



Should Regulatory Impact Assessment Have A Role In Sweden's Transport Planning?

Discussion Paper

180
Roundtable

Lena Nerhagen

Swedish National Road and Transport
Research Institute VTI

Sara Forsstedt

Swedish Transport Agency

Should Regulatory Impact Assessment Have A Role In Sweden's Transport Planning?

Discussion Paper



Lena Nerhagen

Swedish National Road and Transport
Research Institute VTI

Sara Forsstedt

Swedish Transport Agency

The International Transport Forum

The International Transport Forum is an intergovernmental organisation with 60 member countries. It acts as a think tank for transport policy and organises the Annual Summit of transport ministers. ITF is the only global body that covers all transport modes. The ITF is politically autonomous and administratively integrated with the OECD.

The ITF works for transport policies that improve peoples' lives. Our mission is to foster a deeper understanding of the role of transport in economic growth, environmental sustainability and social inclusion and to raise the public profile of transport policy.

The ITF organises global dialogue for better transport. We act as a platform for discussion and pre-negotiation of policy issues across all transport modes. We analyse trends, share knowledge and promote exchange among transport decision-makers and civil society. The ITF's Annual Summit is the world's largest gathering of transport ministers and the leading global platform for dialogue on transport policy.

The Members of the Forum are: Albania, Armenia, Argentina, Australia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Chile, China (People's Republic of), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Kazakhstan, Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Republic of Moldova, Montenegro, Morocco, the Netherlands, New Zealand, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine, the United Arab Emirates, the United Kingdom and the United States.

International Transport Forum
2 rue André Pascal
F-75775 Paris Cedex 16
contact@itf-oecd.org
www.itf-oecd.org

ITF Discussion Papers

ITF Discussion Papers make economic research, commissioned or carried out in-house at ITF, available to researchers and practitioners. They describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which the ITF works. Any findings, interpretations and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the International Transport Forum or the OECD. Neither the OECD, ITF nor the authors guarantee the accuracy of any data or other information contained in this publication and accept no responsibility whatsoever for any consequence of their use. This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Cite this work as: Nerhagen, L. and S. Forsstedt (2019), "Should Regulatory Impact Assessment Have a Role in Sweden's Transport Planning?", *International Transport Forum Discussion Papers*, No. 2019/09, OECD Publishing, Paris.

Acknowledgements

We are grateful for the enlightening discussions as well as comments on previous drafts by Professor Jan-Eric Nilsson at VTI and Mats Andersson at the Swedish Transport Agency.

Table of contents

Introduction.....	5
Regulation in the academic discussion.....	6
The Swedish policy making context.....	9
Structural changes in the governance system	9
Transport policy and the role of the Swedish Transport Agency	12
Case study on regulatory impact assessment and the use of cost-benefit analysis	13
The regulatory process at the Swedish Transport Agency.....	14
Method used in the analysis of impact assessments	15
Sample	16
Results	16
Discussion of the results	18
The lack of a whole of government approach	20
Conclusions and recommendations	22
Notes	25
References.....	26

Introduction

By performing a regulatory impact assessment (RIA), the risk of imposing a proposal that is inefficient or leads to sub-optimisation is reduced. In the European Union (EU28) this approach to regulatory policy making was introduced in 2002 and it is a crucial component of the Better Regulation Agenda. However, the practical implementation of this approach in member states is varied; Sweden, for example, has not implemented the full RIA process. Currently there is a focus on the reduction of administrative burdens for businesses. This paper describes the present use of RIA and cost benefit analysis (CBA) in the Swedish planning context and discusses the reasons for and the consequences of current practices. Using the Swedish transport regulator as a case study, the paper considers the following aspects.*

1. the Swedish planning context and existing requirements regarding the use of RIA
2. current focus of research regarding CBA for infrastructure investments in the Swedish transport sector and the need for greater focus on issues concerning regulation
3. the difficulty to quantify and place monetary values on effects, which also increases when unique, complex and uncertain situations are assessed
4. the need for the alignment of incentives at all levels and across agencies.

According to the OECD, effective regulatory governance involves regulatory policies, tools, and institutions. Regulation is defined broadly and relates to various instruments on how governments put requirements on businesses and citizens. It includes rules issued at all levels of government as well as by other bodies to which governments have delegated regulatory powers. In their most recent recommendations, the focus is to a greater extent on the need for regulatory coordination across levels of government referred to as a “whole-of-government approach” (OECD, 2012).¹ To achieve the goal of good governance, RIA is recommended in the early stages of the policy process.² RIA is a tool but also a decision process for informing political decision makers on whether and how to regulate in order to achieve public policy goals (OECD, 2009). Economic analysis and more specifically CBA is part of this approach to regulatory analysis.

The findings in the scientific literature however reveal that implementation of RIA including CBA is not straightforward and may be highly controversial. Shapiro (2011) discusses the development of the regulatory policy in the United States over 30 years and concludes that CBA has been at the centre of intense controversy. Wegrich (2011) discusses the actual implementation of RIA and concludes that the design and practice of RIA systems vary widely cross-nationally. There are different reasons for this. One is the establishment of this kind of system within government being a challenging task of institutional design. Another, applicable to the European context, is that “the logic of economic analysis is particularly difficult to reconcile with systems of negotiated policy making, such as those of the European Union or other consensus democracies”. In the EU28, RIA as a tool was introduced in 2002, but not without difficulty and changes have been made over time. A recent example is the newly signed Interinstitutional agreement, between the European parliament, the Council of the European Union and the European Commission, which also includes instructions on how to use RIA (European Union, 2016). However, there may be traditions and institutional frameworks that make the approaches suggested by the OECD less

* Author affiliation on the cover was provided at the time of drafting.

relevant, these issues are discussed further by Parker and Kirkpatrick (2012) and Clifton and Diaz-Fuentes (2014).

Regarding Sweden, the governance system has undergone many changes over the past 20 years. Some of these changes are a result of their EU membership. Concerning RIA, which is part of EU's work on better regulation, recent research has found that Sweden is lagging behind other European countries and that the full RIA process is rarely implemented (Radaelli, 2010; De Fransesco et al., 2011; Erlandsson, 2010; Pettersson, 2016). One reason for this seems to be policy-making traditions (Radaelli, 2010). In the light of the above, Sweden is an interesting case to study. In this paper we use transport, and more specifically the experiences from the recently established Swedish transport regulator (the Swedish Transport Agency), to discuss the reasons for the current practices of RIA and the very limited use of cost-benefit analysis, CBA, in this work. We try, as economists, to look into what is usually considered a black box in our discipline: the governance system.

Transport is a policy area in Sweden where economic analysis has a long tradition. The overall transport policy goal is the provision of economically efficient, sustainable transport services for the general public and businesses throughout the country. Theories and models have been developed since the 1960s for elaborate cost benefit analysis of transport investments. Furthermore, economics has influenced policy making in other ways, for example the deregulation on the railway system and the international academic discussion on road pricing, that finally resulted in practical implementation in terms of the Stockholm congestion charging system. Economics and the use of CBA is also currently in the spotlight in relation to the political discussion on high-speed railway since the analysis concludes negative results. Despite this, economics and CBA have had little influence on the regulatory work undertaken by the regulatory body, the Swedish Transport Agency. Moreover, research and development is at this time lacking regarding CBA in the context of regulation.

The paper is organised as follows: To set the discussion in a broader context, it provides a brief overview of the academic basis of the discussion on regulation. It then turns to the Swedish case providing an overview of the institutional and organisational changes that have taken place over the last 20 years in relation to the use of RIA, CBA, transport policy and environmental policy. Thereafter the results from a case study where we assessed the influence of new guidelines, including CBA, on the RIAs done at the Swedish Transport Agency are presented. Next, based on all the above, the paper discusses the reasons for the current practices of RIA in Sweden and describes the implications of the current system using some examples. The conclusion is that the outcome is a result of the current institutional design and the lack of a whole of government approach. The paper ends with a discussion of the possible role of RIA and our recommendations for institutional changes for the full RIA process to be implemented in Swedish transport policy and planning.

Regulation in the academic discussion

To understand why the implementation of RIA, including CBA, can vary between countries this section provides a brief overview of relevant research in economics and other social sciences in this section. It starts with the recent recommendations made by the OECD followed by a recapitulation of several

discussions and findings in the scientific literature. It concludes with some aspects raised in a previous round table related to the regulation of transport that are of interest for our study.

The recommendations made by the OECD on the use of RIA including CBA rest on findings in the scientific literature. The literature on regulation, regulatory policy and the use of RIA and CBA however is large. Different aspects are raised in different types of research, but the focus can vary depending on regional differences, for example the political context. While welfare economics, which is the basis for the use of CBA, have a focus on policy formulation and design, social sciences, such as political science, seems up until recently to lack this focus – at least in Europe. It also appears, as discussed by Swedenborg (1999), that there is a divide between research in economics and other social sciences.³ The paper saw a possibility for cross-fertilisation and asked if it is each discipline fighting in their own corner that prevails, instead of a healthy critical dialogue across disciplines.

As mentioned in the introduction, RIA is described as a tool but also a decision process for informing political decision makers on whether and how to regulate in order to achieve public policy goals. As a tool, it is used to collect information on the potential impacts of government actions by asking questions about costs and benefits, and as a decision process it contributes to the dissemination of the effects of regulatory proposals to a wider audience. To achieve the goal of good governance, the OECD recommends the RIA tool. Even though RIA alone is not sufficient for designing or selecting policy instruments it has a key role in strengthening the quality of policy debate, by making the potential consequences of decisions more transparent (OECD, 2009).

The recent OECD guidelines on regulatory policy and governance (OECD, 2012) emphasise the importance of the initial assessment of the problem that a policy is intended to solve and the evaluation of alternative policy options. It is also stated that to be effective, the use of RIA should be supported with clear policies, training programmes, guidance, and quality control mechanisms for data collection and use. Furthermore, governments should conduct systematic reviews to ensure that regulations remain up to date, cost-justified, cost-effective, and consistent, and that they deliver the intended policy objectives.

From our literature review it is clear that microeconomic theory is one basis for the OECD's recommendations and its work with regulatory policy. Another finding is that different aspects are raised in relation to the use of economic theory (Hahn and Tetlock, 2008; Ruffing, 2010; Delbeke et al., 2010; OECD, 2012; Nyborg, 2012; Parker and Kirkpatrick, 2012; European Commission, 2015). The OECD also uses economic analysis, for example environmental policy instruments, to provide support to the work undertaken by its members (OECD, 2006; Ruffing, 2010). As discussed by Wegrich (2011), the origin of RIA can be traced to US work on regulatory policy. There, CBA has been at the centre of the discussion (Shapiro; 2011). The discussion has resulted in more focus being placed on how to perform this type of analysis. It has also resulted in changes being made to the requirements, for example benefits having to *justify* their cost instead of *exceed* their costs. This literature provides a discussion on the practical implementation of RIA since it describes that CBA can be more or less formalised depending on the situation and the information available (Sunstein, 2000; Carrigan and Shapiro, 2016).

In contrast to economics, the academic discussion by social scientists on regulation appears to have another focus than regulatory design. Since 2005, there has been more interdisciplinary research in an area called Regulatory Governance - mainly involving social scientists such as political scientists, academics of law, sociologists. The background to this line of research is described in a paper by Levi-Faur (2011). According to the paper there has been a discussion about the contrast between the welfare state and the so called regulatory state. This contrast rests first of all on the distinctive administrative trajectory of state-building in the United States (the regulatory state) and Europe (the welfare state), which is described in greater detail in his paper. He also describes the discussion around the possible

shift from a welfare state to a regulatory state. According to the author, this has hampered the scientific discussion by creating conceptual walls. Levi-Faur (2011) therefore discusses the relationship between these two concepts in order to help to bring down the barriers. The conclusion is that it is no contrast but rather a *constitutive* relation between these two notions. While welfare is the aim, regulation is an instrument. He concludes that the welfare state relies on an extensive system of regulation both in order to regulate its own processes and to govern the economic and social pillars of welfare-provision.

The focus on the welfare versus the regulatory state is likely to be one reason for the lack of studies on policy design and the use of analytical tools such as CBA in studies of the functioning of the state. Other reasons are provided in a recent book on the tools of policy formulation, where it is concluded that (Turnpenny et al, 2015, page 14): "...policy formulation tools were gradually marginalised in public policy research...". One explanation for this is said to be that the mainstream of public policy research focused on other research questions. Some, in relation to policy formulation, focused on how to better understand the policy process itself, which was considered to be a complex, negotiated and deeply political process. Others argued that it was policy implementation, not formulation, which was the missing link. In sum, the "Regulatory governance literature" of social science has been important for our study since this is where we have found assessments on the use of RIA in different countries.

As for the use of analytical tools such as CBA, Nilsson et al. (2008) in a three-country study found that, despite the increased political interest in many countries for evidence-based policy making, this has not led to the institutionalisation of assessment tool use. Atkinson (2015) discusses the current evidence on the use of CBA and its influence on policy formulation. Of interest for this study is that the paper concludes that if decision makers are genuinely interested in CBA being used, implementation measures may be needed. Guidelines, for example, may not be a guarantee for actual use. Translating them into action may involve increasing the economic literacy, in particular in policy venues with little experience in this respect. Another measure that can improve the quality of the appraisal is to separate those who perform the analysis from those with a critical stake in a project or policy.

In relation to transport, the need for regulation and policy design was discussed at an ITF/OECD round table in 2010. In this discussion it is somewhat unclear what the definition of regulation is, the discussion mainly concerns the question of controlling actors in a market, such as a deregulated railway system or air. One paper, however, (Winsor, 2011) gives a broad definition of regulation namely "any measure which seeks to change the behaviour of individuals or groups". This definition is more relevant for the decision-making context facing the Swedish Transport Agency. Hence, regulation is a notion that can have different meanings depending on the policy context. In another paper, the independence of the regulator in relation to the political system is discussed and reasons for this are provided. It is argued for independent regulators to ensure quality and continuity. The arguments raised are that "democratic elected governments only have power for a short period of time and cannot bind future governments, but they can assign limited discretionary power to independent regulators, which have expertise and are committed to long-term political goals" (Niemeier, 2011). Hence, the question of who should do what in a governance system is also something that is discussed in the literature.

In sum, our review shows that RIA, CBA, policy design, and regulatory governance are established in the academic literature, but with different focus in different disciplines. This, in combination with that these issues are of low profile in Sweden, implies that the practical implementation is lagging behind.

The Swedish policy making context

Compared to other European political systems, the Swedish public administration is organised in a rather unique way (Modell et al., 2007). Constitutionally Sweden has two levels, the national (central) and the local (municipalities and county councils). Sweden has traditionally built its bureaucracy on semi-autonomous government agencies (OECD, 2002). The government ministries only employ a low percentage of civil servants; the vast majority of the civil servants are employed by government agencies. The government agencies are responsible to the government as a collective, but are placed under the jurisdiction of a specific ministry. The most important differences compared to other countries is that the agencies have constitutionally granted autonomy, which means that formal ministerial rule is forbidden in Sweden. However, the government can influence government agencies and civil servants through different means of control (Larsson and Bäck, 2008). For example, it can give instructions on acts adopted by the Parliament. It can also give instructions on how the government agencies may use the economic resources that have been allocated to them by the government. Nevertheless, the general tendency is currently to offer the government agencies a fairly free hand in the form of a framework budget (Wockelberg, 2014). Another difference is the strong emphasis on the preparatory stages of the policy-making process (Petersson, 2016). It involves the use of commissions of inquiry and stakeholder involvement through the referral process.

Regarding the use of RIA, Petersson (2016) concludes that Sweden is often wrongly viewed as a leading country when it comes to better regulation through impact assessment. One reason being that many commission reports neglect to present this type of impact analysis. Another is the discussion in Erlandsson (2010) which describes how Sweden had rather late established a specific ordinance for RIA but that the focus of the better regulation strategy was a reduction in administrative burdens and improved conditions for enterprises. This finding is supported by Radaelli (2010) who concludes that the full RIA process is scarcely implemented, the main explanation is that Sweden is engaged with the reduction of administrative burden, which also has been prioritised in the scrutiny of regulatory proposals.⁴ Furthermore, Radaelli concludes that “the separation between cool technical analysis and political decision making has a poor fit with the reality of policy making” in Scandinavian countries.

The brief introduction to this paper revealed that the policy-making context in Sweden differs from that in other countries and that it does not appear to support the full implementation of RIA. Therefore, in the following we highlight some political and structural changes in the Swedish governance system that have taken place in the last 20 years, which we believe have influenced the current practices regarding the use of RIA and CBA. According to the literature review in prepared for this roundtable, it is important to understand the institutional design in the governance system, and the policy-making traditions, in order to understand the use of RIA and CBA.

Structural changes in the governance system

Soon after Sweden became a member of the EU28, in 1996, the social-democratic party led by Göran Persson came into office. This government initiated a number of changes of the Swedish governance system that are of relevance for current policy making and the use of RIA. These changes were influenced by New Public Management ideas with a focus on performance management, i.e. management-by-objectives (Pollitt, 1995). In relation to transport the parliament adopted the so-called

Vision Zero policy in 1997, which is based on the ethical standpoint that no one should be killed or suffer permanent injuries in road traffic. Another change influencing transport planning was that Sweden started a process of regionalisation and decentralisation of regional policy in part influenced by the EU structural funds (Stegman McCallion, 2007). Furthermore, in 1999, 15 (later 16) environmental quality objectives (EQOs) were established, these were to be reached within one generation.⁵ These EQOs also influence transport policy since it is the responsibility of all sectors of the Swedish government to contribute to the fulfilment of the EQOs.

At this time, there were also investigations into the use of economic analysis and CBA in policy making. CBA as a tool has been used in Swedish transport investment planning since the 1960s. The government initiated a review of the principles applied to this investment planning. A group called Arbetsgruppen för SamhällsEkonomiska Kalkyler (ASEK), involving both agencies and researchers, was established headed by the autonomous agency the Swedish Institute for Communication Analysis (SIKA). In addition to the transport agencies, the Swedish Environmental Protection Agency (Swedish EPA) was involved in this work. In 1999, ASEK published a report with guidance on how to undertake a CBA and inputs to perform such analysis, the focus being on infrastructure investments (SIKA, 1999). Swedish EPA also performed an investigation on how economic policy instruments could be applied to environmental policy (Swedish EPA, 1997). A few years later, they also published an “in-house” guide on how to undertake CBA in their regulatory work (Swedish EPA, 2003). In parallel with this, practices were established in relation to the Vision Zero⁶ and the EQO system.⁷ This included development of indicators, systems for performance assessments and the involvement of different actors in society.

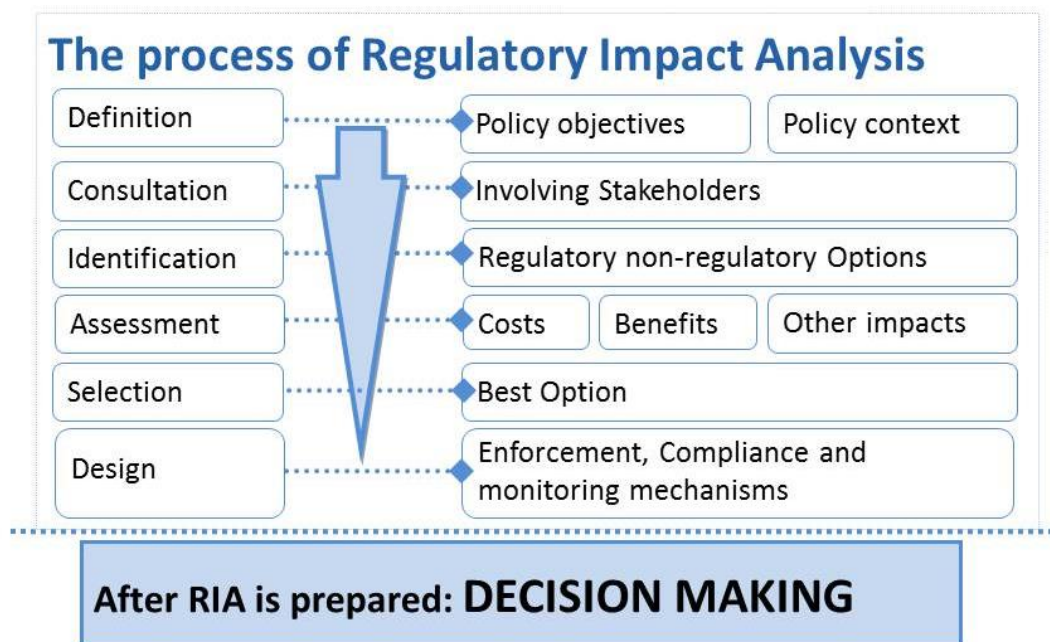
Of particular relevance for the use of RIA was government bill 1997/98:136 on a new administrative policy (based on the Government Official Report 1995:57). A consequence of the bill was that changes were needed in the Ordinance 1995:1322 related to the functioning of government agencies. This ordinance contained instructions on the use of RIA in the agencies regulatory work. A commission of inquiry was set up in 2001 and the result was presented in 2004 (Government Official Report 2004:23). Regarding RIA the commission suggested that a separate ordinance should be established. It also recommended that a separate body should be established to support and evaluate agencies work in this area. It was also said that this entity should preferably be a part of the Swedish National Financial Management Authority but that, in the parts related to small and medium enterprises (SME), NUTEK (the Agency for Growth at the time) should be involved.

The actual implementation was made by a new government “Alliansen”, a coalition led by the Conservative party. They came into office in 2006. Based on additional preparations by the ministry, in 2007 this government introduced two changes, which we believe had strong influence on where the RIA process, with emphasis on administrative burdens, is at present in Sweden. The first was two new ordinances, one (Ordinance 2007:515) regulating the overall work by agencies and the Ordinance 2007:1244 on the work with impact assessments, hereafter referred to as the IA-ordinance. Contrary to the recommendation of the commission, the government placed the overall responsibility for the implementation of IA Ordinance with a newly established agency, The Swedish Agency for Economic and Regional Growth. According to Government bill 2009/10:1 it shall develop and undertake actions that support entrepreneurship, improve competitiveness and growth in businesses, and the power to grow in all parts of the country. According to the IA Ordinance, the Agency shall work together with the Swedish National Financial Management Authority on the implementation of it. The second change was that the government also established a separate body called the Swedish Better Regulation Council, with the role of reviewing and issuing opinions on the quality of RIAs to proposals with effects on businesses. The Council, on request from regulators, will also review RIAs on EU proposals that are assessed to have a great impact on businesses in Sweden.⁸

Changes related to the use of CBA were also introduced. In 2010, the task of ASEK was transferred from the autonomous agency SIKa to the newly established Swedish Transport Administration (STA), which has responsibility for the road and rail infrastructure in Sweden. Following a commission of inquiry (Governmental Official Report 2009:83) and the Government Bill 2009/10:155, additions were also made to the government instructions to the Swedish EPA. These implied that the agency for the first time were officially given the responsibility to develop the use of economic analysis in the EQO system. Since this work is to be done in collaboration with other agencies a “platform” for agency cooperation was established. The Swedish Agency for Economic and Regional Growth and the STA participate together with a number of other agencies.⁹

The IA Ordinance however only applies to *regulatory* agencies. This implies that all other agencies are not required to perform RIAs on their proposals. Furthermore, proposals other than rules do not require a RIA, also for regulatory agencies. The instructions on the use of RIAs are stated in Sections 4–7. Section 4 states that RIAs should be performed before a regulatory agency implements a rule. Section 6 closely resembles the content of a RIA as it is described in Figure 1 below. However, it is not clearly stated in the ordinance what these steps should contain.¹⁰ It was only recently, in early 2015, that the Swedish National Financial Management Authority delivered general guidelines on how to undertake RIAs, but without details regarding the use of CBA (National Financial Management Authority, 2015). In contrast, Section 7 contains rather detailed instructions on what consequences for enterprises that should be accounted for. This is also the paragraph focused upon when the Better Regulation Council reviews the impact assessments according to its instructions. Paragraphs 6 and 7 are also referred to in the Ordinance 1998:1474 guiding the work for committees of inquiries. However, in the latter case there is an additional paragraph where it is stated that it is the government that determines the extent of such an analysis.

Figure 1. Major steps in a regulatory impact assessment



Source: OECD (2008).

The review of the academic discussion and the Swedish policy making context that we have presented highlights that, at present, the responsibility for the implementation of RIA and/or CBA in Swedish policy making is delegated to several agencies implying parallel development with different focus. Hence, the system appears to be fragmented and the requirements regarding the use of CBA seems to be unclear. Institutional and organisational changes that have taken place over time are also likely to have disrupted the development work. Furthermore, with the overall responsibility for the implementation of IA Ordinance resting with the Swedish Agency for Economic and Regional Growth, and assessments for performance only being made by the Better Regulation Council, it is not so surprising that the studies by Erlandsson (2010) and Radaelli (2010) have found that there is a focus on business. Recent evaluations of the work undertaken by agencies indicate that the progress is still rather slow both in relation to the IA Ordinance (Nerhagen and Forsstedt, 2016), and regarding the use of CBA in relation to the EQO system (Wallström and Söderqvist, 2016). As for the influence of CBA on transport investments, this has been evaluated recently and published in the scientific literature. CBA appears to have an impact but mainly as a screening tool since investments are undertaken despite having negative net benefits (Eliasson and Lundberg, 2012).

Transport policy and the role of the Swedish Transport Agency

The transport sector has by tradition been a government responsibility. Transport policy is guided by a number of goals and principles. Since 2008, the overriding goal for Swedish transport policy is to ensure economic efficiency and long-term sustainability of transport provision for citizens and enterprise throughout Sweden (Government Bill 2008/09:93). In addition, the parliament has adopted a functional goal – accessibility – and a consideration goal – safety, environment, and health.¹¹ Furthermore, there are five guiding principles for transport policy adopted by the parliament (National Audit Office, 2012):

- customers shall be free to choose how to travel and conduct transport
- the decision making on transport production shall be decentralised
- the coordination between transport modes shall be supported
- competition in the transport sector shall be supported
- the socio-economic cost of transport shall inform the design of policy instruments (also referred to as marginal cost pricing).

When in power Alliansen made changes to the infrastructure planning system, such as handing over some responsibilities to the regions, and reorganising the transport sector at the national level. The main reason for the reorganisation was that the previous system was considered to be fragmented with unclear roles and responsibilities (Hultén, 2015). The aim was to improve coordination, cost effectiveness and collaboration. Another reason was to prevent authorities supervising their own work. Some activities on the production side were also privatised. In 2009 and 2010 a number of government agencies were merged to created three larger entities; the Swedish Transport Agency (1 January 2009), the Swedish Transport Administration (STA) and Transport Analysis (1 April 2010). The Swedish Transport Agency was a merger of several different government bodies.¹² It stipulates rules and monitors how they are followed, grants permission (driver's licences and certificates) registers change of ownership and manages congestion and vehicle taxation. The STA was mainly a merger of the previous road and rail administration. It is responsible for long-term planning of the transport system for all types of traffic, as well as for building, operating and maintaining public roads and railways.

The Swedish Transport Agency has the overall responsibility to design regulations and to ensure that authorities, companies, organisations and citizens abide by them. The agency also performs market monitoring of the markets of whom it regulates. Furthermore, it collects and administers government taxes and fees. The Swedish Transport Agency also performs tasks according to legal documents provided by, for instance, the EU28 and other international agreements. It also assists the government in engagements internationally. The agency consists of five policy-related departments (11 in total), where most RIAs are performed.

When performing all the regulatory tasks the agency strives to fulfil the goals of the transport sector by achieving good accessibility, high quality, secure and environmentally aware rail, air, sea and road transport. The work should in particular strive to contribute to an internationally competitive, environmentally sustainable and safe transport system. Currently the majority of the impact assessments are performed by the two traffic departments, the Civil Aviation and Maritime Department and The Road and Rail Department.

As for Vision Zero, the STA is responsible for its implementation. Vision Zero implies a break with traditional traffic safety policy based on the view that interventions should be undertaken as long as benefits exceed costs (Belin et al., 2011). Instead, it emphasises the elimination of deaths and serious injuries, at least in the long term. According to the STA this is a Swedish policy innovation that, to some extent, replaces “management by rule” with a new governance approach. This includes management by objectives, network governance and user governance.¹³ Important innovations resulting from Vision Zero are according to the STA median barriers and cameras to control speed. Roundabouts and alcolocks have also acquired greater importance.

Sustainability is also an important issue in transport policy, which the formulation of the overriding goal as well as the consideration goals illustrates. To achieve a more holistic, efficient and inclusive approach to transport planning, other methods such as the so called four-step principle and the strategic choice of measures has been developed (WSP, 2012; Swedish Transport Administration, 2013a). The strategic choice of measures method is a way to implement the four-step principle in relation to physical planning. The four-step principle involves the following steps: 1) means to affect transport demand and mode choice, 2) means to provide for more efficient use of existing infrastructure, 3) reconstruction, including improvements of existing assets and 4) investment, including the construction of new infrastructure which makes use of new land. According to (Nilsson et al, 2012), by tradition much emphasis has been on steps three and four. One reason for this is, according to the authors, that at present there is a lack of information about and analysis of the influence of different policy instruments. More recent evaluations have found that the responsibility for the implementation of such measures is unclear (National Audit Office, 2012).

Case study on regulatory impact assessment and the use of cost-benefit analysis

As described in the previous section, it has been up to regulatory agencies themselves to determine how to undertake RIAs based on the IA Ordinance. Since economic efficiency is an overriding transport policy

goal, the Swedish Transport Agency early on, started a process to include information relevant for CBA in their RIAs. Minor changes to the guidelines were introduced around 2010. In 2011, the Swedish National Road and Transport Research Institute (VTI) was commissioned to provide additional recommendations for the practical implementation (Lindberg and Nerhagen, 2013). In 2013, the agency recruited transport economists with the specific task of supporting the implementation of CBA in regulatory work. These actions provided the basis for a major change that took place in May 2014 with the introduction of completely new RIA guidelines combined with an extensive, but condensed, education campaign. The employees were offered a half-day training course in which all aspects of RIA work, including the “recency” CBA, were briefly covered.

These changes provided the opportunity to investigate what influence a change at the agency level - with new guidelines, some basic training, and accessibility to new competences - can have on existing regulatory practices. The motivation for investigating this is that, as discussed by Atkinson (2015), new guidelines need not provide the solution to a lack of implementation. From our description of the Swedish policy making context, it is clear that the role of RIA, and what should be included in such an analysis, is unclear. Since a requirement to undertake RIAs has existed at least since 1995, when the previous Ordinance 1995:1322 related to the work of agencies was established, it is likely that a “tradition” on how this should be done also exists. However, more recent changes such as the introduction of the Better Regulation Council may have influenced existing practices. As for CBA, this is a tool mainly developed for and used to analyse infrastructure investments. Therefore, it can be expected that general knowledge about this tool is low. Hence, our expectation is that the impact of the changes made to the guidelines will be minor. To set the study in context, we provide a brief description of the regulatory process at the agency before presenting the study and the results.¹⁴

The regulatory process at the Swedish Transport Agency

At the agency there are established routines for how to work with the preparation of regulations and RIAs. The work starts when the head of a department or unit decides that a need for a new ordinance, or changes to one that exists, has to be investigated. Currently interventions other than regulations do not require a RIA according to the ordinance. According to the routine at the agency, the decision to initiate a regulatory process should be preceded by documentation providing background information, a description of the problem, if this is a question of principle and who needs to be consulted in the work process. When the decision to initiate a regulation is made it is also stated which competences at the agency that are to be involved in the work process and the time assigned for the task. The work with development of the ordinance is done in parallel with the RIAs. There are some competences that are required: experts in the issue at hand (for example traffic safety or vehicle technology), law, language and typography. According to the routine, stakeholders shall have the possibility to contribute to and comment on the impact assessment through the referral process.

The work with the impact assessment is supported by two documents, a guidance and a template. These supporting documents are used for all types of regulatory work that requires a RIA. In addition to the work with ordinances, this involves commissions from the government and the work with EU directives and laws. These documents are “owned” by the legal division of the Director General. They are in principle a copy paste of the IA Ordinance, but with clarifications to the guideline on the kind of information that is required under each heading. According to the guideline, concerned parties should be identified and the main effects for them should be described. Thereafter the effects should be quantified and monetised to the extent possible. Statements and claims should be supported by facts such as previous RIAs, investigations and/or scientific evidence.

The changes in the template and guidance in May 2014 made it clearer that alternatives to new rules, for example economic policy instruments or no regulation, should be analysed. More specific requirements related to an analysis of costs and benefits were also added under the heading: Socio-economic analysis. The following components were included for which, when relevant, consequences should be described:

- consumers
- government finances
- society in general (including external effects)
- agencies and other public administrations
- synthesis of costs and benefits
- distributional consequences
- contribution to the transport policy goals.

In addition to these, the requirements related to Section 7 in the IA Ordinance are found under this heading. This part is unchanged in relation to the previous supportive documents and is quite specific about the required information. It includes the number and types of enterprises that are affected, the possible impact on competition, quantification of the administrative burden¹⁵ and if special care in the design of the regulation needs to be given to SMEs.

Method used in the analysis of impact assessments

The aim of our investigation is to examine if the agencies' requirements according to the supporting documents on how to perform an RIA are fulfilled. To do this we use the scorecard approach by Hahn and Dudley (2007). However, we made some changes so that the scorecard would reflect the content of the new guidelines from the Swedish Transport Agency. The aim is to assess the content but not the overall quality of the RIAs. Our focus is on the inclusion of the new aspects related to CBA that were introduced with the new guidelines. The main advantage of using the scorecard method is that it requires no detailed knowledge of the assumptions and calculations underlying the particular analysis. Also, it does not require the researcher to judge whether or not the estimates are correct or not. The only thing that is measured is whether or not the required information is presented in the RIA. However, in order to get some qualitative information about the content of the RIAs, we also included commentary fields for the reviewer.

As discussed by Hahn and Dudley (2007) a good quality RIA is defined in a specific way since it follows the basic requirements in the executive orders and guidelines. This implies that the scorecard is objective in that sense and that other researchers are able to replicate the results. A disadvantage, also discussed in their paper, is that an RIA could receive high scores and still be poorly done. This is the case if all estimates are wrong in the analysis, but this caveat is likely to be minor since many of the questions on the scorecard are quite basic. Hence, a RIA with a low score is unlikely to be of high quality. Another drawback discussed is that it does not measure the potentially significant impact that RIAs may have on the process of regulation such as transparency, encouraging debate or changing policy. Furthermore, a potential drawback not discussed in the Hahn and Dudley report is that the conclusion is based on subjective assessments of the RIAs implying that the result will depend on the reviewer. To mitigate this, for this study two meetings were held with the five persons involved in the review.

Sample

The RIAs were produced in the period from May 2014 to January 2016, which was the period when these supporting documents were in place. Only RIAs that are related to the development of a regulation are included, the reason is that the agency is not required to perform RIAs if the proposal is something other than a rule. Hence, these investigations, if performed, are poorly documented. The sample used consists of a total of 49 RIAs, 32 from the Road and Rail Department, 14 from The Civil Aviation and Maritime Department and 3 are government commissions. As described in the previous section, the decision of whether or not to investigate a regulation is made by a manager and should be preceded by some kind of analysis. These were not included in this study as these decisions at times are poorly documented and not easy to match with the final RIA.

Many RIAs consist of more than one regulatory change. The implementation of an EU Directive for example can require changes to be made in several ordinances. According to the current practice at the agency, these are often described in the same impact assessment. There were however exceptions: in some cases the same EU Directive applied to different areas of expertise, for example road and rail, and our review concluded that different units developed “their own” RIA without, as it seems, synergy effects. Because a RIA can consist of many changes within each report we decided to treat each regulatory change as one “case”, i.e. if a RIA contained three regulatory changes we treated it as three separate cases where each one should contain information as required by the guidelines. The assumption to treat each change separately implies that the number of usable observations totals 142.

The changes evaluated in the different RIAs range from 1 to 22. This imposed a challenge for our analysis since more often than not, the RIA was not structured in such a way that each regulatory change was treated separately. Moreover, the type of change differs, from administrative changes to proposals that affect many parties. Hence, some regulatory changes that were analysed are much more complex, and involve more effects to be evaluated, than others. The range of problems to be analysed was also large. The sample included RIAs regarding medical requirements, requirements for air traffic controllers, traffic safety and environmental effects of introducing longer and heavier freight vehicles, market monitoring of driving schools and driver education. The range of the problems analysed illustrates that the rules designed and administered at the Swedish Agency influence many different parts of society; the business sector as well as individuals.

Results

That the number of changes made in each RIA are difficult to track, implies uncertainty in the results. This is, however, a result itself since if there is no clarity of presentation it is difficult to understand the RIAs. It is often unclear how many changes are made and how they connect to the proposal, that is if it is a change in an existing rule, a new rule, a repeal of a rule or other. About half of the changes made were due to national regulation, 34% originating from the European Union and in 12% of the changes made, it was not clear in the report why an RIA was carried out. This ambiguity tends to increase with the number of changes made in each RIA. About 68% of the cases consisted of two or more changes. In about 4% of the cases it was not possible to evaluate how many changes that were made.

Another general finding is that in some cases changes analysed in different RIAs come from the same reform such as an EU Directive etc. In these cases there seems to be no analysis of the overall change, rather the details in the proposal is analysed. Moreover, the level of ambition in each RIA is the same, even though it is reasonable to expect a variety in breadth and depth of the analysis due to the different

areas in focus or the kind of change to be analysed. That is, the analysis tends to be the same no matter if a pre-determined proposal is implemented or if it is a case where the acting space is large and it is possible to design the proposal and/or even analyse different alternatives to reach a solution that fulfil the objective.

The result of the review of the 142 cases is presented in Table 1. For the main headings in the guideline and the template, we have assessed if they a) contained a satisfactory qualitative description, b) quantification and c) information about monetary values of the effects. The headings in bold are those that are new requirements. Some aspects were not possible to quantify, these are indicated by (*). For others some aspects are not relevant, these are marked with (-).

Table 1. Descriptive summary of the scorecard results (%)

Headings in guidelines	Qualitative description	Quantified effects	Monetary valuation
Problem definition	*	11	-
Status quo (reference alternative)	38	-	-
Objective of proposal	38	-	-
Alternatives (no regulation)	10	-	-
Alternatives (regulation)	31	-	-
Enterprises	46	41	*
Consumers	51	4	1
Government finances	32	6	6
Other society (externalities)	31	4	1
Agencies and other public adm.	40	15	8
Synthesis of costs and benefits	56	-	-
Distributional consequences	28	-	-
Transport policy goal (economic efficiency)	5	-	-
N=142			

Note: (*) implies that these results are difficult to quantify which is further described in the text. (-) implies that this is not considered and reviewed since the guidelines do not require quantification and monetary valuation of the effects.

From the table it is clear that only a small share of the cases contain an evidence-based problem description, i.e. either it refers to previous studies, other RIAs or tries to quantify the magnitude of the problem. The majority of the cases, nearly 90%, lack this information. It is not clear if this is due to difficulties in quantifying the problem, but from the more qualitative comments of the reviewers it appears that one reason is that it is taken for granted that the regulation should take place. The problem description in these cases contains information on the legal aspects, such as the need to regulate because of a new EU Directive. The qualitative description further points to a mixture of economic and market effects, where the latter belong to a business administrative analysis rather than to a RIA.

The objective, or the reference alternative, should provide a description of the status quo over time. This is clearly described in 38% of the cases. In most cases a description of the expected impact on society's welfare is missing, for example if the aim is to reduce accident risk, increase accessibility or reduce emissions etc. Instead, the legal objective is often described. Alternatives to regulation (rules) are discussed in very few cases (10%). In most cases these are not investigated further or are dismissed at an early stage with the motivation that it is unclear whether or not other solutions (than rules) will have the expected impact. About one-third of the cases provide more than one alternative of the design of the rule. Hence, it is more likely that different designs of a specific rule are analysed than it is that

alternatives to rules are evaluated. Still, in the majority of cases it appears that the reason for the regulation is unclear and that only one alternative is described.

As for the new requirements expected to result in better information for CBA, the result in the table is discouraging. The most obvious example is the result for consumers for which impacts are said to exist in 51% of cases but where the quantification of impacts and monetary valuation in most cases are lacking. This can be compared with the results for enterprises where quantifications appear to be made in almost all of the relevant cases (46% concern enterprises and 41% contain quantified information about the impacts). Also for the other new requirements, there is a general lack of quantification and monetary valuation.

Given these results, it is somewhat surprising that a relatively large share of the cases (56%) contain a synthesis of costs and benefits. One explanation is that enterprises are included in the synthesis. That economic efficiency is not really an issue in most of the cases is illustrated by the fact that the fulfilment of the overriding goal of the transport policy (economic efficiency) is only discussed in 5% of the cases. One reason for this rather low result, however, is that the guidelines only discuss the goals adopted by the parliament (functional goals, 41%, and consideration goals, 44%).

As described, the IA Ordinance is quite specific on what information is required if enterprises are affected by a regulation, if the effects are expected to be of a large magnitude. These RIAs are also sent to the Better Regulation Council for review. In the sample considered, 46% involved enterprises and 41% of the cases put a number on how many would be affected by the proposal. Table 2 gives more detail about the information presented concerning enterprises in the cases in the sample. Relative to the other impacts, the number of quantification is higher and covers more aspects. The administrative and other costs are estimated in 28% and 22% of the cases respectively. How the enterprises are affected in terms of competition is analysed in 22% of cases and small enterprises and other effects are discussed in 25% and 30% of the cases respectively.

Table 2. Impact on enterprises (%)

	Enterprises	Administrative costs	Other financial costs	Impact on competition	Impact on SME's	Other effects
Number of cases	41	28	22	18	25	30

Discussion of the results

The results presented in the previous section are quite discouraging, both concerning the overall quality of the RIAs and more specifically their lack of information on benefits and costs. They are however in line with two of the three main findings by Hahn and Dudley (2007):

- The quality of the analyses, as measured by the inclusion of fundamental economic information is in general low.
- The quality of the CBA does not seem to change over time (t = 1982-1999) or across administrations.
- Individual RIAs vary widely in quality, even within administrations.

Our results correspond to their findings in the first and third case. As for the second case that the data is not comparable since the CBA approach has been used for a short time (t = 2014-2016) and we have only evaluated the work at one agency. Overall, potential reasons for the discouraging results are

discussed in this section, the focus being on the institutions and traditions in the Swedish governance system.

The lack of assessment of benefits and costs implies that it cannot be assessed to what extent new or revised regulations contribute to the overall transport policy goal of transport provision that is economically efficient and sustainable in the long term. It is not only that benefits are not quantified monetarily, nor do they appear to be properly assessed in the problem description. Alternative solutions also appear to be ruled out at an early stage. From the more qualitative descriptions from the review, it appears that a central assumption underlying the current regulatory work at the agency is that regulation is obeyed and lead to the expected outcome. Therefore, neither solutions other than rules, nor sensitivity analyses on proposed solutions are analysed further.

Another possible explanation to why a majority of the changes made in the RIAs do not provide a complete description of the problem, or consider alternative solutions, is the decision process. Since the RIA is performed *after* the initiation of an inquiry and because that the outcome by tradition is to regulate, it is likely that the RIA serves more to justify the regulatory decision than to inform it. Hence, there are currently no incentives to perform a deeper analysis and investigate other solutions. There may also be a time constraint. Since it was not possible to study the documents on which the decision to undertake a RIA is made, a judgement of whether this is where the evaluation of alternatives takes place or not cannot be made. However, it seems unlikely since no reference to such documents is made in the RIAs. Moreover, no financial resources are currently assigned to a regulatory investigation at the agency before the decision to initiate a regulation is made.

The result further illustrates that there are few cases where the effects of the proposals made in the RIA are quantified and/or given an economic value in terms of a benefit or a cost. One exception is the effect on enterprises but even these are quantified and given a value in less than half of the cases, despite the requirements of IA Ordinance. The focus on enterprises is likely an effect of tradition in working with RIAs, both on a national level and within the agency. However, as pointed out by, for example, the OECD, a RIA should contain information on the impact on society as a whole, not a specific sector of the economy.

One reason for the lack of information on benefits and costs, despite the new requirements, is that the history of the agency is short and it takes time to collect this type of information. It also requires certain skills. The sample in our study illustrates that the range of the problems analysed by the agency is very large. The problems to be analysed also change over time since the transport system changes, for example, due to the introduction of new technical solutions such as autonomous vehicles. Despite this, the number of economists at the Swedish Transport Agency are few. This is a very different context compared to transport investment analysis where there now exist elaborate tools supporting cost-benefit analysis. Hence, the research regarding infrastructure investments that so far has been in focus in relation to CBA in transport, mainly the work undertaken by ASEK, may not be easily transferable to the regulatory context. Another problem identified during the course of this study is that the agency itself collects relevant data in registers but legal obstacles prevent them from being used for analysis of causes and effects. It is also well known that even with data there are difficulties in placing economic values on effects, an obstacle that increases when assessing situations that are complex and varies.

The lack of a whole of government approach

The division of responsibility between the political level and the regulator is discussed by the OECD (2011). Politics build institutional frameworks for policy making. This Swedish example highlights that little attention has been paid to the role of a RIA in the Swedish policy making system. This section presents three examples that illustrate the implications for current work with RIAs and CBAs in transport planning. As discussed above, one reason for the lack of the full implementation of RIAs in Sweden appears to be the system with committees of inquiry and the referral process. However, according to Petersson (2016), their influence on the policy making process is changing. One reason for this is that the policy making context has been changing, for example due to membership in the EU28. Many proposals are now prepared at the EU level and it is the government and the agencies that prepare Swedish positions in the negotiations that follow, not committees of inquiries. According to Petersson (2016) this has implied that political decisions today are taken on much less solid factual grounds. He also discusses that it is no longer the case that “all interested parties” are consulted beforehand. Hence, despite the referral process, it appears that policy making to a lesser extent is influenced by opinions and advice from stakeholders and the civil society.

Several evaluations (OECD, 2004; 2007; 2010; 2014; 2015) have found that current policies related to growth and the environment in Sweden are neither innovative nor efficient. One reason being that in the current system the ministries do not take a clear lead on strategic issues (OECD, 2014; 2015). This implies an avoidance of, at least an explicit, discussion of conflict between societal goals at the central government level. Policies are not coordinated since it is left to various bodies, and individuals, to interpret government policies and design measures based on these interpretations. That this is also a problem in Swedish transport policy is discussed in a report from a commission of inquiry (Government Official Report 2009:31). Possible reasons for these observations are likely to include the changes made to the Swedish governance system in the last 20 years that described earlier. In the transport sector, the introduction of the Vision Zero and the Environmental Quality Objectives have influenced policy making. Both are examples of the introduction of management by objectives in the policy making system. They are also examples of policies where the actual implementation to a large extent is delegated to other levels in the governance system

Vision Zero and the EQOs were introduced at a time when the precautionary principle was guiding EU policies. According to Lofgren (2004) Sweden at the time was one of the countries that advocated the use of the precautionary principle. However, this is a principle that may be difficult to combine with rational decision making (Sunstein, 2003; Hahn and Sunstein, 2005). This conflict is also discussed by Belin et al. (2012) in relation to Vision Zero. They conclude that Vision Zero is a break with the traditional view of traffic safety interventions where measures should be undertaken as long as the benefits exceed the costs. According to Lofgren (2004), the EU28 with the Better regulation agenda started a move towards using RIA instead of making decisions based on the precautionary principle. Our findings show that Sweden is lagging behind in the use of RIA. Currently, there is no clear description at the ministerial level on the role of RIA, neither clear instructions on what it should contain, when it should be used and who evaluates the results except for the parts related to administrative simplification, and consequences for businesses.

The question then is if the changes in the policy-making system have had implications for the transport policy and planning in Sweden and the use of RIA and CBA? The following three examples from our daily work illustrate how the current context influences the policy-related work. The first is a RIA reviewed in

the case study. The second relates to the output from the work done by ASEK. The third illustrates the problems with a fragmented system for a systematic work on development of inputs to CBA, based on scientific evidence.

Our first example is a RIA concerned with new rules about driving licences for individuals with different kinds of physical handicap. One of these related to a “new” problem resulting from the influenza A(H1N1) pandemic in 2009, when Sweden chose to conduct a mass vaccination campaign using the Pandemrix vaccine. A few years after the vaccination was administered, evidence emerged on an association between the pandemic vaccination and severe adverse event narcolepsy in children (Widgren, et al., 2013). The question now for the Swedish Transport Agency is under what conditions these children can obtain a driver’s licence when they come of age. This entails weighing the risk (i.e. the cost) that these individuals may introduce on the road transport system against the benefit they will have from being able to live as normal a life as possible.

This however was not the focus in the RIA. Instead, it was on the possible increase in administrative costs due to additional medical examinations. This may sound surprising, but it is not, given the current focus in RIA practices. This RIA was examined by the Better Regulation Council and mainly judged according to the fulfilment of Section 7 in the IA Ordinance. It was for example deemed unsatisfactory in relation to the description of businesses concerned. It is the civil servants that are required to judge whether or not a certain RIA should be assessed according to Section 7 of the IA Ordinance or not. As this example illustrates, a RIA can have an impact both on the general public and enterprises. Since, in such cases, the only scrutiny of the RIA is made by the Better Regulation Council, it is not surprising that civil servants are would rather be safe than sorry and focus on the aspects that can be controlled.

Our second example is the work done on the development of principles and estimates to be used in CBA for the transport sector. As described in earlier, this work started in 1998 with the establishment of ASEK. The institutional setting, as well as the participants, has changed over time. At the origin researchers were part of this group in addition to representatives from relevant agencies. The responsibility was placed on the autonomous agency SIKa. In 2010, the responsibility was transferred to the STA, and now only agencies participate. Other institutional changes have also taken place over time. The problem in relation to the implementation of RIA is that since the first estimates were presented, no revisions have been made. The original estimates have only been adjusted over time using price indices. This is despite the fact that, regarding accident risk for example, the introduction of measures, such as median barriers, have reduced the risk. In addition, cars have been made safer. This in turn implies that the marginal cost for using the road transport system are expected to decrease. For air pollution, on the other hand, a number of studies have since 2003 revealed that the estimates used are very high in comparison with other calculations made both in Sweden, and in the EU28 for Sweden. Now new estimates are being developed, not as a result of a decision made by ASEK, but due to a government commission in 2012 (Nilsson and Johansson, 2014; Nerhagen et al., 2015; Isacson and Liss, 2016).

Our third example illustrates how delegation of responsibility in a governance system may work against an efficient approach in the development of inputs required for undertaking a RIA and CBA. The Swedish EPA has the overall responsibility for the achievement of the EQOs. It was only recently, in 2010, that the agency was instructed to develop the use of CBA in the work with the EQOs. This can explain why the current work with the government commission on the development of new marginal cost estimates has revealed that there is a lack of data relevant for quantifying ecosystem impacts in Sweden (Nerhagen, 2016). In the literature study done for this work it was found that studies made for the most recent assessments within the EQO system had a focus on understanding how international sources influence

air quality in Sweden and the achievement of the established goals. Hence, the focus is not on assessing the impact of Swedish emissions sources, which is the information needed for marginal cost calculation.

The examples illustrate that changes in institutional design over the last 20 years influence practical work, which in turn, based on experience, influences the possibility to perform RIAs of regulations in transport. They also illustrate that there is currently a lack of a “whole of government approach” to the use of RIA including CBA in the Swedish transport policy and planning system. The system is fragmented involving several agencies but with different aspects in focus in their work. This influences research and development, which in turn has implications for the possibility to undertake high quality RIA and CBA. One question then is if other aspects of the Swedish policy making system replace the use of RIA. As described, the STA has developed the four-step principle as a tool to encourage “new ways of thinking” in the transport system. The impact however appears to be low. Reasons for this are discussed in a review undertaken for the National Audit Office (Nilsson et al., 2012) and in the final report from the National Audit Office (2012). According to the latter, it appears that the division of responsibility between the ministry and the STA for the design of policy measures for the transport sector is unclear.

These outcomes of the current system also have implications for the work done by the Swedish Transport Agency, since issues that the agency faces in its work with RIA and CBA are not addressed. Compared to the STA, the Swedish Transport Agency assesses the economic efficiency of the “design” and function of the transport system rather than the profitability of investing in it. The situations assessed are less standardised compared to that of building a new road or making changes to an existing one. Hence, the situations to be analysed are generally less repeated and sometimes unique. Therefore, quantifying and placing monetary values on effects are more problematic. Furthermore, the situations assessed are often both complex and uncertain. The cost of providing estimates is also higher when they are produced for unique situations. These are challenges that to a lesser extent have been addressed in the work done by ASEK and in the research regarding Swedish transport. Hence, tools needed for analysing regulation of transport using CBA is a new area of research in Sweden. There is currently a need for empirical studies since monetary estimates, assessments of effects and models are non-existent or need to be modified.

Conclusions and recommendations

RIA as a tool and a process are expected to improve policy making. However, as discussed in the introduction, implementing a full RIA including CBA in a governance system is a challenging task. This paper has discussed the current use of RIA, including CBA, in the Swedish policy making context. Our focus has been on its role in transport policy and planning. The discussion was based on the experiences of the obstacles encountered when trying to implement the full RIA for regulations of the Swedish transport regulator (the Swedish Transport Agency). It was found that in Sweden, contrary to many other OECD countries, the responsibility for the implementation of RIA does not rest at the central government level. Instead, it is in the hands of several government agencies. There also appears to be a separation between the work with the “IA Ordinance” (2007:1244), which only applies to regulatory agencies, and the work with CBA, which is mainly done in relation to transport investment planning and, in recent

years, the work with the environmental quality objectives. Hence, the current system is highly fragmented.

Reasons for the current institutional design are according to our findings policy-making traditions and politics. Compared to other countries, Sweden has an elaborate system for the preparations of policy proposals. Through the established processes with commissions of inquiry and the referral process much information, and the pros and cons of different solutions, are collected and analysed. Hence, the process has supported rationalistic policy making and therefore the usefulness of RIA may be an issue. This is the influence of tradition. As for politics, it is clear that the implementation of the work on better regulation stemming from the European Union in practice has implied a focus on regulatory simplification and administrative burdens for the businesses. A reason for this is that the implementation of the RIA ordinance has been placed in the hands of the Swedish Agency for Economic and Regional Growth. Moreover, the only scrutiny of RIAs is made by the Better Regulation Council, which according to its instructions should focus on Section 7 of the ordinance, that is, consequences for enterprises.

However, policy making in Sweden is changing, in part influenced by the membership in the EU28. Much more than before, regulatory changes stem from decisions made at the EU level. A recent example is the EU Directive on the charging of heavy goods vehicles for the use of certain infrastructures.¹⁶ Currently a commission of inquiry is investigating how this directive should be implemented in Sweden. According to this directive, the charges should be differentiated based on the Euro-class of a heavy goods vehicle and to do this marginal cost estimates should be used. Another example, where the Swedish Transport Agency has been involved in the preparation of Swedish regulation, is the directive regulating the inspection of vehicles. The latter is an example of changes taking place where the agencies together with the ministries make preparation concerning regulations instead of commissions of inquiry. With the small ministries in Sweden, the government agencies have become very important players in the field of policy making.

Given this new situation, the conclusion of this paper is that Swedish transport planning could benefit from implementation of the full RIA. This however entails a number of changes to the current institutional design. One problem related to the current system is the focus in the IA ordinance on regulation. In Sweden, the four-step principle has been developed where the first two steps relate to policy design and measures that may influence travel patterns. In practice, this type of analysis does not appear to be done because of unclear responsibilities and the lack of information to perform such an analysis. Another reason could be that the requirements to undertake RIAs only apply for regulatory agencies and when regulatory changes are considered.¹⁷ Another obstacle is the unclear role of economic analysis and CBA in policy making. It has been illustrated that in the current system inputs to economic analysis, such as marginal cost estimates, are not updated regularly. This is despite changes taking place in the transport system and the environment that will influence these estimates. For the Swedish Transport Agency, this implies that it has to develop its own estimates, which it has not had the means to do since the agency does not have funds for research to the extent needed, or leave out some aspects of an analysis to avoid making decisions based on obsolete information.

The experiences made in the work with implementation of the full RIA at the Swedish Transport Agency provide strong support for the OECD recommendation on the “whole of government approach”. The following paragraphs present some suggestions for concrete changes that could benefit the work on regulation done at the Swedish Transport Agency and in general. These changes relate to the current institutional design and the work undertaken by other agencies. Hence, this paper illustrates how the implementation of the full RIA requires a systems approach with clear requirements, guidelines and

division of responsibility between the ministerial and the agency level as well as between government agencies.

Firstly, the IA Ordinance must be revised or clarified to mitigate the current focus on regulation and regulatory authorities. It is currently unclear what kind of analysis that should underlie proposals that relates to other policy instruments than regulations. This is for example of relevance for the possibility for the STA to do analysis related to steps one and two of the four-step principle. It is also relevant for Section 10 of the IA Ordinance that concerns follow-ups and ex-post evaluations, since the responsibility for evaluations of policy instruments in general is currently unclear. Also, the responsibility for the work with implementation of RIA should probably be placed in the hands of the Swedish National Financial Management Authority, in line with the proposals put forth by the commission of inquiry. In combination with such a change, the guidelines provided by the Authority need to be updated regarding the use of CBA in policy analysis. We believe that having a specific Authority working with RIA will also benefit research on the use of RIA in Sweden.

The second recommendation relates to the role of the Better Regulation Council. In both the European Union and the United States there are separate acts on how to consider SMEs in regulation, which concerns the possible need for differential treatment. This is not the case in Sweden. There is currently a focus in the IA Ordinance on administrative simplification and quantitative description of concerned markets. Since regulation also involves market monitoring, how to work with competitive aspects when undertaking a RIA, in particular regarding SME's, is an issue. Therefore, greater emphasis should be placed on the field of industrial organisation in the work done by the Better Regulation Council, in particular on competition policy and evaluation.

The final recommendation relates to the role of CBA and the current work with research needed for this kind of analysis. The development work is currently undertaken by ASEK and to some extent the Swedish EPA. Hence, in the current Swedish system, the agencies working with a particular policy area (investment in transport infrastructure and environmental policy) are also given the responsibility for developing models, estimates and the collection of data needed to undertake a CBA. This is a problem for the Swedish Transport Agency since current development work has a focus that does not support CBA of regulations in the transport sector. A more general problem is that having several agencies developing inputs and applied methods in parallel may not be efficient. Platforms and instructions on how to coordinate agency work strive to mitigate this but may not be enough. Hence, as discussed in the academic literature, to secure an "objective" analysis, it is recommended that the tools and inputs used in CBA should be developed by an autonomous institution.

Notes

- 1 OECD (2008) defines whole-of-government approach as: “one where a government actively uses formal and/or informal networks across the different agencies within that government to coordinate the design and implementation of the range of interventions that the government’s agencies will be making in order to increase the effectiveness of those interventions in achieving the desired objectives”.
- 2 RIA is increasingly used internationally (Ruddy and Hilty, 2008; Delbecke et al., 2010). Many countries have a legal framework that stipulates the use of economic analysis, including CBA, in regulatory work. In both the United Kingdom and Norway, for example, the respective ministry of finance has responsibility for this type of analysis being used by central government bodies. These institutions also issue guidelines on how the analysis should be done (HM Treasury, 2011; Ministry of Finance in Norway, 2014; Norwegian Government Agency for Financial Management, 2014).
- 3 A recent example of economics as a discipline being questioned is an article published in The Economist in May 2016 with the title “If Economists reformed themselves. A less dismal science”.
- 4 One reason for this appears to be that the European Union until 2012 had an action programme for the reduction of administrative burdens within the European Union. This is now replaced with other initiatives such as the REFIT programme.
- 5 How to reach these ambitious objectives has been a question for governments and government agencies ever since. This has also been an issue discussed in the academic literature, for example in relation to the use of cost-benefit analysis. (Brännlund, 2008; Forslund et al., 2010; Jamet, 2011; Edvardsson Björnberg, 2013).
- 6 This objective has influenced the STA’s work in several ways, for example resulting in the establishment of a governance system involving evaluations, use of indicators, collaboration in networks and a yearly conference focusing specifically on traffic safety.⁶ Concretely, there is for example an established objective that 75% of the state roads with a speed limit over 80 km/h shall have a median barrier by 2020. Another measure is to build more secure road crossings in municipalities for pedestrians and bicyclists.
- 7 According to the instructions, the Swedish Environmental Protection Agency has the responsibility to support the work with sustainable development based on the EQOs. It shall also be a driving force in the work with environmental policy and provide support to other central government agencies. It must also provide updates on the state of the environment. Currently, there are eight central government agencies that have a responsibility for specific EQOs, as stated in their instructions from the government. In addition, there is a system established for the collection of data on the state of the environment to which government agencies and country administrative boards provide information on a regular basis.
- 8 It is stated on its webpage (<http://www.regelradet.se/en/>): “The Swedish Better Regulation Council is a special decision making body under the umbrella of the Swedish Agency for Economic and Regional Growth. The members of the Council are appointed by the government. The Council is responsible for its own decisions. Its tasks are to review and issue opinions on the quality of impact assessments to proposals with effects on business. The Council shall also on request from regulators review impact assessments on EU-proposals that are assessed to have a great impact to businesses in Sweden.”
- 9 <http://www.naturvardsverket.se/Miljoarbete-i-samhallet/Miljoarbete-i-Sverige/Uppdelat-efter-omrade/Miljoekonomi/Samhallsekonomiska-analyser/Plattform/en/>
- 10 In September 2015 a smaller change was introduced in the ordinance, adding to Section 6 that the legal grounds for the agency’s right to regulate should be described.
- 11 <http://www.Government.se/Government-policy/transport-and-infrastructure/goals-for-transport-and-infrastructure/>. Accessed 8 November 2015.
- 12 The Aviation Board, the Swedish Rail Agency, the Maritime Inspection, the Maritime Administration, the Road Traffic Inspectorate and the Administration of Road Traffic from the Road Administration. Driver licensing and commercial transport was transferred to the Swedish Transport Agency from the County Administrative Board in January 2010.
- 13 <http://www.trafikverket.se/en/startpage/operations/Operations-road/vision-zero-academy/Vision-Zero-and-ways-to-work/>
- 14 Nerhagen and Forsstedt (2016) contains a more detailed description in Swedish of the study and its results.
- 15 A calculation tool has been developed by the Swedish Agency for Growth and Regional Development.
- 16 DIRECTIVE 2011/76/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 September 2011 amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures.
- 17 The need for political involvement by the parliament in the work on Better regulation is for example raised in a recent report from the Board of Swedish Industry and Commerce for Better Regulation (Lööv, 2016).

References

- Atkinson G. (2015), "Cost-benefit analysis: a tool that is both useful and influential", in Jordan A.J. and J. R. Turnpenny (Eds) *The tools of Policy formulation: Actors, Capacities, Venues and Effects*, Edward Elgar.
- Belin M-Å, P. Tillgren and E. Vedung (2012), "Vision Zero – a road safety policy innovation". *International Journal of Injury Control and Safety Promotion*, 19:2.
- Brännlund R. (2008), "Principiella utgångspunkter i klimatpolitiken och klimatpolitikens kostnader", *Ekonomisk debatt*, 4, Temanummer om klimatet och samhällsekonomin.
- Carrigan C. and S. Shapiro (2016), "What's wrong with the back of the envelope? A call for simple (and timely) benefit-cost analysis", *Regulation & Governance*, Wiley, <https://doi.org/10.1111/rego.12120>
- Clifton, J. and D. Diaz-Fuentex (2014), "The OECD and "The Rest": Analyzing the Limits of Policy Transfer", *Journal of Comparative Policy Analysis: Research and Practice*, 16:3, pp. 49-265.
- De Francesco, F., C.M. Radaelli and V.E. Troeger (2011), "Implementing regulatory innovations in Europe: the case of impact assessment", *Journal of European Public Policy*, <http://dx.doi.org/10.1080/13501763.2011.607342>.
- Delbeke, J. et al. (2010), "The Role of Environmental Economics in Recent Policy Making at the European Commission", *Review of Environmental Economics and Policy*, volume 4, issue 1, winter 2010, pp. 24–43.
- Edvardsson Björnberg, K. (2013), "Rational climate mitigation goals", *Energy Policy* 56. pp 285–292.
- Eliasson, J. and M. Lundberg (2012), "Do Cost-Benefit Analyses Influence Transport Investment Decisions? Experiences from the Swedish Transport Investment Plan 2010-21", *Transport Reviews*, Vol. 32, No. 1, pp. 29–48.
- Erlandsson M. (2010), "Better Regulation through Impact Assessments", Summary of SIEPS report 2010:1. Swedish Institute for European Policy Studies, http://www.sieps.se/en/publications/2010/regelforenkling-genom-konsekvensutredningar-2010/2010_1_summary.pdf (accessed 15 September 2019)
- European Commission (2015), "Better regulation for better results – An EU agenda", Communication from the Commission to the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM (2015) 215, final.
- European Union (2016), "Interinstitutional agreement between the European Parliament, the Council of the European Union and the European Commission on better law-making", 13 April 2016. EUR-Lex Document 32016Q0512(01).
- Forslund, J., et al. (2010), "Does Remediation Save Lives? On the Cost of Cleaning Up Arsenic Contaminated Sites in Sweden", *Science of the Total Environment*, 408 (16), 3085-3091.
- Forsstedt S. and L. Nerhagen, L. (2016), "Samhällsekonomisk analys i regelgivningsarbetet", Promemoria med avrapportering av inledande delprojekt inom ramen för CTS. Transportstyrelsen.
- Government Official Report 1995:57, *I medborgarnas tjänst. En samlad förvaltningspolitik för staten*, Finansdepartementet

Government Official Report 2004:23, *Från verksförordning till myndighetsförordning*, Finansdepartementet.

Governmental Official Report 2009:31, *Effektivare transporter och samhällsbyggande – en ny struktur för sjö, luft, väg och järnväg*, Näringsdepartementet.

Governmental Official Report 2009:83, *Miljömålen i nya perspektiv*, Miljö- och energidepartementet.

Government Bill 2008/09:93, *Mål för framtidens resor och transporter*, Näringsdepartementet.

Government Bill 2009/10:1, *Budgetpropositionen, Utgiftsområde 2*, Finansdepartementet.

Government Bill 2009/10:155, *Svenska miljömål – för ett effektivare miljöarbete revideras och effektiviseras det svenska miljömålssystemet*, Miljö- och energidepartementet.

Hahn, R.W., and C.R. Sunstein (2005), “The precautionary principle as a basis for decision making”, *The Economists’ Voice*, Vol. 2, No. 2, Article 8.

Hahn R.W. and P.M. Dudley (2007), “How Well Does the U.S. Government Do Benefit-Cost Analysis?”, *Review of Environmental Economics and Policy*, Vol. 1, No. 2, pp. 192–211.

Hahn, R.W. and P. C. Tetlock (2008), “Has Economic Analysis Improved Regulatory Decisions?”, *Journal of Economic Perspectives*, 22(1), pp. 67–84.

HM Treasury (2011), “The Green Book. Appraisal and Evaluation in Central Government”, *Treasury Guidance*, <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>.

Hultén, J. (2015), “Från Vägverket och Banverket till Trafikverket”, In *Vägen till Trafikverket – så byggdes ett statligt verk på 180 dagar*, Dokument 100742, Trafikverket.

Isacsson G. och V. Liss (2016), “Externa marginalkostnader för olyckor i vägtrafik”, *VTI rapport 896*. Statens väg- och transportforskningsinstitut.

Jamet, S. (2011), “Enhancing the Cost-Effectiveness of Climate Change Mitigation Policies in Sweden”, *OECD Economics Department Working Papers*, No. 841, OECD Publishing.

Jordan A.J. and J. R. Turnpenny, (2015), “The Tools of Policy Formulation: Actors, Capacities, Venues and Effects”, Edward Elgar.

Larsson T. and H. Bäck (2008), “Governing and governance in Sweden”, Studentlitteratur, Lund.

Levi-Faur D. (2011), “The Odyssey of the regulatory state. Episode one: The rescue of the welfare state”, *Jerusalem Papers in Regulation & Governance*, Working paper no. 39.

Lindberg G. och L. Nerhagen (2013), “Transportstyrelsens arbete med konsekvensutredningar. Metodik för samhällsekonomisk analys med beräkningshandledning i bilaga”, *VTI rapport 783*, Statens väg- och transportforskningsinstitut.

Lofstedt, R.E. (2004), “The swing of the regulatory pendulum in Europe: From precautionary principle to (regulatory) impact analysis”, *The journal of risk and uncertainty*, 28:3. pp 237–260.

Lööv, T. (2016), “Systematisk utvärdering. Politiskt ansvarstagande för effektivare regler”, Board of Swedish Industry and Commerce for Better Regulation (In Swedish: NNR – Näringslivets regelnämnd) <http://nnr.se/english/about-nnr/>

Ministry of Finance in Norway (2014), “Prinsipper og krav ved utarbeidelse av samfunnsøkonomiske analyser”, Rundskriv R-109/14.

Modell S., K. Jacobs and F. Wiesel (2007), "A process (re)turn: Path dependencies, institutions and performance management in Swedish central government", *Management Accounting Research*, 18(4), pp. 453-475.

National Audit Office (2012), "Central government investments in transport infrastructure – value for money", RIR 2012:21, Riksrevisionen.

National Financial Management Authority (2015), "Tänka efter före – konsekvensutredning vid regelgivning", ESV 2015:19. Ekonomistyrningsverket

Nerhagen L., et al. (2015), "Externa kostnader för luftföroreningar och buller från trafiken på det statliga vägnätet. Kunskapsläget och tillgången på beräkningsunderlag i Sverige samt några beräkningsexempel", VTI notat 4. Statens väg- och transportforskningsinstitut.

Nerhagen L. (2016), "Externa kostnader för luftföroreningar. Kunskapsläget avseende påverkan på ekosystemet i Sverige, betydelsen av var utsläppen sker samt kostnader för utsläpp från svensk sjöfart", VTI notat forthcoming, Statens väg- och transportforskningsinstitut.

Niemeier H-M. (2011), "Effective regulatory institutions for air transport: A European perspective", in OECD (2011), *Better Economic Regulation: The Role of the Regulator*, ITF Round Tables, No. 150, OECD Publishing, Paris, <https://doi.org/10.1787/9789282103272-en>.

Nilsson J-E., R. Pyddoke and J-E. Swärdh (2012), "Fyrstegsprincipen i praktiken. Tre underlagsrapporter för Riksrevisionens granskning av transportpolitiken", VTI notat 40, Statens väg- och transportforskningsinstitut.

Nilsson J-E. and A. Johansson (2014), "SAMKOST – Redovisning av regeringsuppdrag kring trafikens samhällsekonomiska kostnader", *VTI rapport 836*, Statens väg- och transportforskningsinstitut.

Nilsson M. et al. (2008), "The use and non-use of policy appraisal tools in public policy making: an analysis of three European countries and the European Union", *Policy Science* 41, pp. 335-355

Norwegian Government Agency for Financial Management (2014), "Veileder i samfunnsøkonomiske analyser", http://dfo.no/Documents/FOA/publikasjoner/veiledere/Veileder_i_samfunns%C3%B8konomiske_analyser_1409.pdf

Nyborg, K (2012), *The Ethics and Politics of Environmental Cost-Benefit Analysis*, Routledge.

OECD (2002), *Economic Surveys: Sweden*, OECD Publishing, Paris.

OECD (2004), *OECD Environmental Performance Reviews: Sweden 2004*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264108592-en>.

OECD (2006), *Cost-Benefit Analysis and the Environment: Recent Developments*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264010055-en>.

OECD (2007), *Regulatory reform and the environment. OECD reviews of regulatory reform. Regulatory reform in Sweden*. Report carried out under the OECD's Regulatory Reform Programme, in response to the 1997 mandate by OECD Ministers. Report drafted by Prof. Thomas Sterner, Nick Johnstone and Caroline Varley.

OECD (2008), "Whole-of-Government Approaches to Fragile States", *OECD Journal on Development*, vol. 8/3, https://doi.org/10.1787/journal_dev-v8-art39-en.

- OECD (2008), *Building an Institutional Framework for Regulatory Impact Analysis (RIA): Guidance for Policy Makers*, Version 1.1. Regulatory Policy Division Directorate for Public Governance and Territorial Development, <https://www.oecd.org/gov/regulatory-policy/40984990.pdf>
- OECD (2009), *Regulatory Impact Analysis: A Tool for Policy Coherence*, OECD Reviews of Regulatory Reform, OECD Publishing, Paris, <https://doi.org/10.1787/9789264067110-en>.
- OECD (2010), *Better Regulation in Europe: Sweden 2010*, Better Regulation in Europe, OECD Publishing, Paris, <https://doi.org/10.1787/9789264087828-en>.
- ITF (2011), *Better Economic Regulation: The Role of the Regulator*, ITF Round Tables, No. 150, OECD Publishing, Paris, <https://doi.org/10.1787/9789282103272-en>.
- OECD (2012) *Recommendation of the council on regulatory policy and governance*. OECD Publishing
- OECD (2014), *OECD Environmental Performance Reviews: Sweden 2014*, OECD Environmental Performance Reviews, OECD Publishing, Paris, <https://doi.org/10.1787/9789264213715-en>.
- OECD (2015), *OECD Economic Surveys: Sweden 2015*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-swe-2015-en.
- Ordinance 1995:1322, *Verkförsförrdning*, Svensk författningssamling
- Ordinance 2007:515, *Myndighetsförrdning*, Svensk författningssamling
- Ordinance 2007:1244, *Förrdning om konsekvensutredning vid regelgivning*, Svensk författningssamling
- Parker, D. and C. Kirkpatrick (2012), "Measuring Regulatory Performance - The economic impact of regulatory policy: a literature review of quantitative evidence", Expert paper no. 3, August 2012. OECD
- Petersson O. (2016), "Rational Politics: Commissions of Inquiry and the Referral System in Sweden", in Pierre J. (Ed) *The Oxford Handbook of Swedish Politics*, Oxford University Press.
- Pollitt, C. (1995), "Justification by Works or by Faith? Evaluating the New Public Management", *Evaluation Vol 1*(2), pp. 133-154.
- Radaelli, C.M. (2010), "Rationality, Power, Management and Symbols: Four Images of Regulatory Impact Assessment", *Scandinavian Political Studies*, vol. 33, no. 2, 2010.
- Ruddy T.F and L.M. Hilty (2008), "Impact assessment and policy learning in the European Union", *Environmental Impact Assessment Review* 28, pp. 90-105
- Ruffing, K. (2010), "The Role of the Organisation for Economic Cooperation and Development in Environmental Policy Making", *Review of Environmental Economics and Policy*, volume 4, issue 2, summer 2010, pp. 199–210.
- Shapiro S., (2011), "The evolution of cost-benefit analysis in US regulatory decision making", in Levi-Faur (Ed) *Handbook on the Politics of Regulation*, Edward Elgar.
- SIKA (1999), *Översyn av samhällsekonomiska kalkylprinciper och kalkylvärden på transportområdet*. Rapport 1999:6, Statens institute för kommunikationsanalys.
- Stegman McCallion, M. (2007), *Multi-Level Governance in Sweden?* Regional and Federal Studies, 17:3, pp. 335-351, DOI: 10.1080/13597560701543725
- Sunstein, C. R. (2000), "Cognition and benefit-cost analysis", *Journal of Legal Studies* 29 (2): 1059–1103, The University of Chicago.

Sunstein, C.R. (2003), "Beyond the precautionary principle", The University of Chicago Law & Economics, Olin Working Paper No. 149; University of Chicago, Public Law Working Paper No. 38.

Swedish EPA (1997), *Miljöskatter i Sverige – ekonomiska styrmedel i miljöpolitiken*, Naturvårdsverket förlag.

Swedish EPA (2003), *Konsekvensanalys steg för steg*, Handledning i samhällsekonomisk konsekvensanalys för Naturvårdsverket, Rapport 2003-11.

Swedish Transport Administration (2013), *Strategic Choice of Measures, A new step for planning of transport solutions*, Handbook, Publication 2013:176.

Swedenborg B. (1999), "Om betydelsen av konstitutionella spelregler", in Swedenborg B. (Ed) *Makten över politiken, Om konstitutionella spelregler och politikens innehåll*, SNS förlag.

Turnpenny J.R. et al. (2015), "The tools of policy formulation: an introduction", in Jordan A.J. and J.R. Turnpenny (Eds) *The Tools of Policy Formulation: Actors, Capacities Venues and Effects*, Edward Elgar.

Wallström J. and T. Söderqvist (2016), *Kartläggning av samhällsekonomiska analyser inom miljöområdet*, Rapport 2016:1, Envenco, Stockholm.

Wegrich K. (2011), "Regulatory impact assessment: ambition, design and politics", Levi-Faur (Ed), *Handbook on the Politics of Regulation*, Edward Elgar.

Widgren K. et al. (2013), *Prevailing effectiveness of the 2009 influenza A(H1N1) pdm09 vaccine during the 2010/11 season in Sweden*, Euro Surveillance, 18(15).

Winsor, T. (2011), "Effective regulatory institutions: the regulator's role in the policy process, including issues of regulatory independence", in *Better Economic Regulation: The Role of the Regulator*, OECD Publishing, Paris, <https://doi.org/10.1787/9789282103272-3-en>.

Wockelberg H. (2014), "Political Servants or Independent Experts? A Comparative Study of Bureaucratic Role Perceptions and the Implementation of EU Law in Denmark and Sweden", *Journal of European Integration*, 36(7), pp. 731-747

WSP (2012), *Fyrstegsprincipen genom en planeringsomgång*, Bilaga 3 till Riksrevisionens (National Audit Office) rapport 2012:21.

Should Regulatory Impact Assessment Have a Role in Sweden's Transport Planning?

This paper describes the use of regulatory impact assessment (RIA) and cost-benefit analysis (CBA) for transport planning in Sweden and discusses the arguments for and against its use. The paper considers four main aspects: First, the Swedish planning context and existing requirements regarding the use of RIA. Second, the current focus of research regarding CBA for infrastructure investments in the Swedish transport sector and the need for greater focus on issues concerning regulation. Third, the difficulty to quantify and place monetary values on effects. Fourthly, the paper discusses the need to align incentives at all levels and across agencies.

Resources from the Roundtable on Assessing Regulatory Changes in the Transport Sector are available at:
www.itf-oecd.org/assessing-regulatory-changes-roundtable