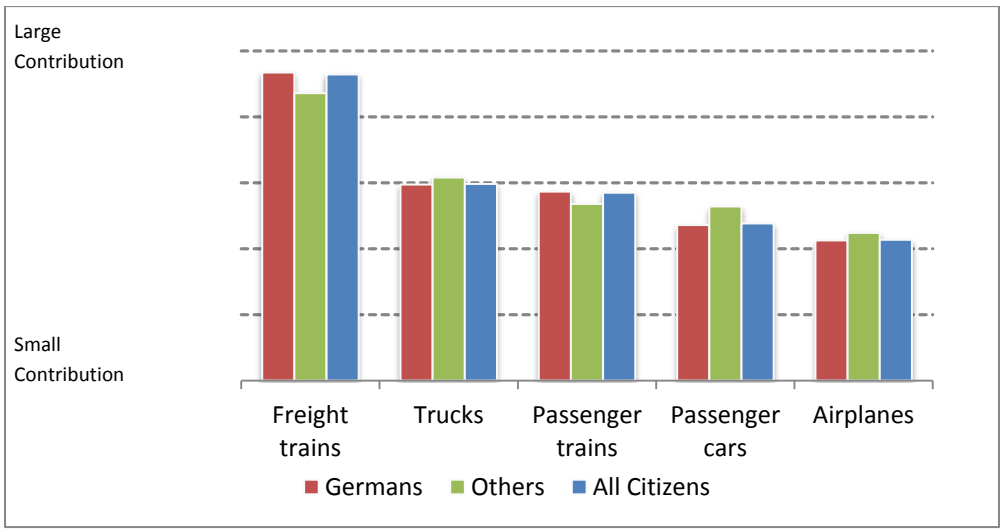


Figure I-4 below shows that freight trains are by far the greatest contributor to noise pollution, according to the responding citizens, ahead of trucks and passenger trains.

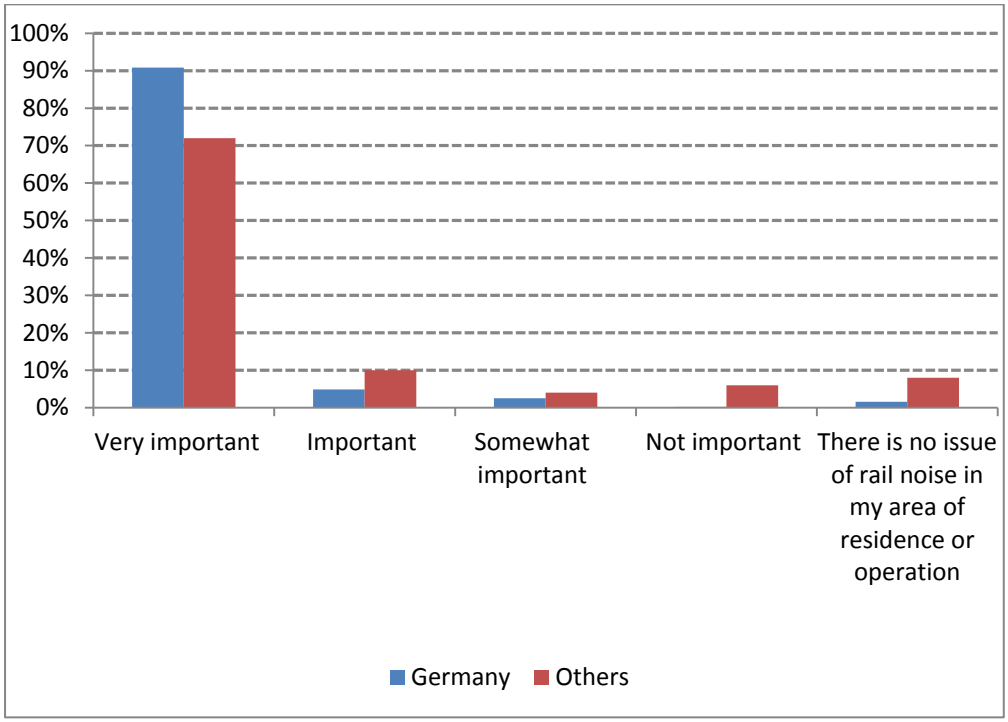
Figure I-4: Relative contribution of different noise sources to the problem of noise as perceived by citizens (N=563)



1.3.1 Problem definition

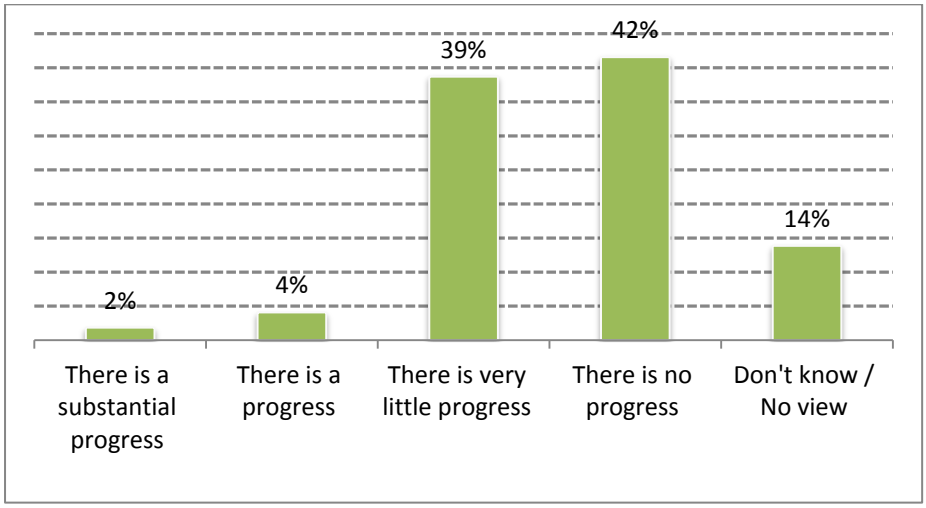
In general, the citizens who replied to questionnaire were those who were strongly affected by rail noise. Of those 90% of German respondents and 70% of non-German respondents rate the problem of rail noise as 'very important', as shown in Figure I-5. The variation in the response pattern may be due to a low number of responses from other countries, but there are slight indications in the data that the rail noise issue is not as apparent in other countries as in Germany.

Figure I-5: Replies to "How do you rate the problem of rail noise in your area of residence?" (N=563)



Following this, it seems that citizens observe little progress in the retrofitting of quieter brakes for existing freight wagons, as is illustrated by Figure I-6 where 39% see very little progress.

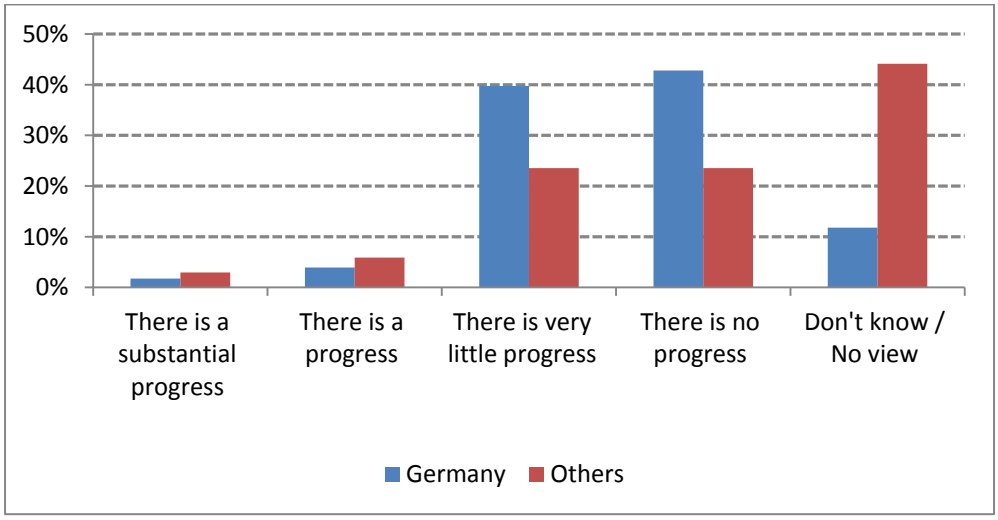
Figure I-6: How quickly is the retrofitting of quieter brakes for existing rail freight wagons implemented in your region of residence/operation? (N=491)



It can be debated whether the citizen respondents have an informed opinion on this matter. However, as already shown, the citizens who have answered are strongly affected by rail noise, and might therefore be expected to have more knowledge on this matter than an average EU citizen. Furthermore, the responses from citizens who rate their own knowledge of rail noise as "low" or "very low" are excluded from this question.

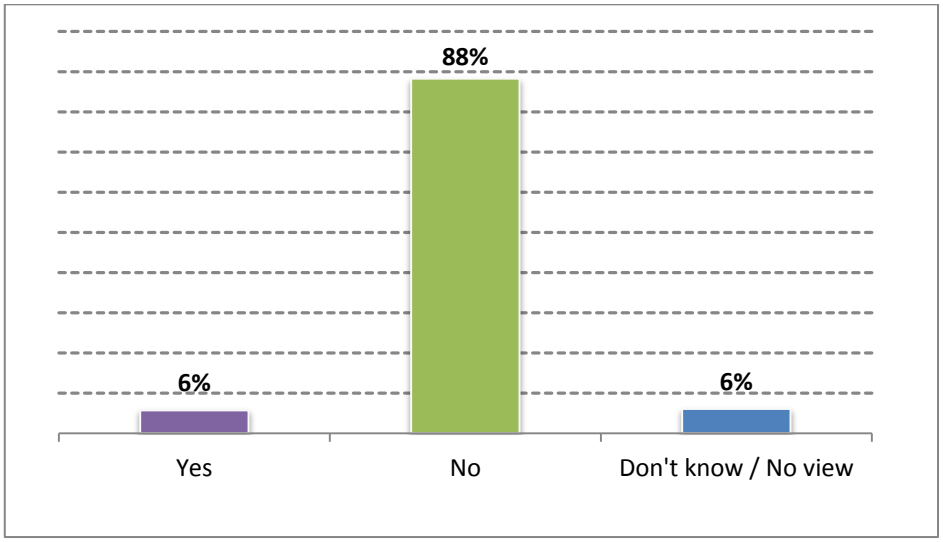
Splitting the citizens into German and "others" yields Figure I-7 below. It shows that German respondents experience less progress than other respondents, and that citizens from other countries are more uncertain. It should be remembered, however, that Germans account for ca. 90% of the citizens, and so the "others" category is not statistically representative of citizens in their respective countries.

Figure I-7: How quickly is the retrofitting of quieter brakes for existing rail freight wagons implemented in your region of residence/operation? (N=491)



Furthermore, almost 90% believe that current measures at local and national level are insufficient in achieving a reduction in rail noise, as shown in Figure I-8. This provides a clear indication that further action is needed if citizens are to have faith in the ambitions on reducing rail noise being reached.

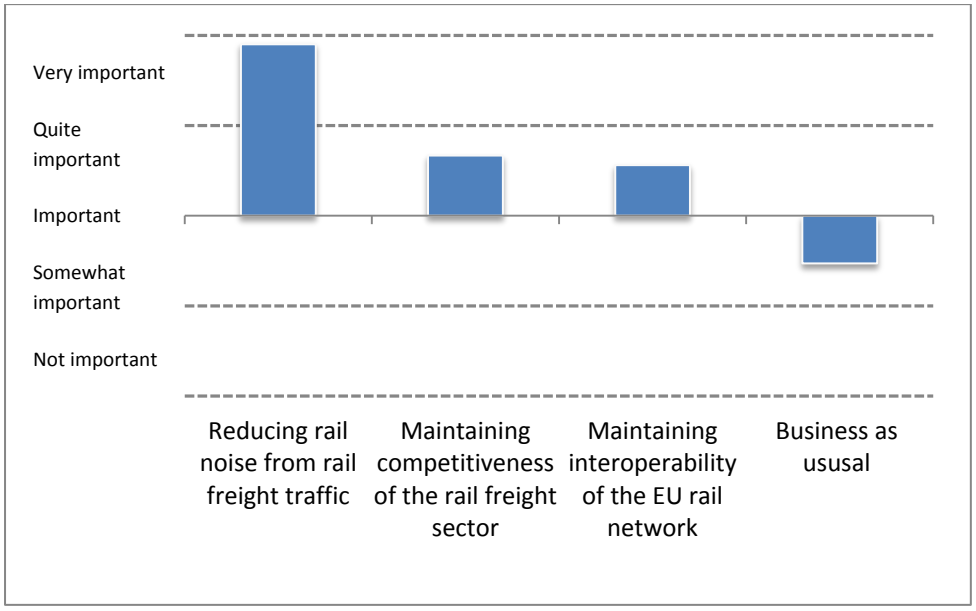
Figure I-8: Are measures currently taken at national/local level sufficient to achieve a reduction of rail freight noise? (N=562)



1.3.2 Policy objectives

In the questionnaire, the respondents were presented with four policy objectives, all mentioned in Figure I-9. The results show that reducing noise from rail freight traffic is viewed as the most important policy objective by the citizens. The remaining policy objectives are viewed as less important, but not negligible. 'Business as usual' is viewed as the least important of the four policy objectives. This may be a reflection of the fact that there is already some legislation and some measures in place that citizens would not like to see removed or restricted.

Figure I-9: Importance of policy objectives according to citizens (N=492)



1.3.3 Policy options

Table below presents the options, as they were introduced in the public consultation document.

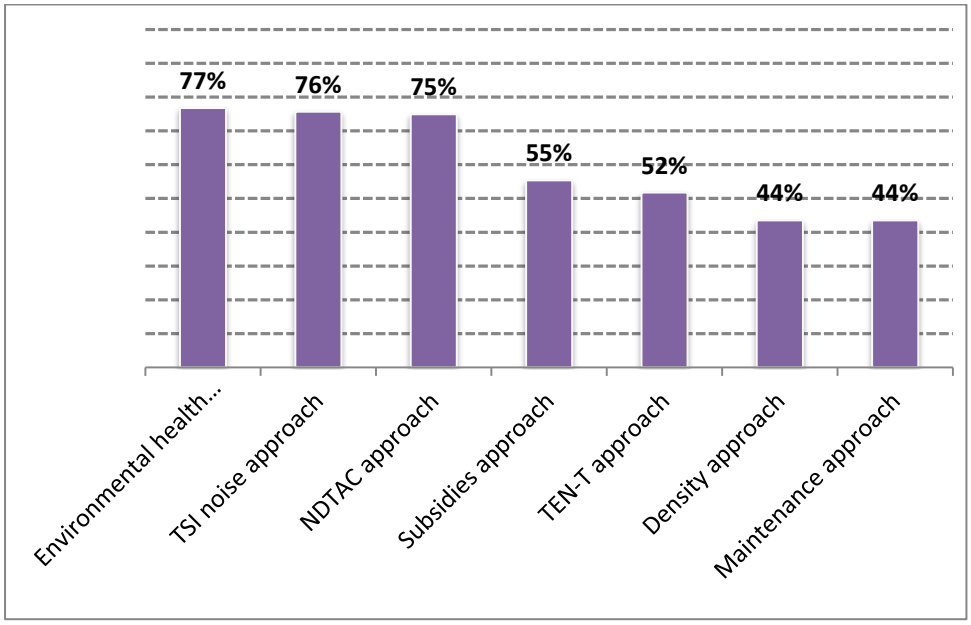
Table I-3 Policy options as presented in the online questionnaire

Policy options	How the options deliver on the objectives
Status quo	This is the baseline. The baseline must assess how the future situation is likely to evolve under the current legal framework, including assessing the effects this will have on the health of citizens and on the competitiveness of railways. Likely future developments are that some progress will be made through fragmented with a possible risk for reverse modal shift. It is expected to have the least impact on old rolling stock and acceptance of rail. Further elaboration of problem drivers/barriers is also part of the baseline.
Subsidy approach	This option foresees financial incentives (subsidies) to improve rate of retrofitting of wagons at EU level. It is important to estimate the level and exact type of incentive that will have the optimal result. A sufficiently high incentive could deliver in preventing overutilization, increasing quality of life and wellbeing as it could accelerate retrofitting. Still it might not guarantee a common approach or legal clarity. While it could build acceptance, much will depend on the chosen source of funding (EU or national), as, given the current economic environment the allocation of public funds has developed into a sensitive issue.
NDTAC approach	This approach examines in detail the effects from the optional introduction of NDTAC, possible "spill-over-effects" and foresees a comparison with the possible effects of a mandatory NDTAC. Here, the extent to which this option will deliver will depend, as the experience so far has shown, on the actual design of the NDTAC system. A properly designed and technically feasible and cost-effective system could provide a best practice scenario to have positive impacts on the whole of the EU. A fragmented application of NDTAC has the risk of not delivering on a number of objectives, such as the common approach and the clarity.
TSI Noise approach	This option differs from the above market-based instruments, by introducing a legal limitation to the existing wagons for all the lines in the EU. This option could deliver for all the stated objectives. This option is expected to be contested on a number of grounds including the availability of funds, higher costs, the technical difficulties for this undertaking, and the possible reduction in rail competitiveness. All these factors will have to be assessed in order to estimate an appropriate date for such an introduction. A number of possible variations concerning transition periods can be envisaged. It might be relevant to consider combining this option with the subsidies approach to mitigate negative effects on the competitiveness of the rail sector.
TEN-T approach	This option is similar to the one examined above. However, it is limited in its scope of application to the TEN-T network. The main differentiating characteristic is the focus on the international dimension of the railways and the intensity of freight volumes. This option could have a limited effect on the objectives. In addition it introduces the risk of reduced competitiveness so long as similar measures are not taken for the competing modes (i.e. road), as well as for the overutilization of old rolling stock which will now be used disproportionately on lower freight volume routes. The issue of funding for retrofitting will be actively raised by stakeholders.
Density approach	This option is a variation of the one examined above. It focuses mainly on the density of population and as such it is expected to have positive results in terms of quality of life and acceptance. The success will depend also on the level that the railway undertakings and the wagon owners will be able to finance/recover from the retrofitting costs as rail lines passing through densely populated areas are not necessarily the most profitable ones. Again funding will become an important issue. A number of possible variations concerning definition of the densely populated areas can be envisaged.

Environmental health approach	This option comes as a "fair" option as far as intermodal competition is concerned, and would bring the highest impact on all objectives.
Maintenance management approach	This option is directed towards the second element in the wheel rail interface - rail. Setting up requirements for the rail roughness on the European Rail Network (or part of it) could lower noise not only for freight wagons but also for passenger trains. The infrastructure manager would play a key role in delivering this option. This option could however be contested on the grounds of the subsidiarity principle, as the Commission sets up requirements for the maintenance of the railway infrastructure, which is normally the remit of the member states. This option might not deliver all the stated objectives but could in combination with one or several of the other policy options deliver a substantial contribution.

In Figure I-10 the policy options are ranked according to the citizens' assessment of their appropriateness. The respondents who rated rail noise as a 'very important' problem seem to be positive to all policy options addressing the problem. A large part of the respondents rate any approached as "very appropriate" or "quite appropriate".

Figure I-10: Percentage of citizens that rated noise as "very important" who assessed the respective approaches as "very appropriate" or "quite appropriate" (N=502)

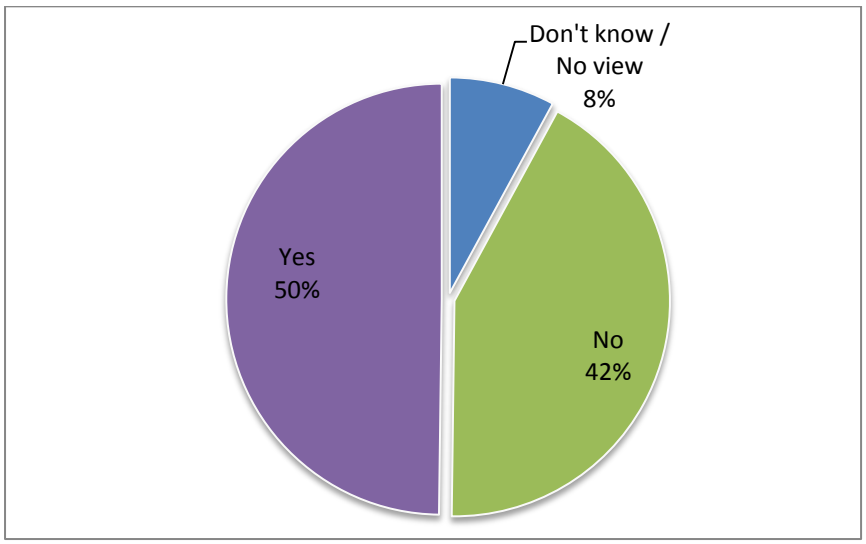


The comprehensive environmental health approach is deemed most appropriate, while TSI Noise and NDTAC are equally judged. A tentative conclusion from the above could be that citizens prefer comprehensive solutions and/or solutions that are targeted at the rolling stock.

1.3.4 Willingness to pay

As a supplementary question in the survey, citizens were asked whether they would be prepared to pay slightly higher taxes, if this were used to finance noise reduction measures in their area. The answers are summarized in Figure I-11.

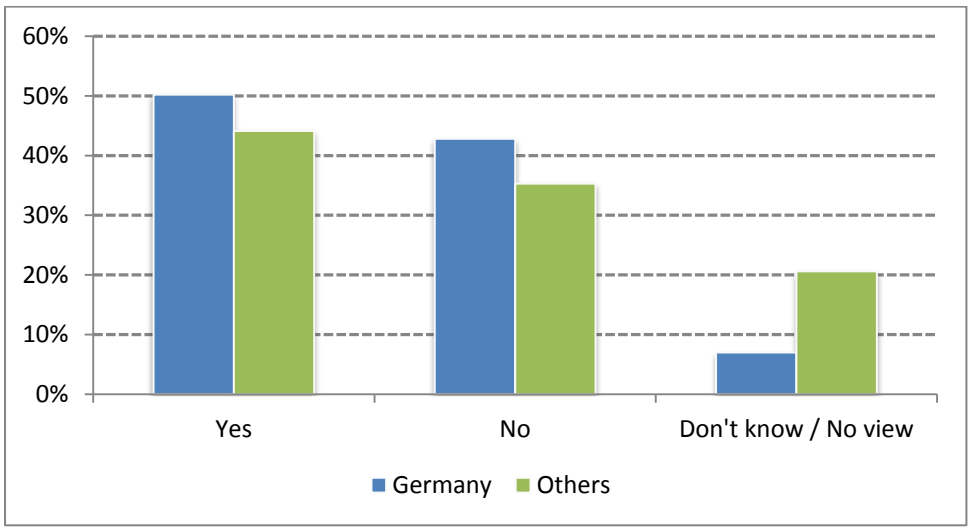
Figure I-11: Would you be prepared to pay slightly higher taxes (e.g. higher income tax) in order to finance measures to reduce rail freight noise in your area? (N=492)



While it is important to be aware of the relatively large group of respondents in the category 'others', who 'don't know' or have 'no view' on this topic, approximately 50% of the respondents would be willing to pay higher taxes. This relates above all to respondents most exposed to rail noise, given that supplementary data shows, that among those who do not see rail noise as an important issue in their area of residence, 100% of the responses indicate no willingness to pay.

Looking at responses from 'Germany' and 'Others' (Figure I-12), it can be seen that 50% of German respondent are willing to pay, where only 44% of 'other' respondent are.

Figure I-12: Would you be prepared to pay slightly higher taxes (e.g. higher income tax) in order to finance measures to reduce rail freight noise in your area? Germans and Others



1.3.5 Citizens' assessment of impacts

In the questionnaire, citizens are asked to give their assessment of the impact of the different policy options on several different issues, e.g. competitiveness in the sector, administrative costs for companies and the state and, of course, rail freight noise. The answers have been summarized in Table I-4. Averages of qualitative scores have been calculated as explained earlier in section 2.2 Scoring. Values above 3 indicate a positive impact; values below 3 indicate a negative impact. When looking at the averages across all options and areas of impact, there is just one average that is assessed as having negative impact. In two instances, the impacts on policy options are assessed as neutral. In more detail, citizens assess that the subsidy approach will have a negative impact on government budgets. However, the score of 2.7 indicates a small negative impact (close to neutral). Citizens also asses the TEN-T and Density approaches to have a neutral impact on government budgets, which seems improbable given that both will entail administrative and other costs to implement. In general, it seems that citizens have the impression that that all options will generate positive impacts across the board. This is probably not realistic and it may indicate either some degree of optimism bias or just the fact that it is difficult to assess the possible impacts of different policy options.

Table I-4: Average impact score of each approach according to citizens (N=492)

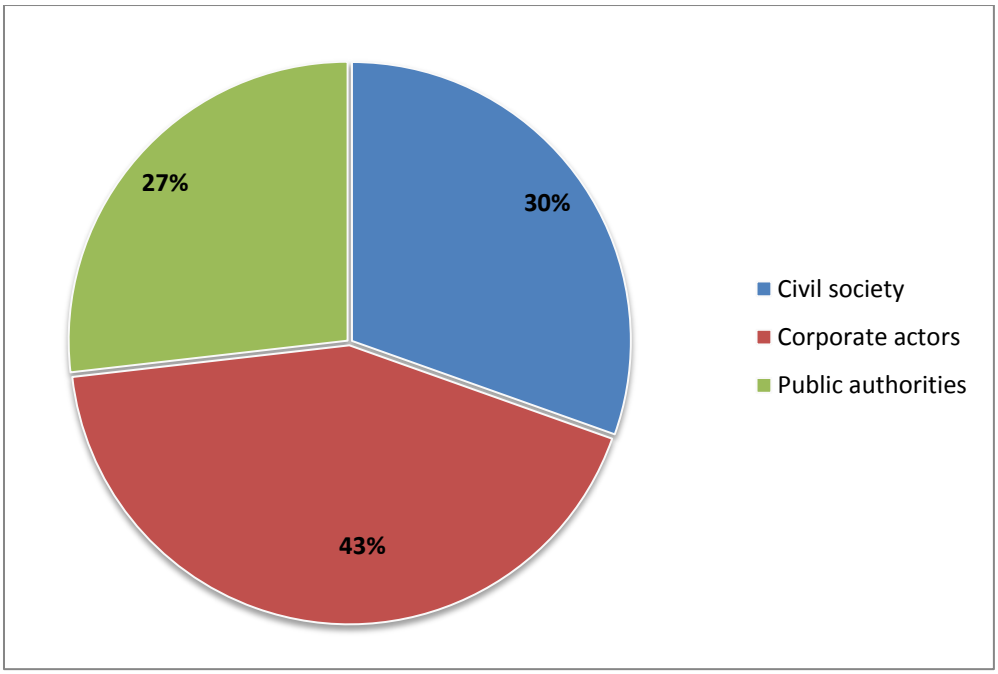
	Competitive-ness of the rail freight transport sector in the EU	Total administrative costs for companies and for the state	Working conditions in the railway sector	General employment levels in your country	Government budgets	Exposure of the public to rail noise	The functioning of the Internal Market?	Ability of operators from 3rd countries (e.g. Switzerland and Russia) to maintain business in the EU?
Subsidies approach	3.7	3.2	3.7	3.6	2.7	3.9	3.5	3.2
NDTAC approach	3.9	3.3	3.7	3.7	3.1	4.2	3.4	3.2
TSI noise approach	3.9	3.4	3.8	3.8	3.1	4.2	3.5	3.2
TEN-T approach	3.6	3.2	3.7	3.6	3.0	4.0	3.4	3.2
Density approach	3.4	3.1	3.5	3.4	3.0	4.0	3.1	3.1
Maintenance approach	3.9	3.4	3.9	3.9	3.2	4.2	3.5	3.3
Environmental health approach	4.0	3.5	4.0	3.9	3.3	4.3	3.5	3.3

1.4 The views of citizens

This section presents the answers from the 'Professionals' category. These are the stakeholders who work on a professional and/or daily basis with issues related to rail noise. Their responses indicate how rail noise affects this group of actors (or their constituencies), and what their professional opinion on the matter is. The answers in this section are expected to have a relatively high quality, as 75% of the respondents rate their own knowledge about issues regarding rail noise as high or very high.

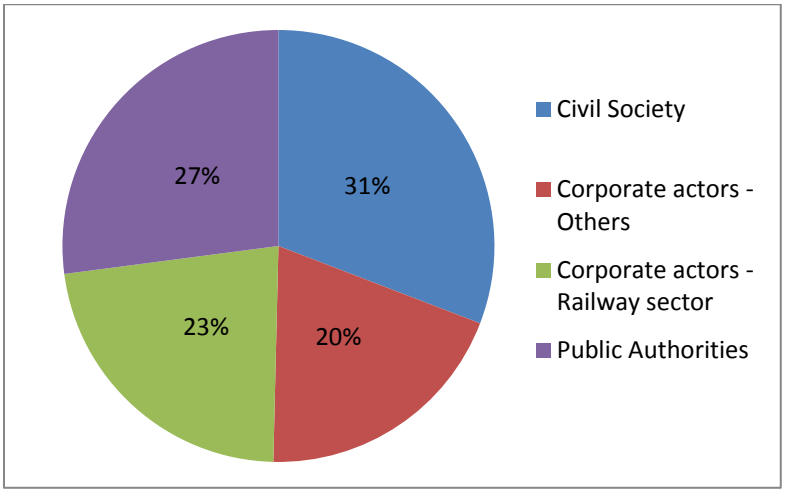
There is a great variety within the "Professionals" category in terms of the size or number of members of the different companies and associations. Of the companies represented, SMEs (10-249 employees) and large enterprises (250 employees or more) make up about 40% each, whilst micro enterprises (10 employees or less) account for the remaining 20%. The associations also vary greatly in size and have membership numbers ranging from 15 to more than 20.000.

Figure I-13 Breakdown of professionals by category (N= 138)



The category “corporate actors” encompasses a range of different types of firms. As shown in Figure I-14, a slight majority of the corporate actors come from the railway sector. Among the group “Corporate actors – Others”, are several firms in the tourism industry and agriculture.

Figure I-14: Breakdown of professionals, separating out railway sector (N=133)[4]

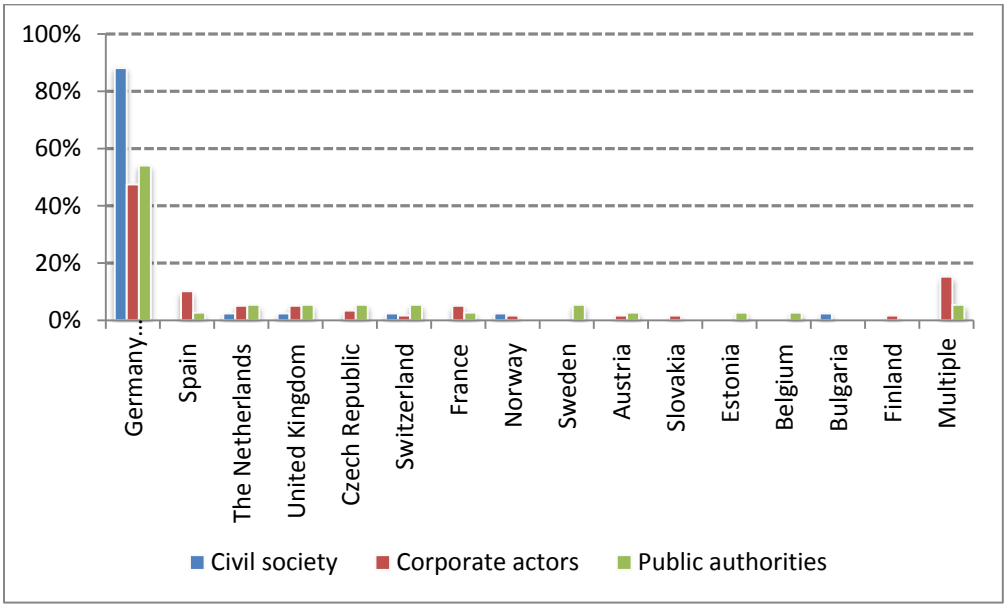


With regards to the public authorities, the specific composition of this group can be seen in below.

Table I-5: Public authorities by type (N= 37)

Type of authority	Count	%
Local or regional public authority	23	62
National public authority	11	30
Association of public authorities	3	8

Figure I-15: Professionals by category and country (N=138)



As Figure I-15 illustrates, Germany is strongly represented in this category as well, accounting for more than 70% of the professional respondents. Public authorities and

[4] The railway sector is defined as railway undertakings, infrastructure managers, wagon keepers and railway sectors interest organizations. The number of observations drops to 133, because 5 actors of unknown industry have been deleted.

corporate actors are also primarily from Germany, but represent a broader selection or Member States than does civil society.

1.4.1 Problem definition

Figure I-16 presents data on the professionals' perception of the importance of the different policy different objectives. It is obvious that none of the three groups of professionals believe 'business as usual' can be a valid objective.

Figure I-16: To what extent do you think the following objectives are important to achieve in the future? (N=138)

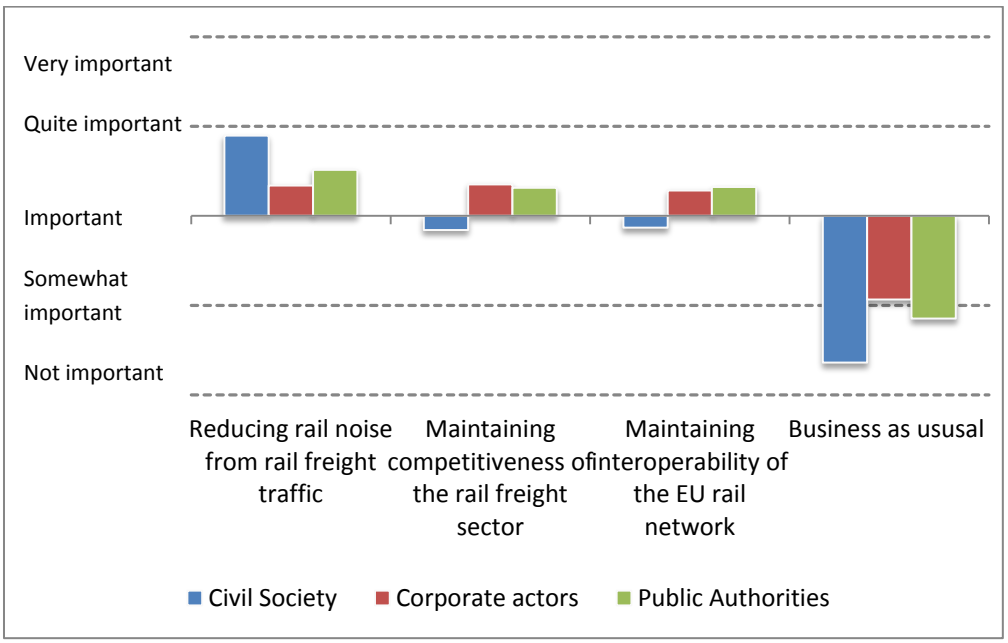
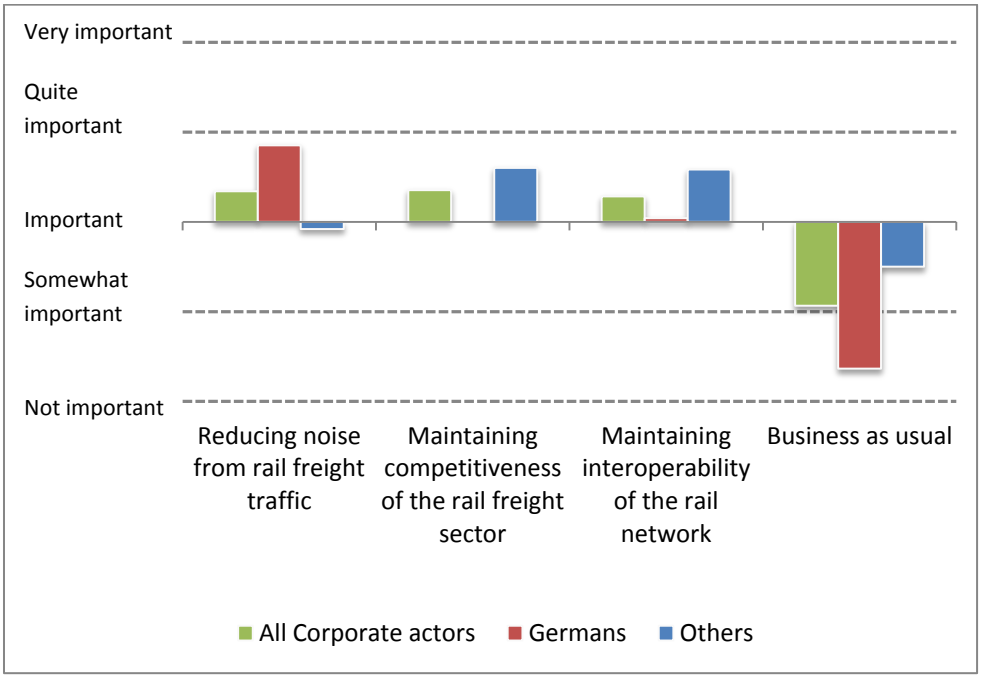


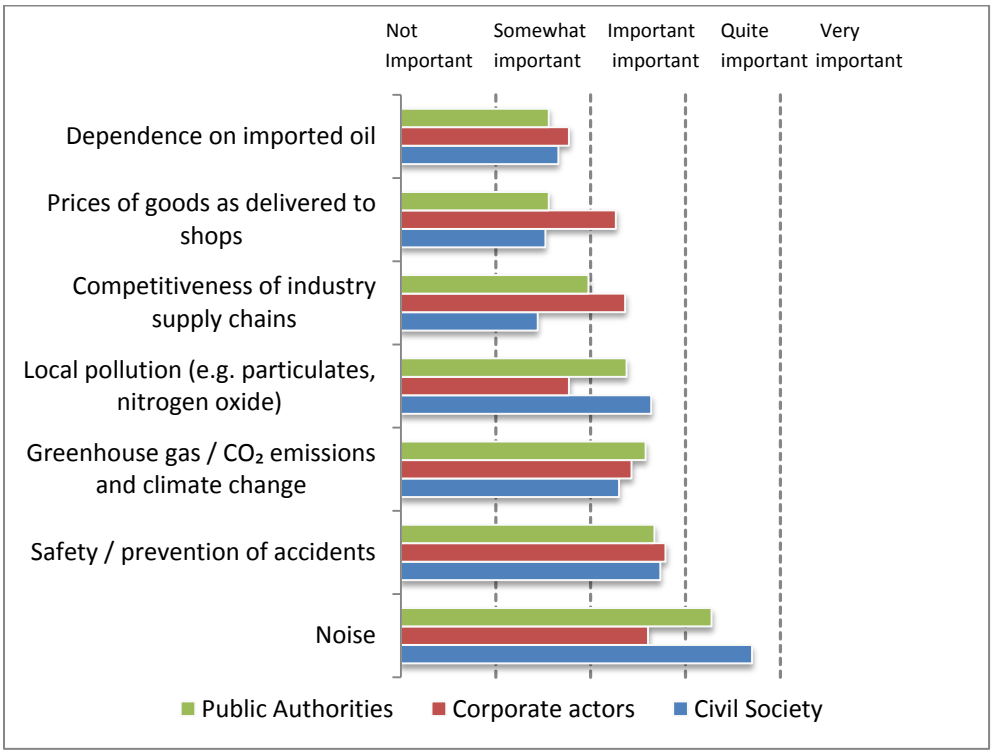
Figure I-17: To what extent do you think the following objectives are important to achieve in the future? (N=55)



Civil society organisations almost exclusively rank the reduction of rail freight noise as the main policy objective of future policy making. This differs from the answers from corporate actors and public authorities. These two groups have almost similar perceptions of the objectives that should be addressed, if and when making new policy.

As illustrated in Figure I-18, 'Professionals' as a whole rank noise as the most important freight transport policy challenge, just like the citizens. However, in contrast with the citizens, they rate climate change-related issues as more important than local pollution. Also, professionals rank competitiveness of industry as a more important policy challenge than citizens do. Corporate actors seem not to prioritise noise as a specific challenge distinct from the other mentioned freight policy transport challenges.

Figure I-18: Importance of Freight Transport Policy Challenges (N=138)



Looking at the sources of rail noise in Figure I-19, all the mentioned sources are seen to make significant contributions towards rail noise. If any tentative conclusion can be drawn, it seems that issues to do with specific rail infrastructure (wheels and rails) are more 'at fault' than other issues.

Figure I-19: Contributing sources to rail noise (N=138)

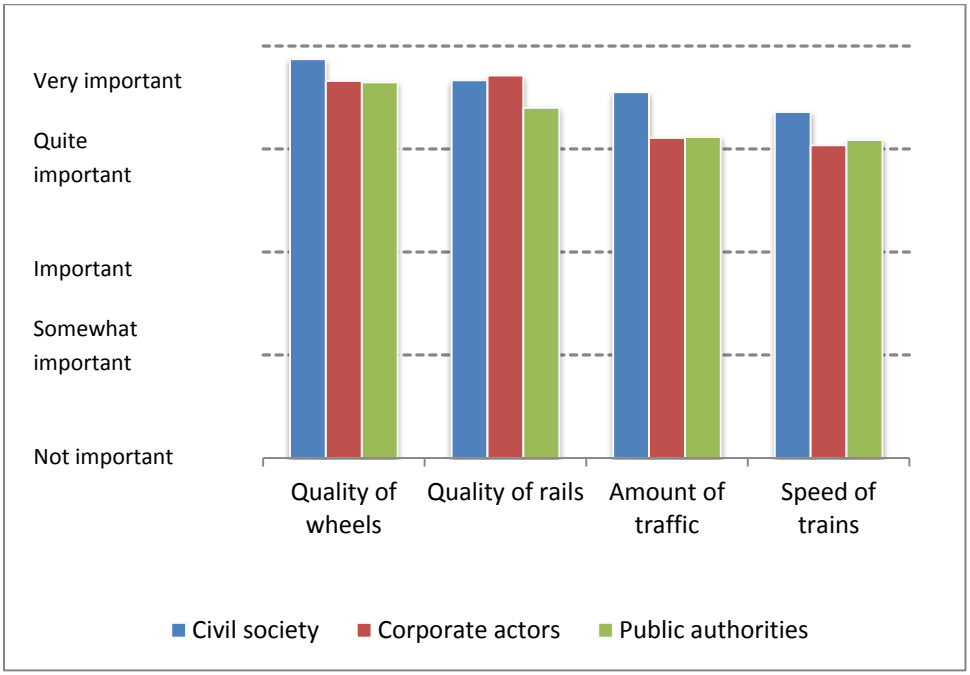
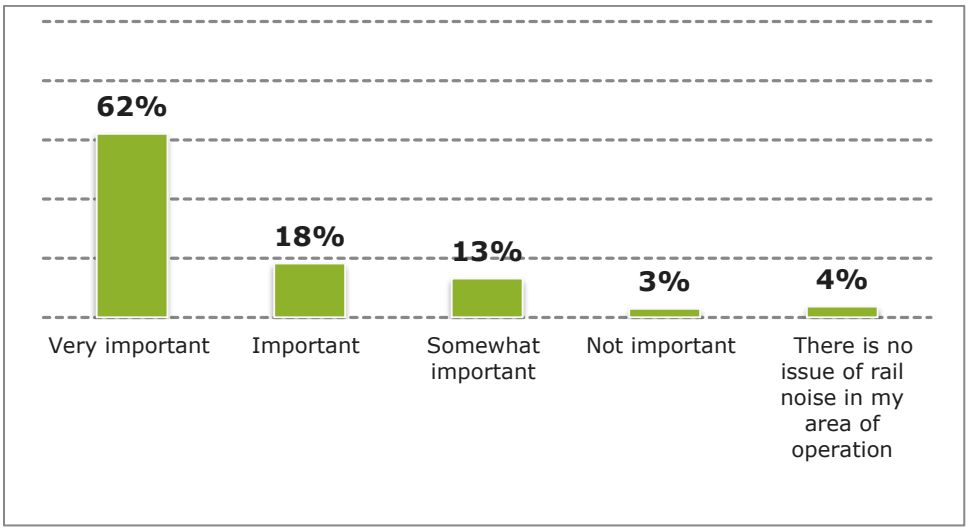


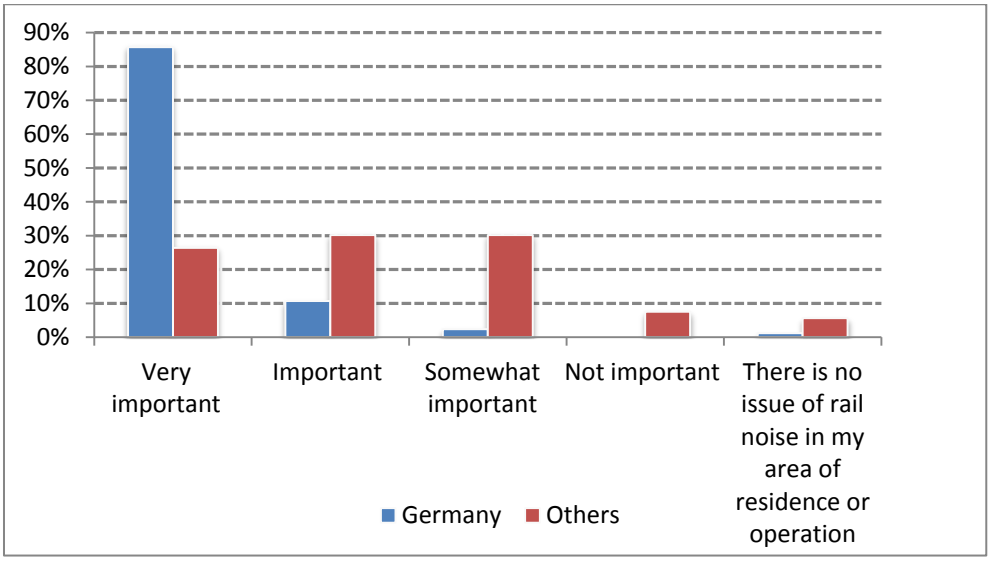
Figure I-20 shows that for 80% of the respondents, rail noise is an important or very important issue in their area of operation. This indicates that the questionnaire to a large extent has reached relevant respondents.

Figure I-20: Importance of Rail Noise in Area of Operation (N= 137)



The fact that 62% of respondents say that rail noise is a very important issue in their area of operation, masks rather big differences in the backgrounds of the respondents. Looking more closely at data in Figure I-21, it is clear that respondents from Germany view rail noise as a much more prominent problem than other respondents do. Around 85% view rail noise as very important in Germany as compared to 25% in other countries.

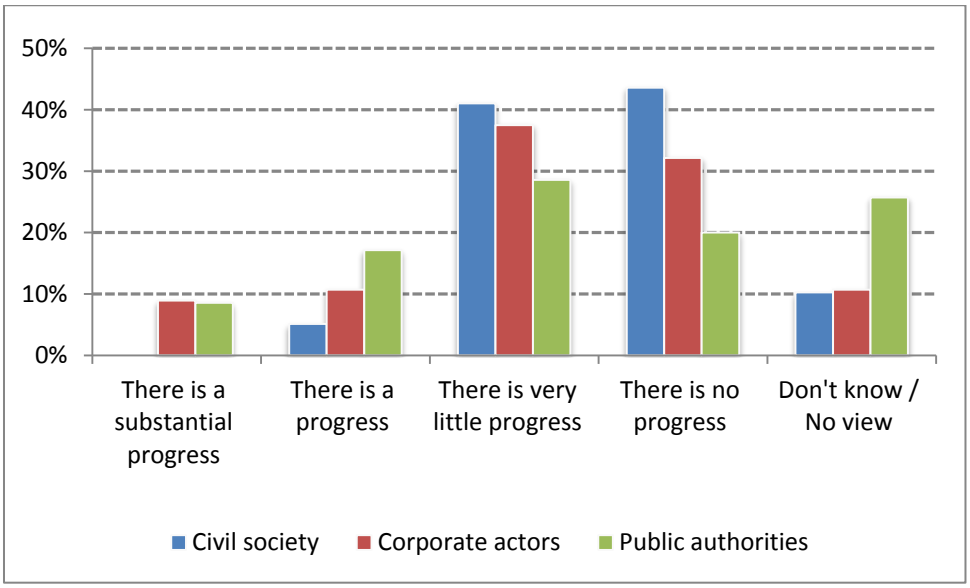
Figure I-21: Importance of Rail Noise in Area of Operation by country (N= 137)



1.4.2 Baseline

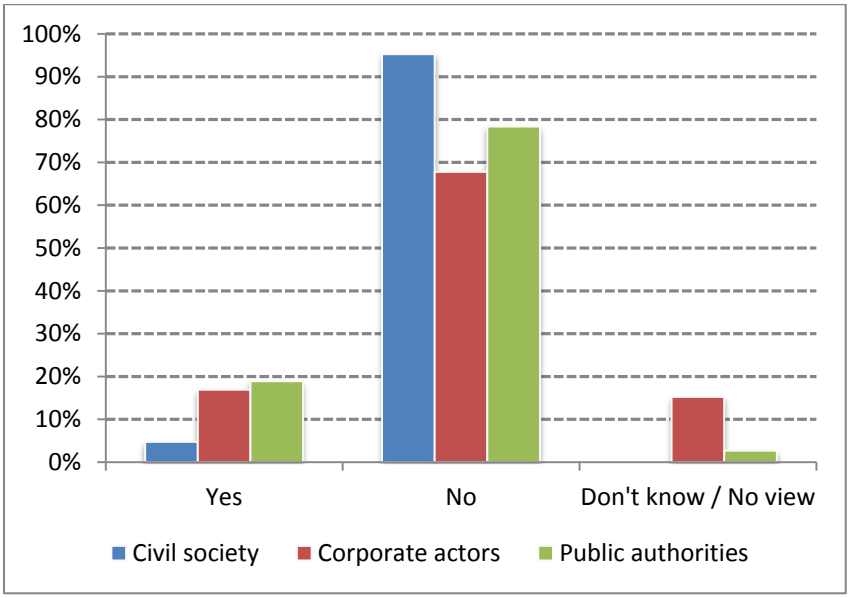
The 'professional' respondents were asked to assess existing measures in terms of their ability to reduce or limit rail freight noise, and their sufficiency in achieving such a reduction. More than 65% reply that there is little or no progress in the process of retrofitting quieter brakes for existing rail wagons.

Figure I-22: Progress of Existing Measures for Retrofitting of Quieter Brakes for Existing Rail Freight Wagons (N=130)



Another indication of the current state of affairs is given in Figure I-23. On average, more than 70% believe current measures are not enough to achieve a reduction in rail noise. Less than 20% believe that current measures are sufficient to reduce rail noise. These responses indicate the need for dealing with the present issue of rail noise.

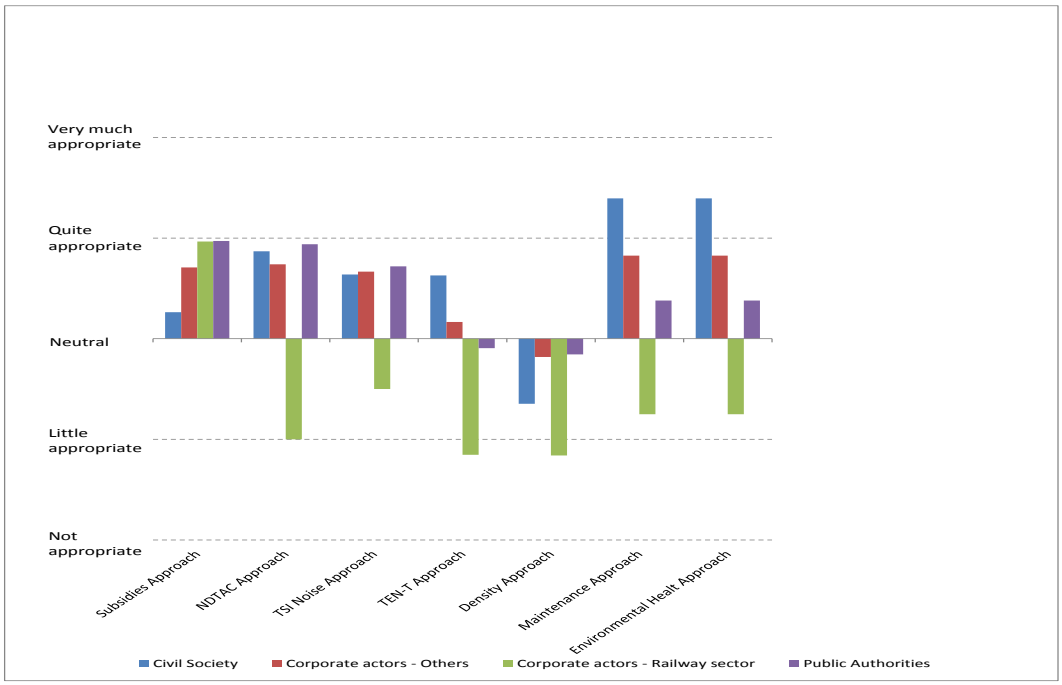
Figure I-23: Are current measures sufficient to achieve rail noise reduction)? (N=137)



1.4.3 Appropriateness of policy options

Each bar in Figure I-24 represents the average rating of the appropriateness of the different approaches in addressing the issue of rail noise.

Figure I-24: Appropriateness of different approaches (N=138)



At this stage, the preferred policy option for civil society actors is either the maintenance approach or environmental health approach. Three other options - the NDTAC, TSI-Noise and TEN-T - are not rated very differently in terms of appropriateness. The density approach is deemed only of little relevance by civil society organisations, and comes out as the least appropriate option in general among all three groups.

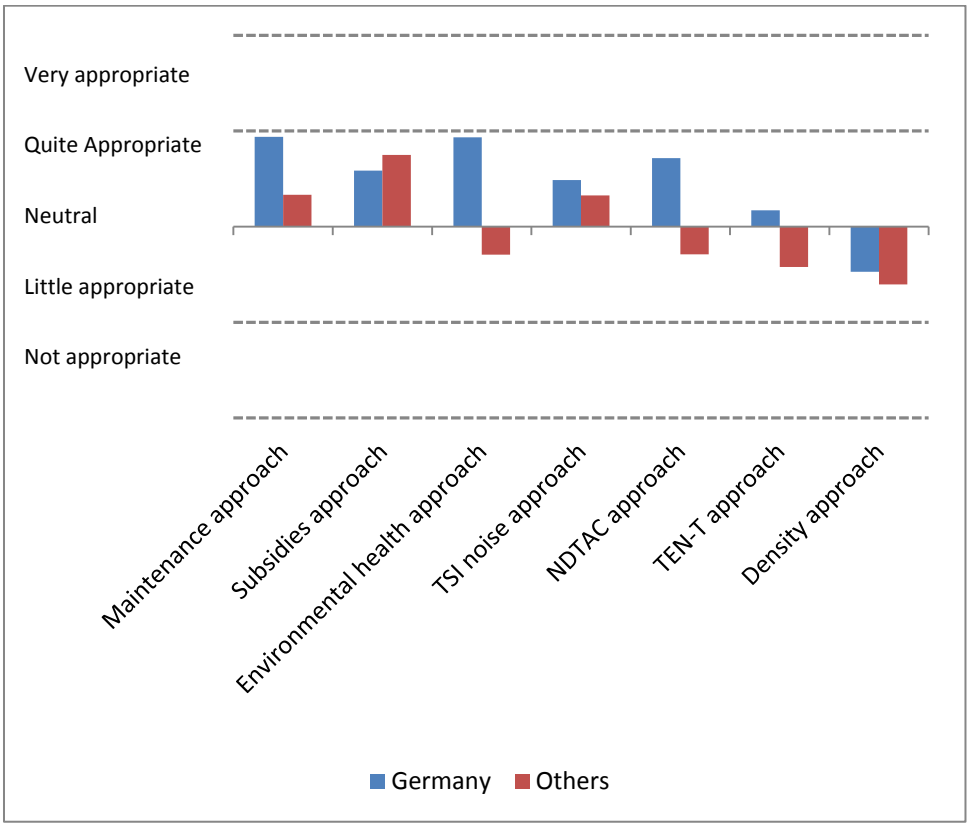
Among the corporate actors, the highest score for appropriateness is given to the subsidies approach. In particular, the subsidy approach is the only one which is considered appropriate by the railway sector. This makes sense, given the fact that corporate actors worry about competitiveness, and rail noise reduction at the same time. Providing subsidies is from the viewpoint of the sector a simple way to maintain competitiveness, while achieving noise reduction. The maintenance approach is the second favourite in terms of appropriateness, likely due to the fact as it would, like subsidies approach, put the bulk of cost on public budgets.

The public authorities rate three options – the NDTAC, TSI-Noise and subsidies – similarly, with equal and relatively high appropriateness scores. The TSI-Noise approach however is rated least appropriate of the three. In the ranking of NDTAC and TSI-Noise, there is a disagreement between the public authorities and the private actors.

In general, no options come out with an average score on appropriateness close to 'Very appropriate'. This indicates, that either there is no very suitable option in play or that a very appropriate solution might need a combination of two or more approaches.

In Figure I-25, the data were split into responses from Germany and 'others'. The results indicate that the most positive responses stem from Germany, while 'others' are more sceptical of the options described in the survey. Differences are largest for the environmental health approach, the maintenance approach and the NDTAC approach.

Figure I-25: Appropriateness of different policy approaches, German respondents and others (N=138)



1.4.4 Policy options

In this section, questions relating to more specific issues on feasibility and implementation of each option are presented. Some of the questions have been asked for all options, but many are also option-specific, e.g. relating to subsidy levels. Common questions asked for each option, are reported at the beginning of each sub-section, and then the presentation goes on to delve into the option-specific questions.

Table I-6 presents the results for one of the common questions. Comments are not given here, but this table is the reference for some of the introductory comments in each section.

Table I-6: Summary of common questions for the seven policy options (N=138)[5]

When will it be feasible to introduce this approach?	It is possible already	Within 1-3 years	Within 3-6 years	In 6 years or after	Appropriateness ranking
Options					
Subsidies approach	53%	21%	13%	6%	6
NDTAC approach	47%	14%	21%	10%	3
TSI noise approach	34%	6%	12%	34%	4
TEN-T approach	29%	13%	13%	23%	5
Density approach	29%	11%	14%	20%	7
Maintenance approach	41%	15%	20%	12%	1
Environmental health approach	26%	5%	15%	30%	2

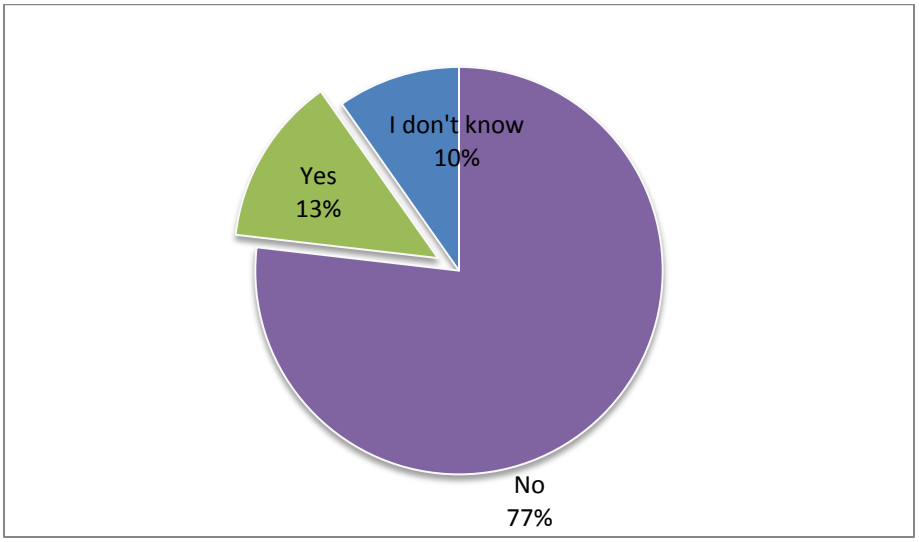
1.4.4.1 Subsidies approach

The subsidies approach comes out as the second most appropriate option, when taking all responses from professionals into account. 53% think that it is technically and administratively feasible to introduce a subsidy today, while 21% think that it would take 1-3 years. In other words, there is optimism among professionals that it would be possible to work out a feasible subsidy policy option for implementation quite soon.

Looking at the questions specific for this option, respondents were asked to assess the likely impact of a subsidy approach on the market. As shown in Figure I-26, the majority do not think that a subsidy for retrofitting would cause any distortion to the competition between operators. However, a significant minority are of another opinion, one of the main reasons for this being the fact that some operators have already gone ahead and retrofitted brakes or axles on their own.

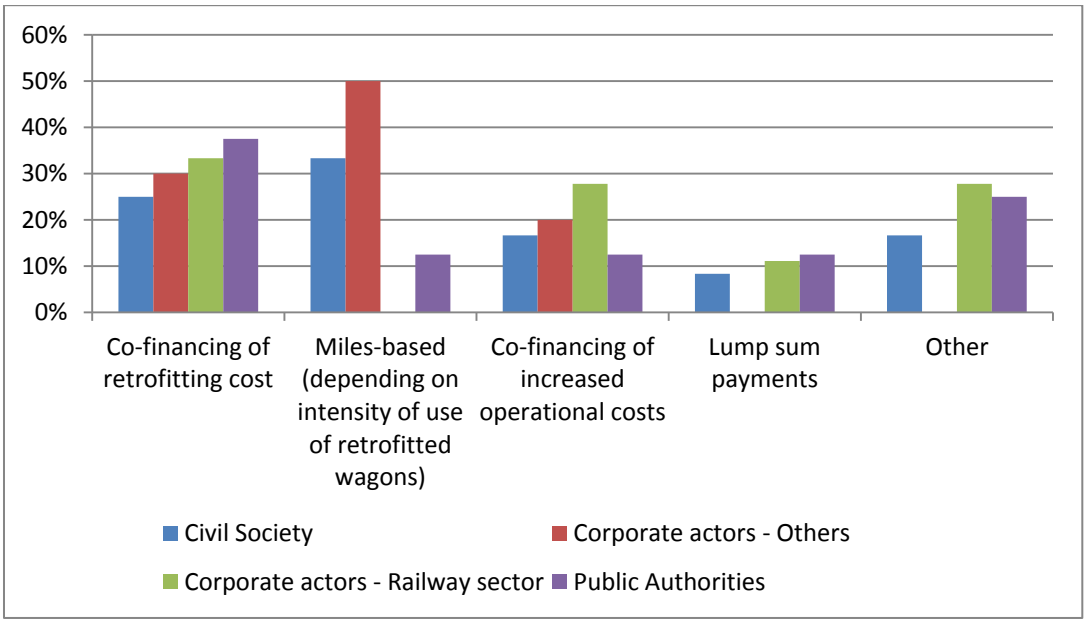
[5] The respondents answering "It will never be possible" are excluded from the table because they only represented 2% of the answers.

Figure I-26: Will subsidies for retrofitting distort competition between operators? (N=131)



According to the responses shown in Figure I-30, there is no clear cut solution as to which version of a subsidy would be the most appropriate. Only 28 respondents replied to this question, naming two types of subsidies each. Co-financing of retrofitting costs is the most named, but a substantial number of respondents think that co-financing of increased operational costs is relevant as well. Lump sum payments are not considered effective in this context. Examples of measures mentioned in the "Other" category include variation in track access charges for less damaging rolling stock, and miles based subsidies with a maximum related to retrofitting costs.

Figure I-27: What type of subsidy do you think is the most effective? (N=28)

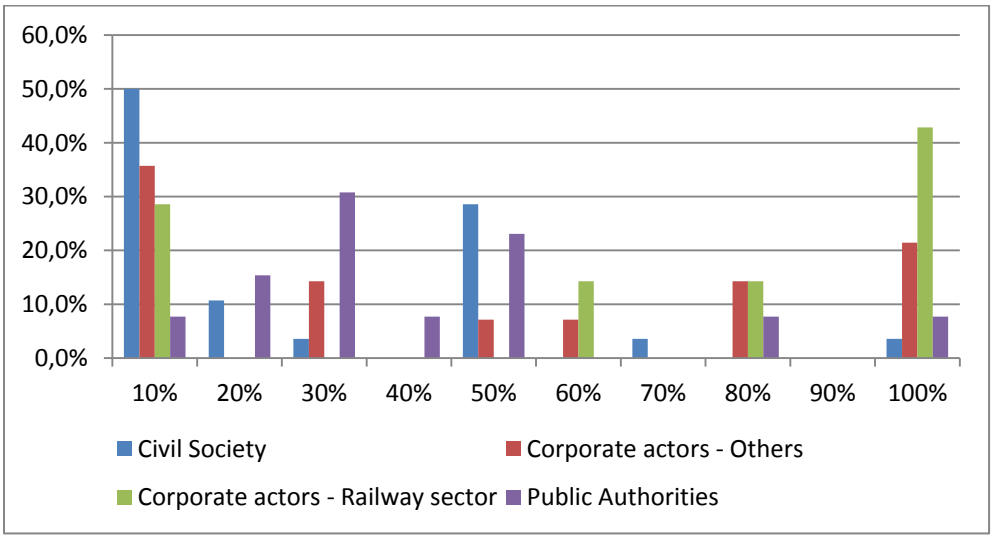


As shown in Figure I-28, the minimum of expected levels of co-financing for retrofitting vary. Civil society believes that this type of subsidy should only cover a relatively low percentage of retrofitting costs. Somewhat surprisingly, a large proportion of corporate actors have the same opinion – with another large subgroup in this category replying that 80 or 100% co-financing is necessary for retrofitting to be effective. The qualitative answers reveal that

among those who prefer a low compensation, it is a consideration that companies already committed to retrofitting would be unfairly treated, with a subsidy to companies who have been more reluctant to move on the issue. Among those who prefer a high compensation, many make the argument that low levels of subsidies would decrease modal share of rail freight as rail would become less competitive.

Public authorities are more 'moderate' in their answers, with most answers in the range of 20%-50% co-financing of costs for retrofitting.

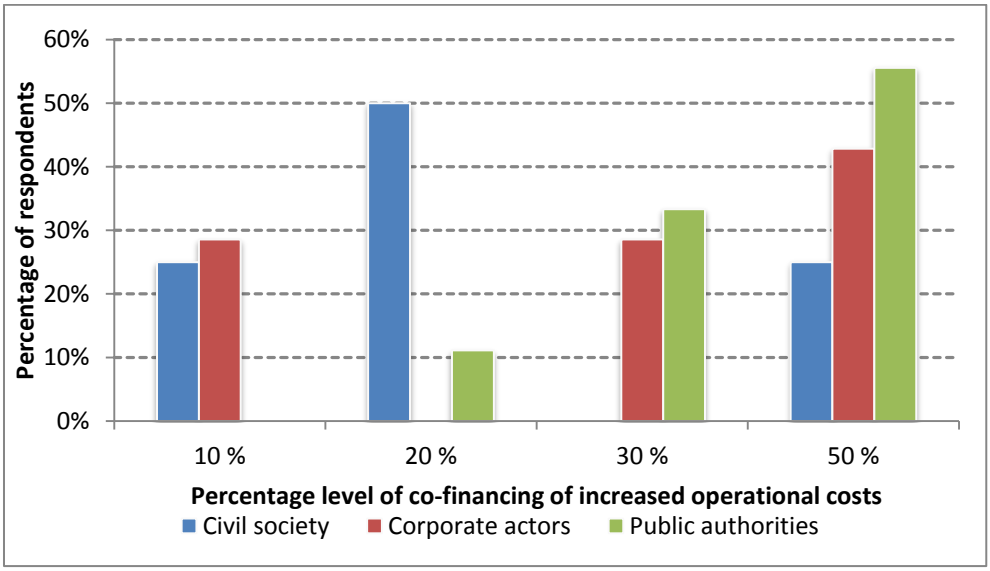
Figure I-28: What is the minimum level of co-financing of retrofitting costs that would have to be provided to be effective (while still being feasible for public budget)? (N= 68)



Looking at levels of subsidies for operational costs (**Figure I-29**), the picture is somewhat different. Civil society actors still prefer low compensation rates, while public authorities and private actors rate the necessity of this type of subsidies and the level of subsidies quite similarly. It is interesting that public authorities believe, that rather high levels of subsidies are necessary - even higher than what the private actors deem necessary.

The qualitative data contains some hints, as to the reasons for some corporate actors wanting a high compensation rate. These respondents claim that anything less than 100% compensation would be unfair to those who made 'honest' investments in previously legal rolling stock. The respondents arguing for a lower compensation rate have not provided much incentive to retrofit.

Figure I-29: What is the minimum level of co-financing of increased operational costs that would have to be provided to be effective (while still being feasible for public budget)? (N=20)

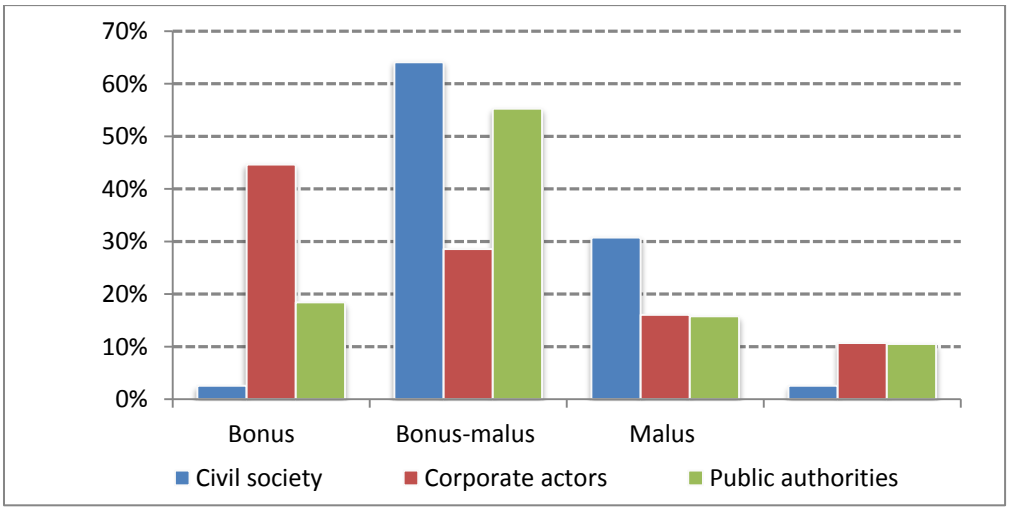


1.4.4.2 NDTAC approach

The NDTAC approach does not rank high in terms of appropriateness, when looking at the average of professionals' responses. However, as witnessed previously, the low ranking is primarily due to a relatively low appropriateness assessment from the corporate actors. In terms of feasibility, 47% believe that it is already technically and administratively feasible to introduce an approach along these lines. This puts it among the easiest options for a quick implementation.

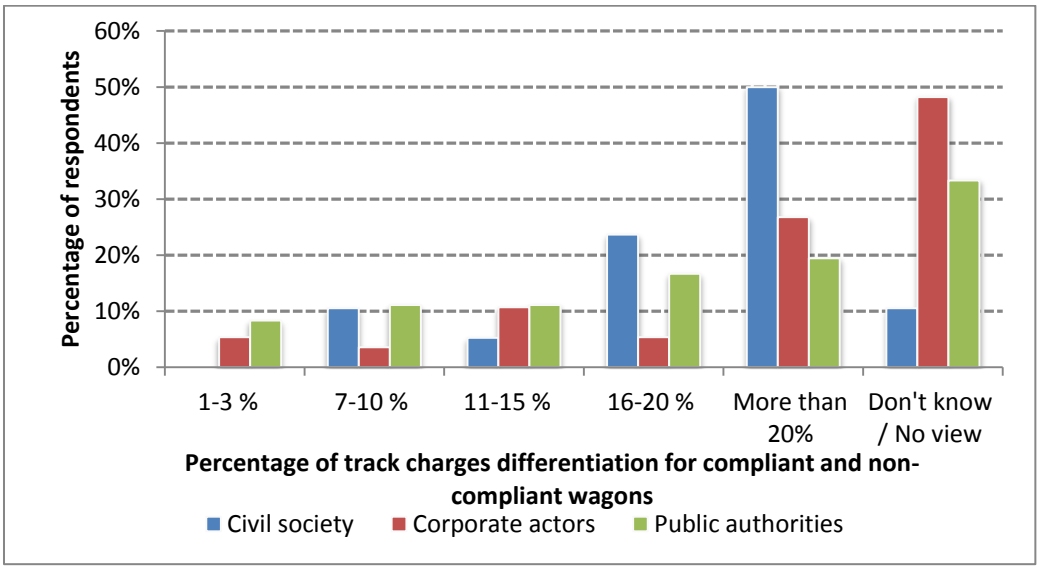
The NDTAC could take different forms, of which the bonus-malus (reducing track charges for TSI-Noise compliant wagons, and increasing them for non-compliant wagons) is preferred by the professionals. This is seen in Figure I-30. For corporate actors, the preferred NDTAC scheme would be one that only consisted of a bonus measure.

Figure I-30: What form of NDTAC do you prefer? (N=133)



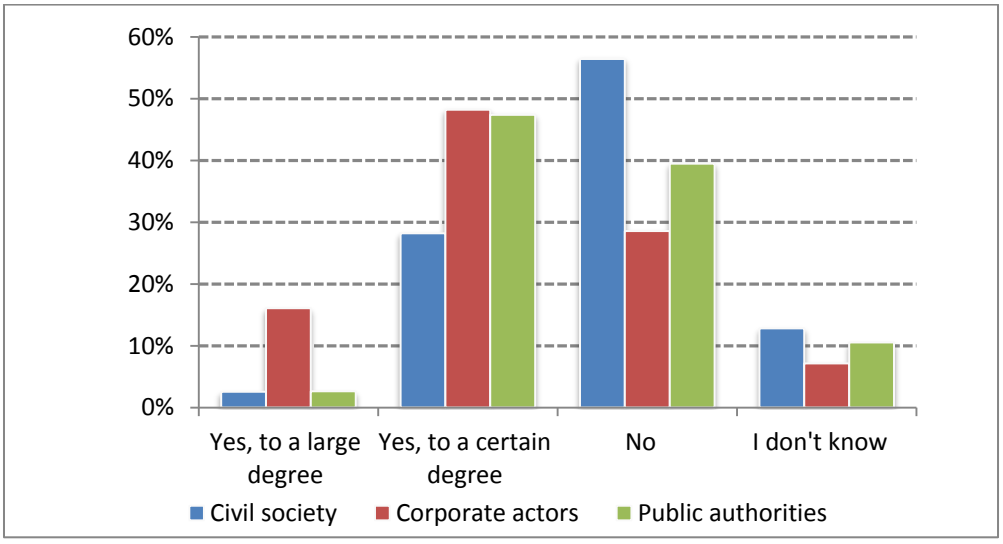
When looking at the differentiation between compliant and non-compliant wagons, the picture is somewhat blurry (see Figure I-31). First, a large proportion of answers are in the 'Don't know' category. Especially the corporate actors find it hard to make a judgment, as to what would be a meaningful level of incentives. Many public authorities do not know this either. For those answers that have been given, it seems that the differentiation levels should be at least 16%.

Figure I-31: To what extent should the track charges be differentiated for non-compliant and compliant wagons in order to establish a meaningful incentive to retrofit those wagons? (N=130)



As is indicated by Figure I-32, there is no consensus on whether the NDTAC approach will cause a modal shift from rail back to road. The lack of clarity of answers is probably due to the fact that NDTAC can be implemented in many ways (as indicated above), where some may lead to a higher risk of modal shift than others. At this stage, the question was too general to provide further insight than what has already been given.

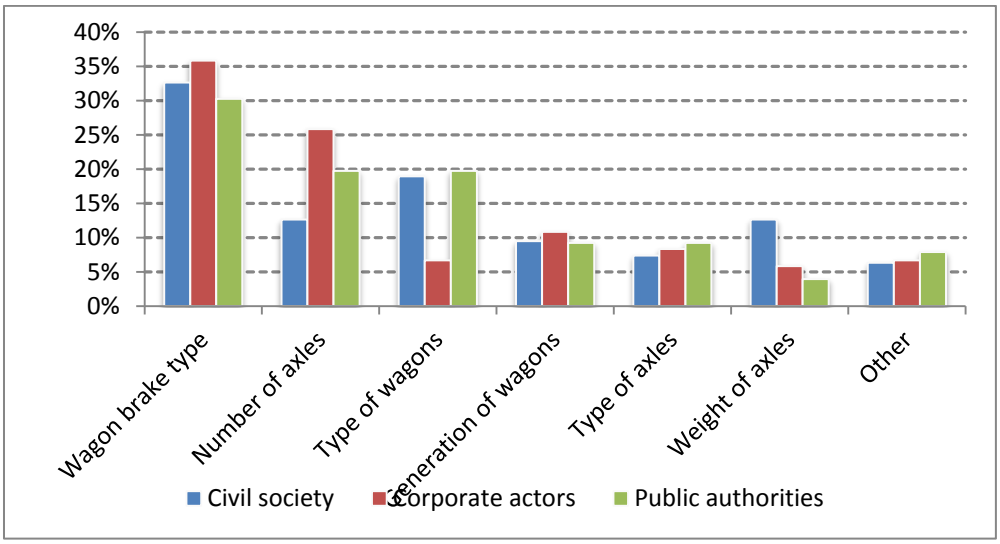
Figure I-32: Do you think that NDTAC will create a modal shift from rail back to road? (N=133)



The respondents are asked to name two factors which in their opinion should be the basis for NDTAC. The results are summarized in Figure I-33. The wagon brake type is the most mentioned factor, with around a third of the votes. This is followed by the number of axles.

Civil society and public authorities both consider the type of wagon to be also a meaningful factor in establishing relevant NDTACs.

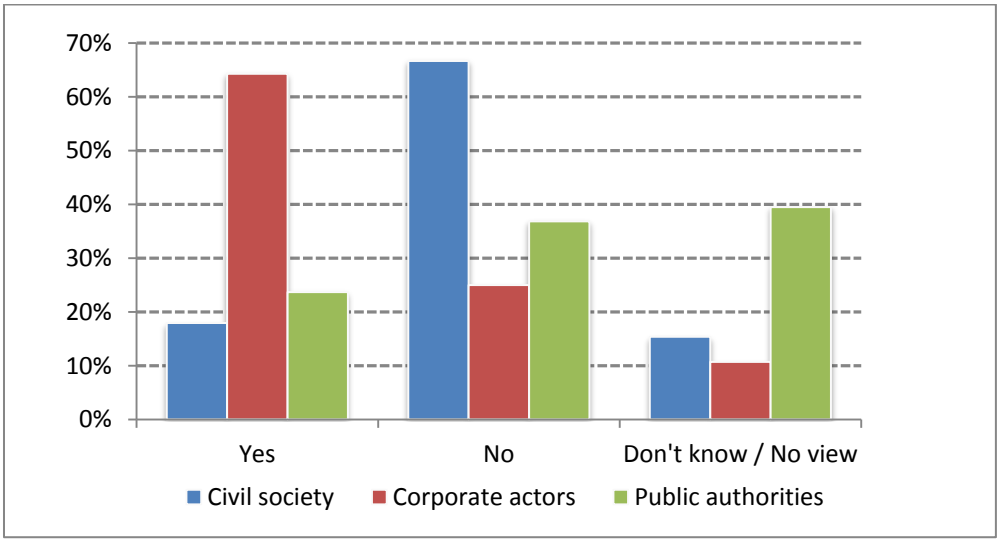
Figure I-33: In your opinion what should be the basis for NDTAC? (N=123)



1.4.4.3 TSI Noise approach

The TSI Noise approach is ranked 4th overall in terms of appropriateness, but highest by civil society actors and public authorities. 35% of the respondents think it is feasible to introduce the approach within the near future, and only few respondents believe that it will be any easier to introduce it within a short time horizon; just 6% of the total number of respondents think it will become feasible within the coming 3 years. Apart from the environmental noise approach, this is the lowest level for any of the options.

Figure I-34: Do you think that this policy measure (TSI Noise) could lead to negative consequences for rail operators, wagon keepers or other market players? (N=133)



From the perspective of corporate actors, almost a two-thirds believe that a the TSI Noise approach will lead to negative consequences for operators, wagon keepers or other market players. Civil society actors have almost the opposite response pattern.

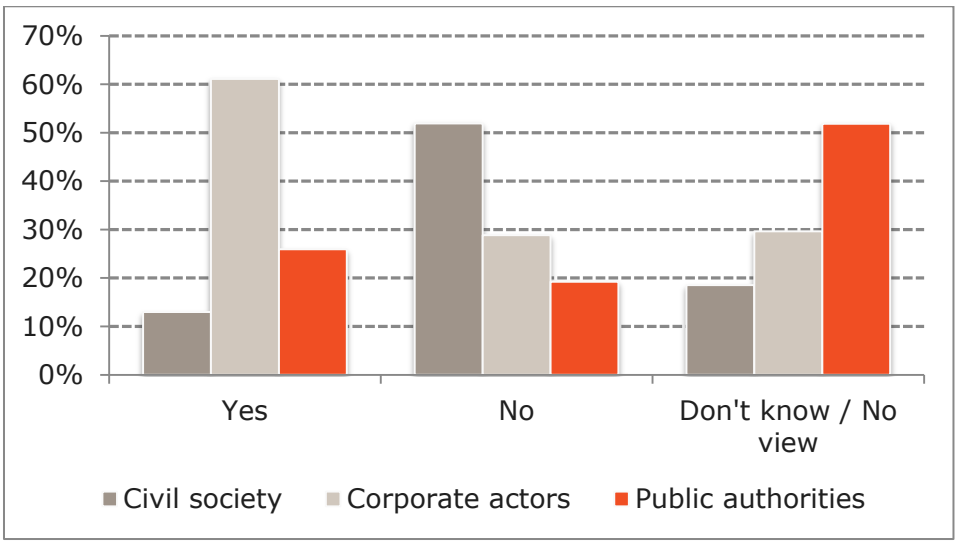
Answers from the public authorities are divided, with the main group replying that they do not know whether a TSI Noise approach will have negative consequences for the market actors.

1.4.4.4 TEN-T approach

The TEN-T approach ranks low in terms of appropriateness, with only the density approach deemed less relevant. On average, 29% of the respondents think that it is feasible to introduce this approach at the current stage; with 13% believing that it could be possible within 1-3 years should the Commission decide to follow this path.

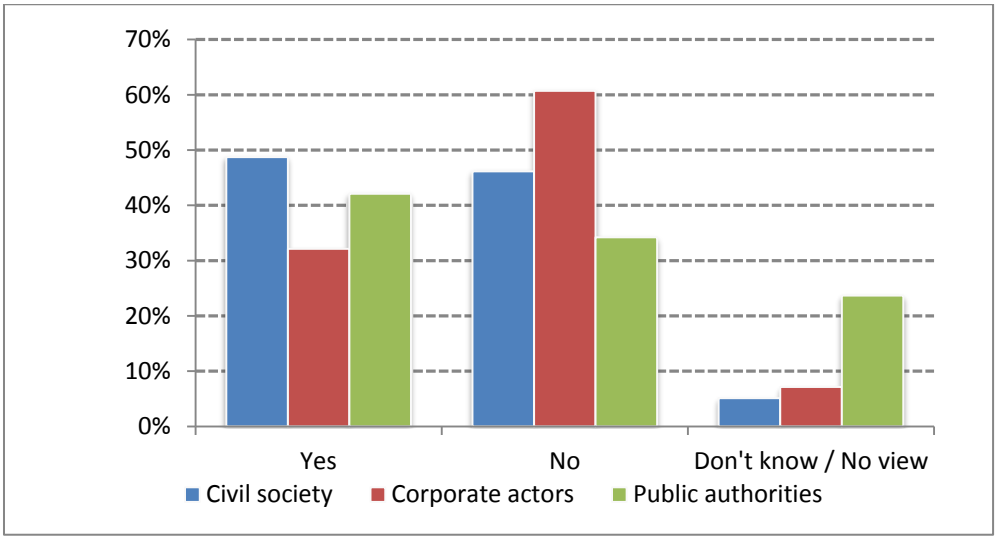
One factor behind that low assessment of appropriateness is the fact that almost 60% of the corporate actors think the approach would have negative consequences for the market players (see Figure I-35). This view is shared by one quarter of the public authorities, who are otherwise divided on how to assess the impact of the approach on market players. Civil society actors are optimistic and do not in general believe that this approach will have negative consequences for the market players involved.

Figure I-35: Do you think that this policy measure (TEN-T) could lead to negative consequences for rail operators, wagon keepers or other market players? (N=133)



When asked, the respondents did not have any clear consensus on whether or not there should be different restrictions for day and night (Figure I-36). As the only group with a somewhat clear answer, corporate actors lean towards a 'No', possibly because this would make it more complex for them to operate.

Figure I-36: Should there be any differentiation in rail traffic restrictions between day and night? (N=133)

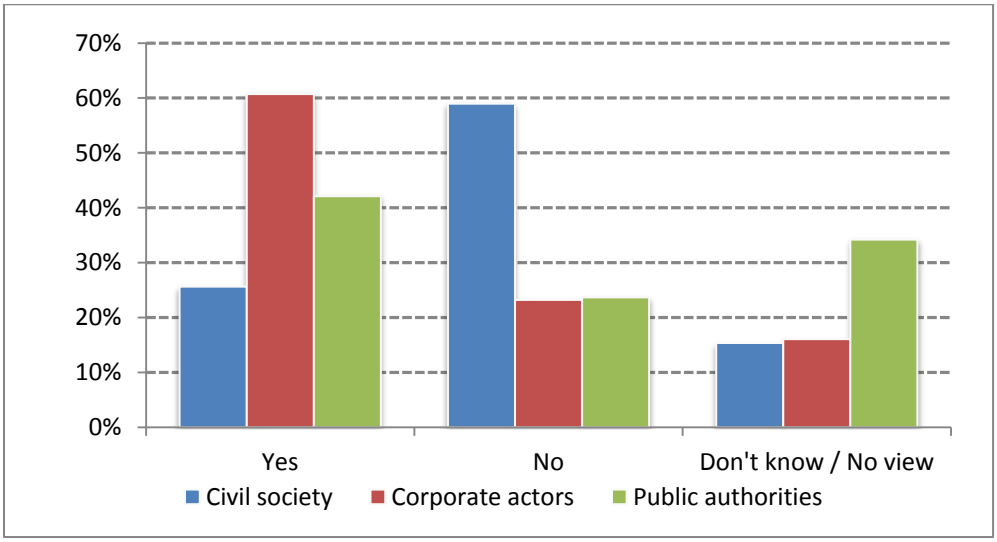


1.4.4.5 Density approach

The density approach comes out as the least appropriate of all the policy options. 29% believe that it is currently feasible to introduce this approach, with another 11% believing it could be the case within 1-3 years.

To the question whether this option would have negative consequences for market players (see Figure I-37), the resulting response pattern is somewhat identical to the one for the TEN-T approach. The answers from corporate and civil society actors differ, while the public authorities have a large number of 'Don't know' answers. However, for this option, it seems that the public authorities tend to agree with the corporate actors that this option would lead to negative consequences.

Figure I-37: Do you think that this policy measure (Density approach) could lead to negative consequences for rail operators, wagon keepers or other market players? (N=133)

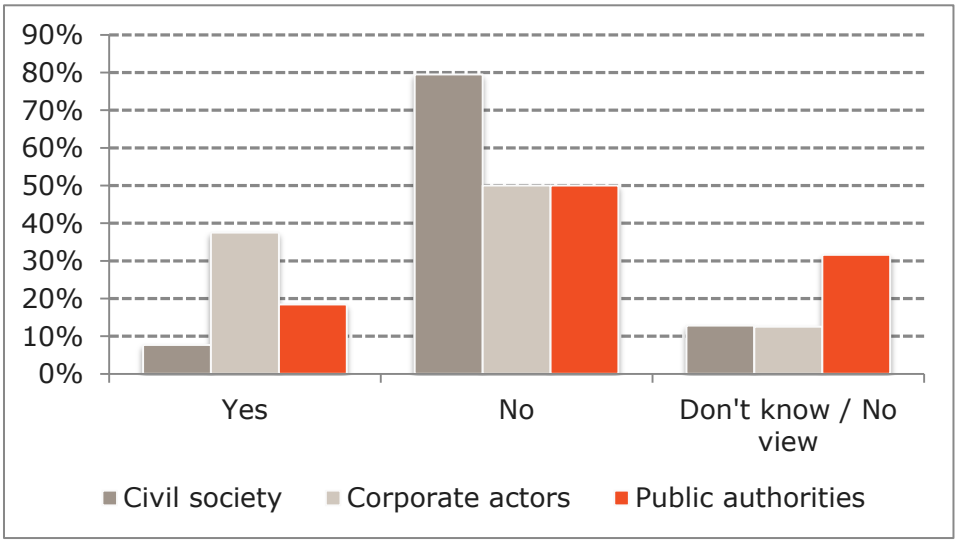


1.4.4.5.1 Maintenance approach

The maintenance approach is ranked as the most appropriate option (Figure I-38), when looking across all the answers from professionals. It is seen as the most appropriate option among civil society actors and the second most appropriate among corporate actors. Public authorities rank it fourth out of the proposed options. A relatively high proportion (41%), think it is already possible to implement this option technically and administratively. Additionally 15% think that it would be possible within 1-3 years. This makes it the option that most respondents think is realistic technically and administratively, and this may be a main reason behind its high level of appropriateness.

Another likely explanation for the relative popularity of this option is the fact that most respondents believe that it will not influence market players negatively. In all likelihood, it also plays into the assessment of this option that bad tracks lead to bad wheels, which could risk making issues targeted only at wheels ineffective.

Figure I-38: Do you think that this policy measure (Maintenance approach) could lead to negative consequences for rail operators, wagon keepers or other market players? (N=133)



1.4.4.6 Environmental health approach

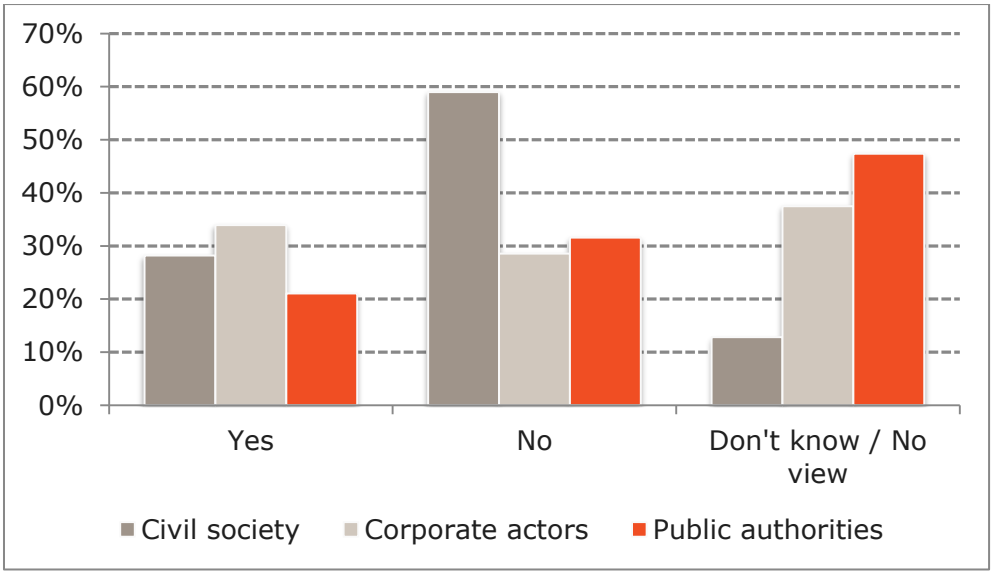
This policy option is the most comprehensive and holistic proposing measures which affect similarly road and rail transport. It receives relatively high scores of appropriateness, third amongst the seven options being compared after the maintenance approach and the subsidy approach. The civil society actors think that this approach is more appropriate than do public authorities and corporate actors. Among public authorities the approach is only ranked 5th.

In terms of technical and administrative feasibility, 27% think this approach is feasible today, which translates into a relatively low level of feasibility. Adding to this, only 5% of respondents believe that the approach could be feasible within 1-3 years, which make it the least feasible of the policy options according to stakeholders when looking at the near future.

When asking about possible negative consequences of this policy option, answers are tainted by the fact that it is difficult to imagine exactly, how such a relatively comprehensive

approach would work in practice. The number of respondents that have 'No view' or 'Don't know' is higher than for the other policy options, and the response pattern is overall inconclusive. For civil society actors, however, there is a majority that does not believe that this approach will negatively influence market players (Figure I-39).

Figure I-39: Do you think that this policy measure (Environmental health approach) could lead to negative consequences for rail operators, wagon keepers or other market players? (N=133)

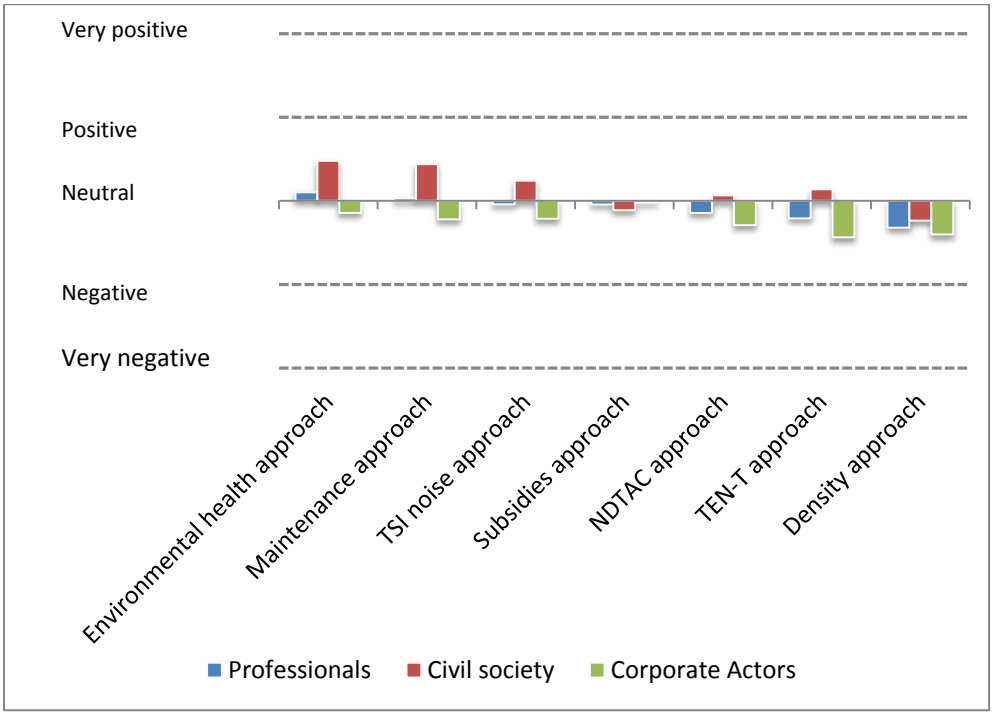


1.4.5 Impacts

The questionnaire asks the respondents to assess the impact of each policy option on eight different economic issues, and other issues related to rail noise as described in subsections 2.4.5.1 to 2.4.5.1.7.

The answers that are reported in this section are only based on the answers from the professionals, given their higher knowledge on technical rail noise related issues. At the aggregated level, Figure I-40 presents the data based on all types of impacts being averaged for each policy option, thus showing the average impact across all types of impacts for each option. It is assumed that all types of impacts are equally important in this average.

Figure I-40: Average impact by approach (N= 138)



The graph reveals that the average impacts are in general very close to 'Neutral'. No policy options come out with either clearly positive, or clearly negative impacts on average. It seems that the civil society actors are slightly more positive in general. As to the impacts of the options, the corporate actors are generally slightly negative and the public authorities are on average neutral in their assessment of impacts.

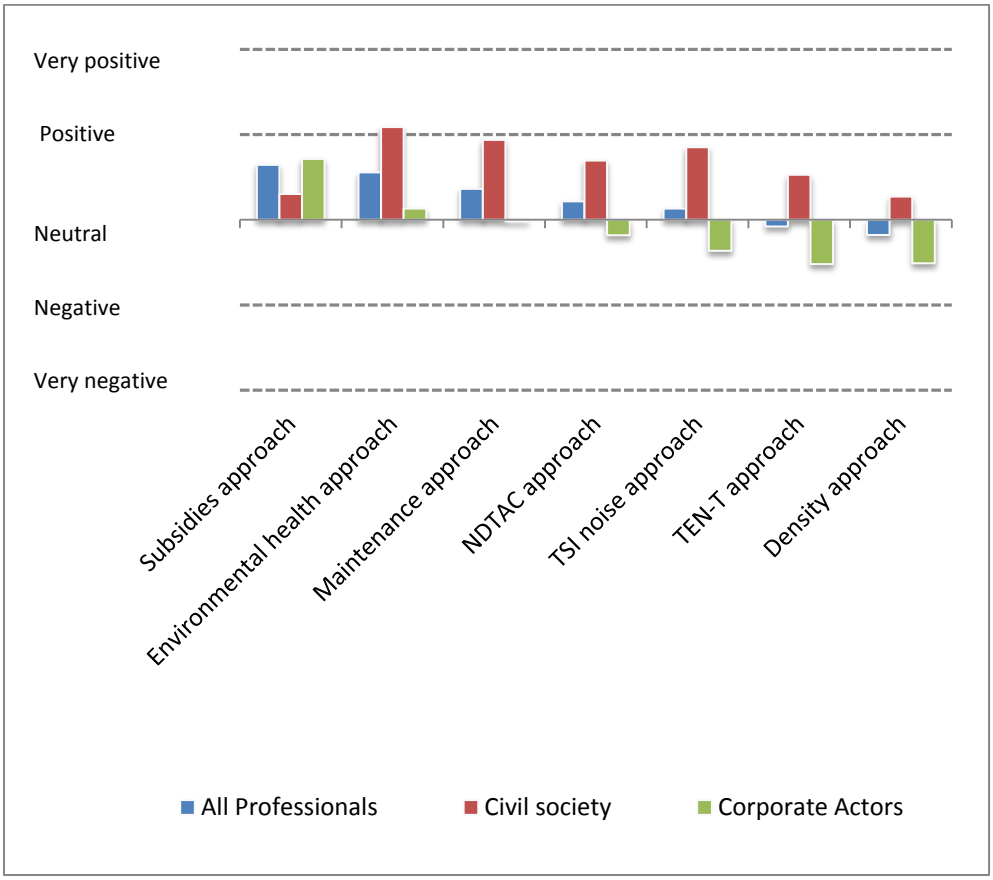
Even though the variation in the average impacts is so small, it can still be noted, that the ranking of the impacts matches the previously reported assessment of appropriateness to a relatively high degree.

1.4.5.1 Impact on the competitiveness of the rail freight transport sector in the EU

One of the central objectives for the Commission, when working to reduce rail noise is to simultaneously protect the competitiveness of the rail freight sector. Looking at the responses from the professionals, it seems that the civil society actors on average believe that all the policy options will have a positive impact on the competitiveness of the rail freight sector. The answers from the public authorities are also relatively positive, believing that most of the policy options will (at some time in the future) actually aid competitiveness of the rail freight transport sector.

Corporate actors are, on the other hand, relatively clear that only the subsidies approach, and environmental health approach may help competitiveness, with the maintenance approach having a neutral impact. The rest of the options will, at least in a stand-alone version as used in the questionnaire, have a negative impact on competitiveness according to the respondents.

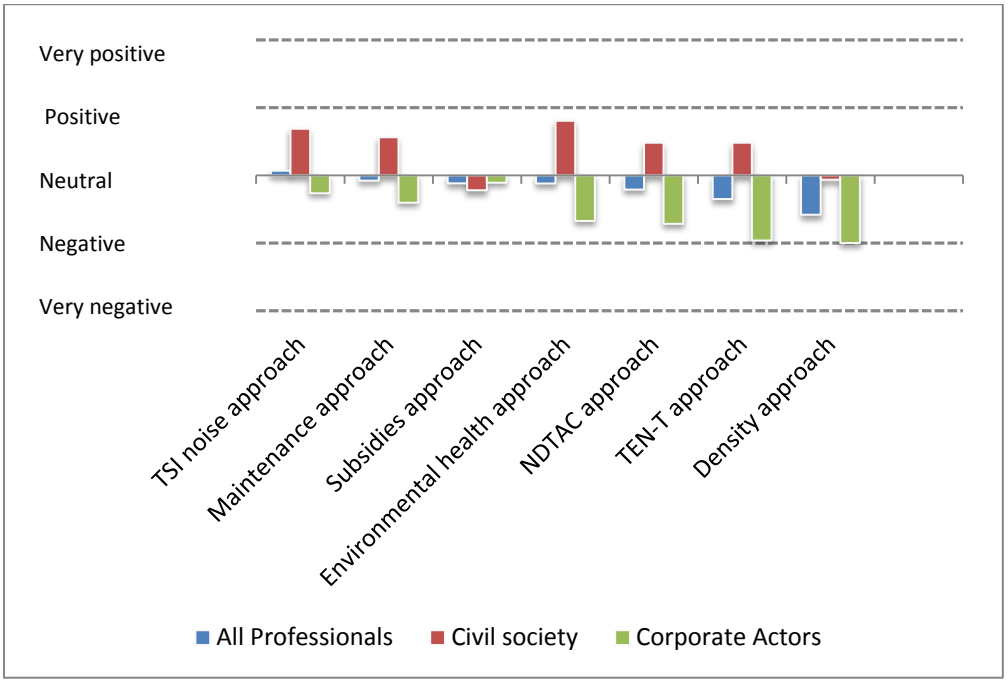
Figure I-41: Impact on the competitiveness of the rail freight transport sector in the EU, by policy option (N=138)



1.4.5.2 Total administrative costs for companies and for the state

Looking at the administrative costs associated with the considered options, civil society actors believe that the subsidies approach and the density approach will have average impacts less than 'Neutral'. Public authorities and corporate actors are relatively convinced that most options will lean towards a negative impact, with corporate actors being clearly the most sceptical on this point. They believe that especially the TEN-T and density approaches will be administratively heavy. Corporate actors, more than public authorities, believe that the environmental health approach or an NDTAC scheme will lead to increase administrative burdens.

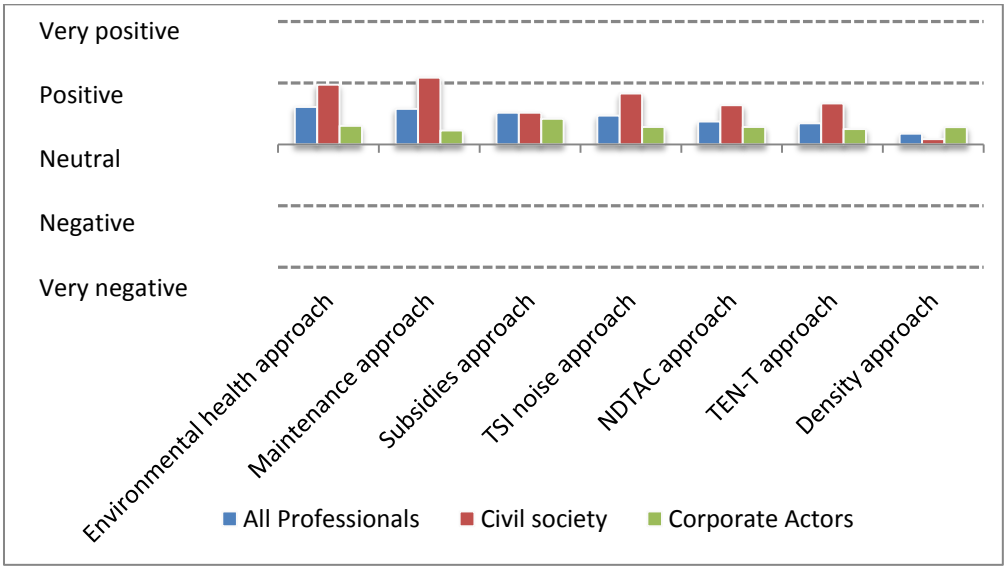
Figure I-42: Impact on total administrative costs for companies and for the state (N= 138)



1.4.5.3 Working conditions in the railway sector

There is a general consensus among all professionals, that the impacts on working conditions in the railway sector will be improved. Again, civil society actors are the most positive, followed by the public authorities. The environmental health and maintenance approaches come out as the most positive in general, with the TEN-T and density approaches having the least impact. This ranking makes sense since the TEN-T and density approaches have impact limited to certain areas of railway operation.

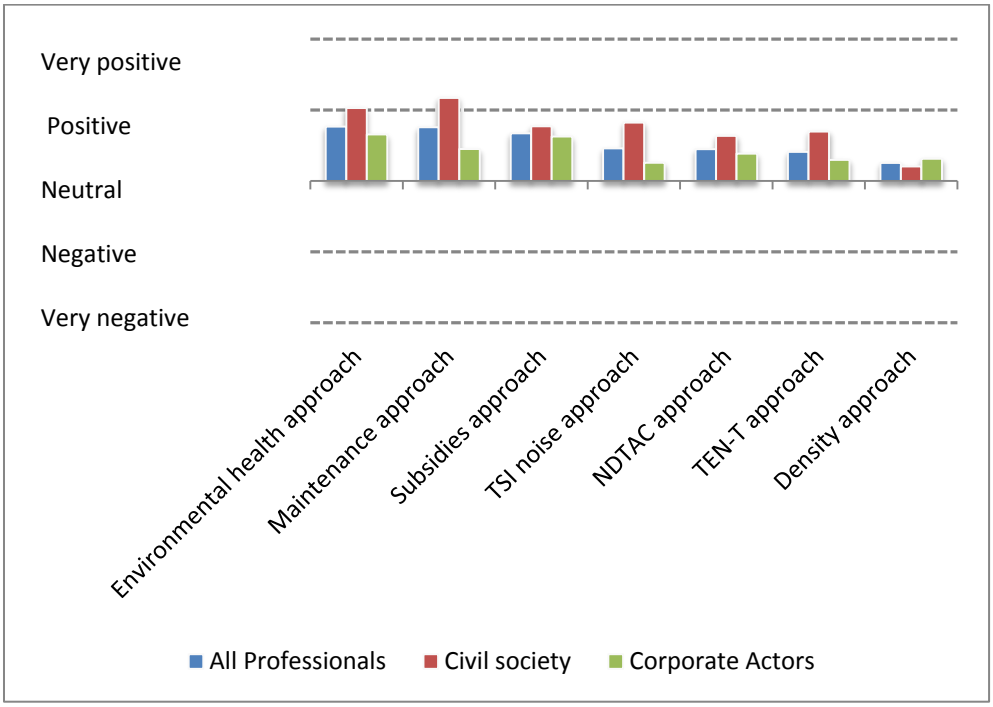
Figure I-43: Impact on working conditions in the railway sector (N= 138)



1.4.5.4 General employment levels in your country

All groups of professionals believe that employment levels in their respective countries (or areas of operation); will increase as a consequence of a policy initiative, irrespective of which option. The subsidies approach provides the greatest impact on employment levels, according to the corporate actors, with the environmental health approach following closely. Public authorities also rank those two options highly, but only after the maintenance approach. Civil society also ranks the maintenance approach the highest and is, again, generally more positive than the two other groups.

Figure I-44: Impact on general employment levels in your country (N= 138)

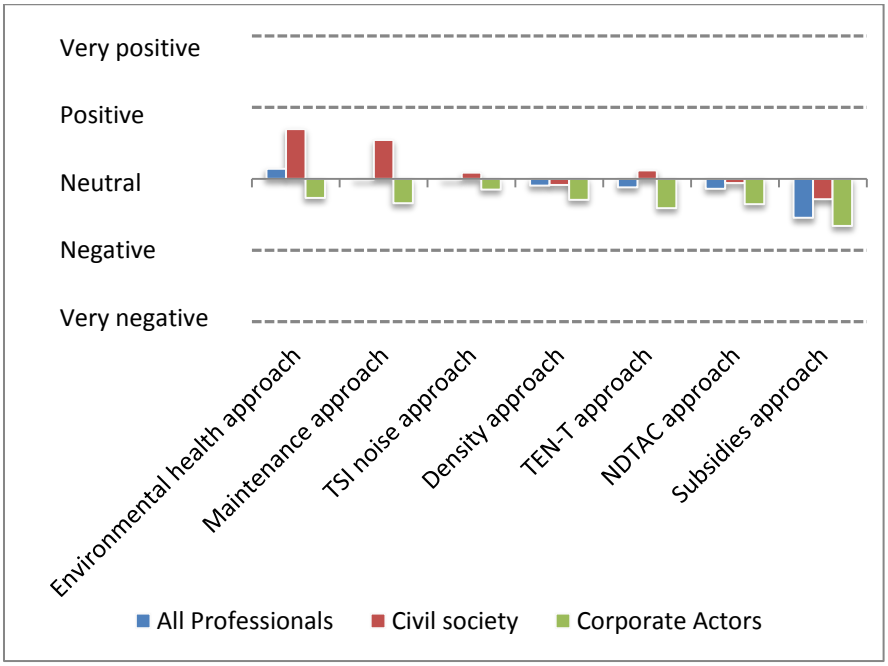


1.4.5.5 Government budgets

In general, the average expected impacts on government budgets are very small and close to neutral. Civil society actors express the belief that the environmental health approach will have positive consequences for government budgets. The rest will have neutral impacts, with the exception of the subsidies approach, which will have negative impacts.

Public authorities only have clear answers for the subsidies approach, where they are in line with the civil society actors in affirming an expected negative impact on government budgets. Corporate actors expect a negative impact from all of the policy options.

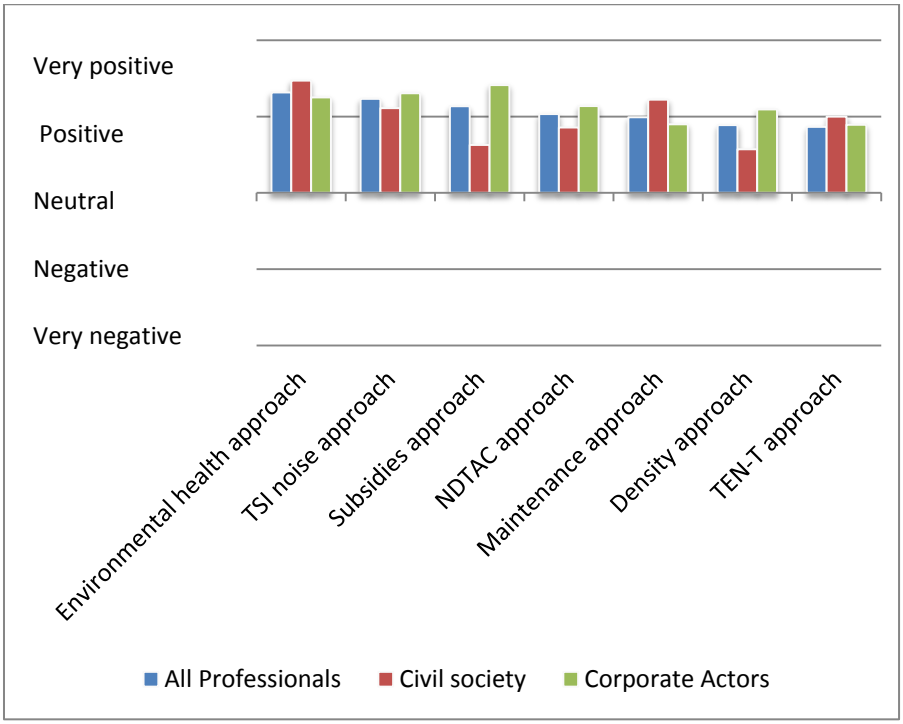
Figure I-45: Impact on government budgets (N= 138)



1.4.5.6 Exposure of the public to rail noise

This is obviously one of the main impacts that policy options are seeking to address, and most policy options have been designed initially with a view to obtain exactly this impact. This is evident from the answers, since all three groups agree that all options will have some degree of positive impact on rail noise. When asking the professionals, on average, the environmental health approach, the TSI-Noise approach and the maintenance approach seem to give the highest impacts.. The density and TEN-T approaches are the 'worst' when comparing options, which has also previously been the case for other impacts. The maintenance approach has a relatively lower impact (ranked fifth) than for the other types of impact.

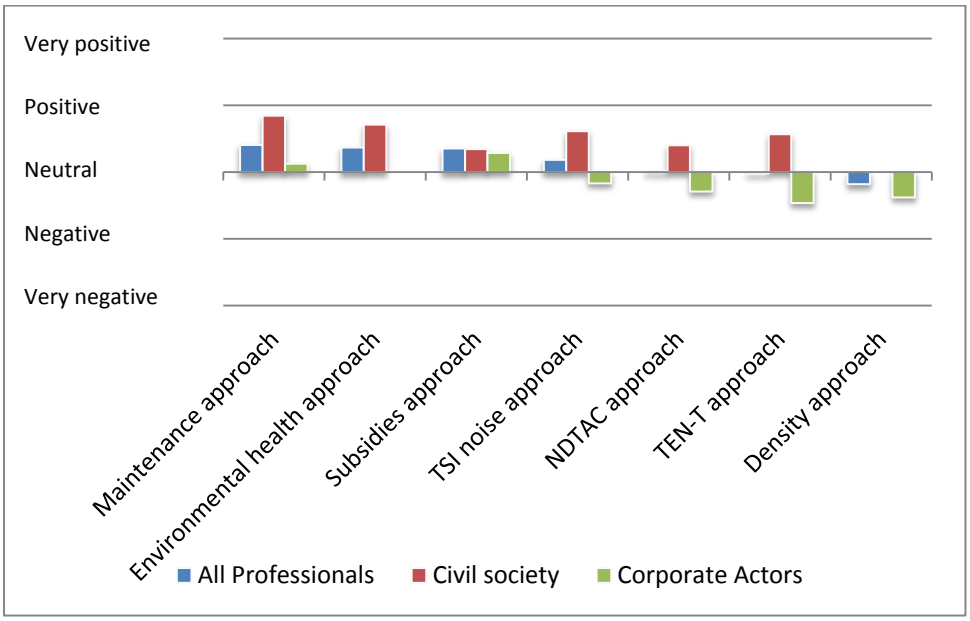
Figure I-46: Impact on the exposure of the public to rail noise (N= 138)



1.4.5.7 The functioning of the Internal Market

As regards the impacts on the functioning of the internal market, most impacts are assessed as having a positive impact on average. Public authorities are neutral or slightly positive towards all options for this type of impact. Their 'favourite' option, in terms of impacting positively on the functioning of the internal market, is the subsidies option. For civil society actors, the evaluation is the same (neutral or positive), even though they are in general more positive.

Figure I-47: Impact on the functioning of the Internal Market (N= 138)



Corporate actors feel that the subsidies approach is the one that has a chance of impacting slightly positively on the functioning of the internal market. For the rest of the options, the

assessment is either neutral or negative. Again the TEN-T and density approaches are ranked the lowest in terms of impact.

1.4.5.8 Ability of operators from 3rd countries (e.g. Switzerland and Russia) to maintain business in the EU

Gauging via stakeholders, the impact of the seven options on the ability of third country operators to maintain business in EU, gives relatively clear answers. It seems that most options will, in the opinion of professionals, have a neutral impact within this area.

Public authorities may be slightly worried that the density approach has a negative impact, but this is, as said, only a slight tendency. Corporate actors seem to believe that the environmental health approach may actually impact positively in this regard - again only slightly. Civil society actors agree with this and also rate the maintenance approach, as having a potential positive impact of this type.

Figure I-48: Impact on the ability of operators from 3rd countries (e.g. Switzerland and Russia) to maintain business in the EU (N= 138)