



INDICATORS FOR THE EFFECTIVENESS OF TRAFFIC LAW ENFORCEMENT

Vesa Huotari, PhD

*Senior researcher
Police University College
Finland*

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ABSTRACT

The bookkeeping of public organisations like the police covers the resources, their allocation to various tasks and the number of outputs provided. However, without indicators reflecting their capability in making a difference in terms of their purpose, their legitimacy rests upon shifting sands. This article explicates the effectiveness of traffic law enforcement by the police and the complexities involved in it. The aim is to specify clear points of reference that reflect their purpose and provide for the formulation of indicators of their effectiveness. From the perspective of the police, a valid system of indicators, when put into use systematically, would provide them with information to help them meet the purpose and, thus, help them to enhance the effectiveness of their work. The article discusses the obstacles to grasp that purpose unequivocally and figure out the deeds and activities that are essential in achieving it conceptually. The result is a conceptually comprehensive view that provides for the formulation of indicators that are useful in practice.

INTRODUCTION

Traffic law enforcement by the police, ever since the early years of motor-ing, has not sat well within the police institution, as the primary purpose of the latter has been the fight against crime. Policing the roads with the aim of increasing their safety has cumulated diverse criticism from inside the police and from the public (e.g. Brown, 1908; Donovan & Lawrence, 2008; Emsley, 1993; Hough, 1987; Seo, 2019). The police have been criticised for lacking systematic understanding of the effectiveness of their activities on the roads. While they measure the use of resources, the inputs and the immediate outputs, they pay insufficient attention to the more encompassing effects of their work in fulfilling its very purpose (e.g. Palmer & Corbett, 2015). Such a criticism puts the justification of the respective activities in question and undermines the legitimacy of the public provider in question. However, I will argue that this common criticism is true but unwarranted; the habit of measuring the inputs in controlling, say, speeding and drunk driving, are also good proxies for their effectiveness. The main aim of this article is to lay the ground-work for the formulation of indicators for the effectiveness of traffic law enforcement by the police.

I shall, firstly, explicate the very idea of effectiveness and outline two possible ways to approach it empirically. After a short discussion of the nature of traffic laws and the complexities underpinning their effective enforcement, I shall put forward an alternative view to traffic law enforcement and the role of the police in it (c.f. Meares, 2013). The purpose of traffic laws, unlike the Criminal Code, is to keep risks on the roads at a level that society finds acceptable (c.f. Elder, 1964; Zaal, 1994). Therefore, traffic law enforcement by the police should aim to ascertain that the law accurately reflects the true risks on the roads and that it is followed in practice too. As my third point, I shall draw out a framework for determining a system of indicators that would not only provide information on the effectiveness of the police on the roads, but also help in coming to terms with it in practice. The above calls for a systematic approach to the evaluation of effectiveness that succeeds in covering the process, not just its expected results.

Arguably, the effectiveness of law enforcement on the roads by the police is a complex and controversial issue (e.g., Churchill & van Norden, 2010; Bierschenk, 2016; Fichtelberg, 2013; Jacobs, 2016). I believe that the challenge of identifying good indicators for it reflects the problems in determining effectiveness in open and complex environments where the desired end results, like road safety, emerge because of the work of systems and systems of systems. The specific character and purpose of traffic laws and the controversial role of the police in maintaining good order on the roads by enforcing such laws add to this complexity.

However, we should address this complexity directly and aim to tackle the issues in their complexity rather than dissolving them by introducing simple analytical models as true accounts of the reality underlying the diversity of empirical events. Arguably, there is a wide gap between the aforementioned models and the real world. Overcoming it will not happen with a great single leap but by persistent and piecemeal conceptual pursuit. This article represents my attempt towards such a pursuit.

1. THE IDEA OF EFFECTIVENESS

The police that enforce traffic laws on the roads are part of the institution that, above all, but among its other duties (e.g., Friedman, 2021; Sparrow, 2016), fights crime, prevents it from taking place and, if such prevention fails, investigates the incidents as the first step in the criminal process. Arguably, the very purpose of traffic law enforcement is, at least in part, to provide for the accomplishment of the more general purpose of the police. However, the role that the police play in the criminal justice system implies that the purpose of the police is partly defined by the purpose of the criminal justice system. In addition to this, policing the roads aims to make the roads safer for their users. This aim, or the desired state of affairs, defines the purpose of work for a number of other agencies and organisations as well. Therefore, whether good or bad, it is a result of many independent, more or less coordinated pursuits and activities (e.g., McIlroy, Plant, Hoque, et al., 2019; Mohan, Tiwari, Varghese, et al., 2020; Churchill & van Norden, 2019). Accordingly, the outcome represents a joint accomplishment that does not offer any uncomplicated way to single out the contribution from an individual provider such as the police from the collectively accomplished outcome.

The obscurity of the purpose of the police, not to mention contradictions among the various purposes (Hough, 1987), has hampered all attempts to measure the effectiveness of the police (Kirby, 2013). Even more pressing is the question of whether the effectiveness of the police is basically a simple or straightforward technical matter that will be resolved as soon as the purpose(s) is (are) made clear for good. What is at stake here is the fundamental question of whether the police and policing manifest some value in themselves or whether their value is reduced fully to their instrumental utility and effectiveness.

Engel and Eck (2015) point out that effectiveness is not a supreme value. It cannot be pursued blindly or at the cost of other important values like equity, fairness, legitimacy, and quality. Strategies that are effective but not fully justified in the eyes of the citizens simply undermine the police as an institution. (Engel & Eck. 2015; Chatterton, 1987; Goldenbeld, Heidstra, Christ, et al., 2000). However, instrumentalist orientation

characterises our time to such a degree that the view that the citizens care about nothing, but the results seem almost inevitable, Tyler (2021) notes. Success in meeting socially held criteria for “good” police work, but failure to achieve the desired situation that is seen as belonging to the responsibility of the police will eventually turn the tables.

Thus, there are fundamental conceptual and practical issues in defining the purpose of the police as well as in determining the effectiveness of the police as an institution or of any of their distinctive functions, like traffic law enforcement. Table 1 evaluates the true complexity of the case.

The eight points highlighted in Table 1 undermine our efforts to measure empirically the effectiveness of traffic law enforcement by the police. However, such a method is not the only option for the evaluation of effectiveness.

It is possible to evaluate the effectiveness of an activity, not in terms of its intended effects on some desired state of affairs, but in terms of how closely the actual practice approximates to an ideal model for its functioning or realisation. Such a theory- or model-driven approach could proceed as follows:

- Figuring out the best available accounts explicating the causal mechanisms between the desired state of affairs and the possible courses of action.
- The selection of the model that, taking into account a variety of criteria, represents the most promising or otherwise warranted line of action.
- The model specifies the abstract categories and the causal relations between them. The next step is to transfer the categories into the world of traffic law enforcement by the police and use them to give a substantial yet ideal account and description of such enforcement.
- As the last step, the characterisations of the actual activities would be contrasted with the ideal model for traffic law enforcement in order to detect the possible compatibilities and shed light on possible discrepancies between the two. Such analysis would suggest

TABLE 1. The dilemmas in the evaluation of effectiveness.

Difficulties in the evaluation of effectiveness	The practical consequences resulting from them
The activity in itself and/or the state of affairs pursued by it are difficult to circumscribe unequivocally and measure empirically.	We cannot measure the changes either in the target activity of which the effectiveness interests us, or in the state of affairs that would change due to adjustments in our activity.
A significant time lapse that often exists between the deeds and materialisation of their effects hampers the efficient measurement of the latter.	We cannot determine beforehand the exact point in time when the expected effects should materialise, and thereby provide the desired proof in the matter.
In an open environment, the materialisation of effects is likely to depend on the state of a number of other factors that remain beyond our control or grasp.	As a rule, simply doing the proper thing in theory is insufficient in an open situation to guarantee the materialisation of the expected effect.
All activities tend to come with effects, some of which are undesirable or cause collateral costs that cannot be overlooked in the evaluation of the effectiveness. However, the true value or significance of the unintended effects is difficult to pin down and measure.	There is no objective method available for deciding the true value of the desired effects while taking full notice of the value of the undesirable ones too.
Theories that guide us in the connection between our deeds and the desired state of affairs are either ideal types or abstract. Their scope never covers all factors, effects or relations that intermingle with practice.	We build our plans on the best available knowledge and experiences verified by the past. However, the quality of those theories in representing the real mechanisms and their mutual relations escapes us, so our knowledge of the adequacy of our deeds remains obscure.
Our beliefs on effectiveness are hardly ever backed up by warranted empirical evidence, but for the most part reflect wishful thinking and our aspirations.	The evaluation of the effectiveness of anything is accomplished in a context characterised by strong expectations on the effectiveness of the evaluand.
Effectiveness is often an emerging result from numerous individual deeds, actors and systems in action. The interrelations between various elements remain a mystery to us.	It is impossible to determine afterwards the contribution from a single level or system to the outcome, or to determine how much of the success is coincidentally produced and how much is genuinely accomplished collectively.
Often organisations simultaneously pursue purposes that are competitive, occasionally even contradictory.	The effectiveness of the pursuits represents a compromise between the various purposes. In any situation, it is impossible to determine what would be the ideal balance between various purposes in it and how to attach a specific value to it.

ways to improve the performance of the target activity, i.e., to identify areas where it leaves room for improvement from the point of view of the ideal state.

It is possible to carry out the aforementioned comparison between the actual and the ideal, and to identify possibilities for enhancing the effectiveness without the need to verify the empirical manifestation of the intended effects.

This approach is built upon the presupposition that the efficient functioning of anything is a prerequisite for its effectiveness. Therefore, everything we can do to advance the smooth functioning of something, like lessen the friction in it, is likely to increase its effectiveness.

Unfortunately, this is purely a technical view of the issue and simply implies that effectiveness is improved by increasing the efficiency of something. This view is often compatible with the interests of management. From the management's point of view, the onus is on the efficient task accomplishment rather than on the larger external effects or outcomes resulting from the accomplished tasks.

In the evaluation of effectiveness, we should take full notice of the aforementioned complexities comprising difficult conceptual, methodological, technical and political issues, even dilemmas. Most noteworthy, possibly, is the difference between the view that puts the emphasis on the internal, efficiency-related, technical issues and the view often put forward by the external audit authorities that question the legitimacy of the activity under evaluation and see the latter as nothing but an option in the investment portfolio.

Arguably, the purposes driving the police do not consist of a coherent, well-aligned system. Occasionally, but also regularly, road safety becomes compromised by the activities of the police. This happens whenever police officers decide to pursue a car that fails to stop as ordered or whenever there is an emergency and the police patrols speed to get to the site (e.g., Lum & Fachner, 2008; Alpert & Lum, 2014; Christie, 2020). Police pursuit tends to compromise the safety of other users of that particular section of the road, the police officers involved in it, as well as the driver and possible passengers in the runaway vehicle. Clearly, policing

the roads and keeping them safe for their users are two separate, therefore also potentially incompatible, purposes.

Anyone assigned with the task of identifying and formulating indicators for the effectiveness of traffic law enforcement by the police should not expect a simple and straightforward journey. However, something being complicated, perhaps even beyond our capacities, is not a reason for avoiding tackling it. The questions related to the effectiveness of our pursuits confront us with fundamental questions.

2. THE CURIOUS NATURE OF TRAFFIC LAWS

Although all traffic laws come under the same label (“law”), they comprise a multitude of different kinds. The enforcement of a law reflects or resonates with the kind of law in question. Some laws outlaw several deeds categorically and everyone would find it easy to agree when an incident represents a clear breach of that law. The enforcement of such a law leaves no room for the discretion of the police whenever such an offence is witnessed, and the culprit is caught red-handed. (E.g., Boucher, 2005; Ewick & Silbey 2002; Simmonds, 2005; Yagil, 1998.)

Then we have traffic laws that leave much more room for police discretion, because they do not prohibit acts or deeds categorically, only to a certain degree, like allowing a car to be driven unless the driver is deemed too drunk to do so by law (Yagil, 1998; Hertogh, 2004). The use of roads is regulated in law to manage the risks related to them, i.e., the risk of accidents resulting in death and injuries. The factors that correlate with the risk of road accidents are well-known, and they are also closely monitored by the police (e.g., Zaal 1994; Goldenbeld, Heidstra, Christ, et al., 2000; Mäkinen, Zaidel, Andersson, et al., 2003).

The enforcement of traffic laws aims to keep the risks involved in the use of public roads at a level that society finds acceptable in general, and that the police find agreeable at any specific place and time. This leaves room for both unspoken and pronounced negotiations and implicit contracts between the police and road users. There is traffic law and then there is the implicit agreement between the regular users of a specific road and the police enforcing both the law in the area, but also the agreement that keeps the traffic running smoothly and the locals both safe and happy with the police. A driver on an unfamiliar road is more likely to follow the example of the other drivers than the stipulations of traffic law.

The public regulation of traffic on the roads is essentially an attempt at joint risk management. The aim is to manage the likelihood of accidents dangerous to life and limb and resulting in private suffering and direct and indirect public costs. The laws in question reflect the accepted level of risk. Arguably, the risk could be reduced to zero simply by

categorically prohibiting all traffic on the roads. Moreover, traffic laws, their nature, purpose, and competency are also controversial and debatable from the democratic point of view. In them, expert knowledge, bureaucratic practices, public interests, and democratic principles often come head-to-head.

The way that traffic law is applied at a specific road or in some section of it, like in setting the speed limit for it, is often decided somewhere by someone, often without hearing those living by it or only hearing the loudest of them. In most cases, the act is justified by the specific expertise of the responsible authority and by knowledge of accident statistics and the results of research (see Turner, 2003; Kennedy 2005). Thus, in practice, the enforcement of traffic law means enforcing specific limits on a road that neither the police nor the regular road users find warranted or feel that it represents authentically their collective interests or will. However, the last three, i.e., enforcement, justifiability, and ownership, are essential elements in compliancy with the law.

At the focus in traffic law enforcement by the police is the risk of a road accident. The application of law leaves room for police discretion. The discretion leaves room for negotiation, both within the police and on the roads (e.g., Buvik 2016; Elder, 1964; Edwards, 2006; Ferrett & Spenlehauer, 2009; Jackson, Bradford, Hough, et al., 2012; Joh 2007; Lichtenberg, 2003; Miller, 2015; Tyler, 2016; Sklansky 2005). Whenever the determination of the restrictions on a specific section of a road is not in local hands, the road users may find them difficult to agree with, unwarranted and something externally set upon them. This is also likely to affect their enforcement.

Long experience of policing road users since the early days of motor-ing, and the criminal investigation of road accidents have strengthened specific expertise in the police on traffic-related risk. Therefore, the role of the police is not limited to the enforcement of traffic laws that have passed the parliamentary process. The police should use their expertise on risks on the road in more proactive ways to ensure that the relevant risks are actually covered by law. Thus, the police should actively get involved in the law-making process either directly or in cooperation with other organisations dedicated to the safety of the roads.

The effectiveness of traffic law enforcement not only depends on efficiency in enforcing compliancy with traffic law, but also reflects the success in getting the law to cover all the risk factors too. The purpose of policing roads is aligned directly with the rule of law and indirectly with the number of road accidents, the fatalities in them or the injured. Therefore, possible deficiencies in the law in relation to true risks compromise the effectiveness of the police in ways that cannot be compensated for by simply increasing their efficiency in accomplishing their traffic-related tasks. Thus, the effectiveness of the police in terms of road safety is conditioned by their effectiveness in identifying all the risks and having them included in the relevant laws.

3. TWO AVENUES FOR THE ENHANCEMENT OF THE EFFECTIVENESS OF TRAFFIC LAW ENFORCEMENT BY THE POLICE

The indicator most used for road safety is the number of accidents, especially fatal ones, and the number of persons injured in them (e.g., Goldenfeld, Heidstra, Christ, et al., 2000; Mäkinen, Zaidel, Andersson, et al., 2003). However, once an accident has taken place, the likelihood of fatalities depends on the quality and availability of health services and on the level of safety devices and structures in the vehicle. Only the use of safety devices like seat belts or child safety seats is within the direct, but often sporadic, control of the police. Therefore, while those numbers remain relevant in determining the effectiveness of traffic law enforcement by the police on a large scale, they are not a good indicator of it. The effectiveness of the police should not be judged in terms of something not fully under the police's control (Pritchard, Culbertson, Malm, et al., 2009).

Hierarchical organisations are characterised by the division of tasks and responsibilities. The responsibility for dividing the task of the organisation into subtasks and formulating them and their mutual relations in such a way that those assigned with the responsibility of accomplishing them do not need to worry about the effectiveness and can focus solely on the efficiency and quality of their work, rests at the top. The responsibility for a task usually comes with the means and powers needed to accomplish it, but often also includes expectations for continuous improvement in it. However, in complex organisations simultaneously pursuing several purposes, the question of effectiveness carries most weight and significance at the aggregate level only.

The effectiveness of traffic law enforcement by the police necessarily includes the purpose of the police at large too. This effectiveness is directly linked to the way the specific responsibilities in terms of road safety have been formed and formulated within the police. However, traffic law enforcement as a specific police task also has a history of its own (e.g., Emsley 1993). The two tasks, i.e., crime fighting and enhancement of road safety, are not always compatible as purposes (Hough

1987). Conflict or competition occurs between policing measures that are meant to enhance safety on the roads and those deemed effective or needed in fighting crime (e.g., Alpert & Lym 2014; Corbett, 2008). On the roads, measures against crime, once implemented, tend to compromise the very purpose of maintaining road safety. Moreover, policing citizens who fail to follow the traffic law in the same way as people who breach the Criminal Code intentionally is detrimental to the support and contribution of the public that the police need in tackling crime successfully (e.g., Cooper 2010; Snow, 2019). Thus, following the same strategy in both is likely to be counterproductive from the point of view of the purpose that both police and citizens see as the true one, i.e., fighting crime (Hough 1987).

When it comes to managing the risks to safety on the roads, the police have both long first-hand experience in managing those risks and, through their road crime investigations, substantial understanding of them, which contributes to their identification as well as to the evaluation of their significance. Therefore, the effectiveness does not lie solely on the side of efficiency in enforcing the relevant risk management device called traffic law, but also in engaging in developing traffic law in terms of comprehensiveness, inclusiveness, and adequacy. Figure 1 shows the

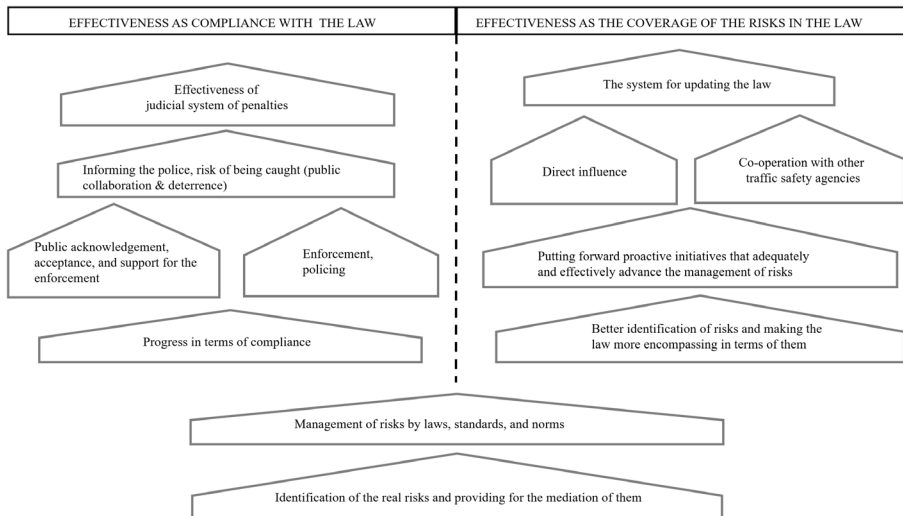


FIGURE 1. The ways to enhance the effectiveness of traffic law enforcement by the police

two sides of the issue and depicts the aspects underlying the idea of effectiveness of traffic law enforcement by the police in a conceptually comprehensive way.

Basically, the development of traffic law is driven by the need to successfully cover the risks to road safety. From the point of view of law enforcement by the police, identification of risks is followed by risk management measures. On the one hand, they include further enhancement of compliance with the current norms as they are applied on the roads. This means that the users of the roads voluntarily agree with them and support their enforcement by the police with the aim of persuading the reluctant others to follow them, too. The criminal justice system rests on its functioning of the idea of effective deterrence (e.g., Chalfin & McCrary, 2017; Zaal, 1994; Goldenbeld, Heidstra, Christ, et al., 2000; Paternoster, 2010). Whether the criminal justice system works in practice as presumed in theory determines the effectiveness of the police as an essential element in its functioning (e.g., Daly, 2012; Dandurand, 2014; Smith 2015).

On the other hand, the effectiveness of traffic law enforcement by the police depends on the quality of those very norms in identifying the risks, determining a risk level that is accepted and agreed by society, and providing the police with the means needed to carry out its duties in managing the risks in practice. In a continuously evolving society characterised by the emergence of unforeseen technologies, the risks on the roads, their types, sources, and dynamics do not stand still but emerge too. The effectiveness of the police in keeping the risk levels on the roads at the agreed level requires an active role from them in the development of the very basis of their risk management work.

The police usually have privileged access to road accidents through their investigatory responsibilities, and to the behaviour of drivers on the roads through their role in enforcing traffic law. Therefore, they should engage directly and in cooperation with other agencies dedicated to fostering the common cause of road safety by developing traffic law from the point of view of risk coverage. In practice, this means eventual interaction with the political system.

Figure 1 depicts the two purposes and the two main pathways for enhancing the effectiveness of traffic law enforcement by the police. The

two interrelated purposes aim to, on the one hand, enhance compliance with the law and, on the other, ensure that the law represents the best understanding of the risks compromising safety on the roads. Thus, the indicators for the effectiveness of road policing should provide information for the police on their success in terms of both these purposes. However, learning about success says very little, if anything, on the possible steps needed to improve it further. From the police's point of view, the dominant interest does not lie in the awareness of their effectiveness, but in finding ways to increase it in a systematic and continuous manner.

4. INDICATORS OF THE EFFECTIVENESS OF TRAFFIC LAW ENFORCEMENT BY THE POLICE

An indicator provides valid and reliable information on the state of affairs for some specified use and user. It is not possible to cater to all possible uses by a single measure. Moreover, when it comes to the effectiveness of a public service provider like the police, the many stakeholders have different interests, and therefore also different requirements for relevant information and indicators. Accordingly, what is a useful indicator for one may well appear irrelevant to another. In this sense, indicators resemble tools. They should fit the purpose of the task, the needs, and capabilities of their presumed users, work reliably, and be economical in their use.

From the point of view of the police, the indicators should contribute to their attempts to increase their effectiveness. Therefore, the indicators that measure the impact of their efforts on the desired situation in the operating environment are necessary but, from the point of view of the aforementioned interest, insufficient. The missing links are indicators that give them information on their very effort itself, its immediate results, and the way they connect with, and contribute to, the emergence of the desired change in the situation, like safer roads, something that resonates with their purpose.

Therefore, the indicators for the effectiveness of traffic law enforcement by the police, despite all the complexities involved in it, should consist of a system that includes their resources, effort and learning as well as their mobilisation by leadership, strategies, tactics and intended activities that turn into outputs, outcomes, and effects. The achievement of such systemic comprehensiveness becomes more urgent the more we understand policing as a field of true expertise, and police officers collectively as the medium for the realisation of that professional capacity in society.

Traffic law enforcement by the police should culminate in compliance with the law. While the police necessarily serve the interests encoded in the law, in well-functioning modern democracies the interests should

also reflect the interests of society (e.g., Amir, 2001; Bierschenk, 2016; Jacobs, 2016). Among such interests, then, is safety on the roads.

Therefore, a natural indicator of the effectiveness of traffic law enforcement should reflect citizens' perceptions of the level of traffic-related risks and sense of safety on the roads. One would expect that compliancy with traffic law would correlate positively with this.

However, the perceived safety on the roads, compliance with traffic law and preparedness to collaborate with the police in enhancing safety and compliancy would need some indicators of their own too, like the percentage of cars following the speed limit and the number of contacts made to the police regarding reckless driving. Without citizens' active and voluntary collaboration such as reporting crimes to the police, stepping forward as an eyewitness and giving evidence, the effectiveness of the police would evaporate (e.g., Saunders, Popper, Morral, et al., 2014).

Most likely, the readiness to contact the police relates to several factors. Among them are the perceived legitimacy of police activities on the roads as well as the general acceptance of traffic laws and the way they are applied in a specific place (e.g., Watling & Leal, 2012). Citizens' views of traffic law enforcement and the police, in general, are derived mainly from encountering the police on the roads and from their perceptions of being treated fairly, politely, and without prejudice when doing so (e.g., Bates, 2014; Jackson, Bradford, Hough, et al., 2012; Mazerolle, Bennett, Davis, et al., 2013; Meares, 2013; Tyler, 2004; van Damme & Pauwels 2016). Moreover, the belief of citizens that the police and the criminal justice system in general are interested in their safety, their communities and the roads, and work well in enhancing it, contributes to their readiness to support police work. This is further enhanced by the personally felt responsibility of road safety and the view that one can contribute to it by informing the police about road users who endanger it (Saunders, Popper, Morral, et al., 2014). The sense of being personally responsible for following the law and thereby maintaining lawful order on the roads resonates with a sense of ownership. This feeling is enhanced when one has, in one way or another, participated in the process in which laws are formulated, accepted, or applied them locally, has found them justified and well-warranted, and has seen the system as enforcing them legitimately and efficiently and working for the benefit of all. Therefore, if the

police want to improve their effectiveness, it is fundamental for citizens to feel that it is a question of their own laws that are being enforced on their behalf by the police, for their joint benefit and, essentially, with their help, too. Readiness to collaborate with the police without proper ways and means for doing so, like informing the police of possible criminal activities, reduces the effectiveness of the police.

Road safety is a joint accomplishment. It involves several authorities and other participants working both separately and in tandem to keep it up and maintain it. The police have limited resources for the task, but even these limited resources can be put to work and organised in an efficient way. Time can be spent on paperwork, on patrolling the roads (see Pritchard, Culbertson, Malm, et al., 2009. 2009) or in cooperating with other agencies and authorities on a local, regional, national, or international level. The activities can be based on analysed data, received intelligence, experience, findings from accident investigations and decisions from the courts, learning from experimenting with different tools, tactics, and approaches. Finding the right balance between such a portfolio of measures that are all significant from the point of view of road safety calls for strategies and strategic thinking (e.g., Smith, Beard, Durrell, et al., 2015).

Indicators of effectiveness should provide criteria that relate meaningfully to the activities of the police, are relevant in terms of the number of road accidents and their severity and help the police to learn about the best ways to further the safety of road users through their activities both on and off the roads. For this objective, the indicators should provide information on the desired effects, the tasks accomplished, the resources available for them and the ways those resources are organised and put into action. Figure 2 provides a schematic presentation of the process. It outlines the main components and specifies potential criteria for the evaluation of the effectiveness of traffic law enforcement by the police. Such an inclusive system of indicators system should assist them best in learning from their efforts to increase their effectiveness.

The costs for an evaluation of effectiveness that aims at conceptual comprehensiveness need to be balanced with its potential benefits in practice. No model can capture all relevant factors responsible for the variance in the criteria, and any model that is not seen as relevant by police officers

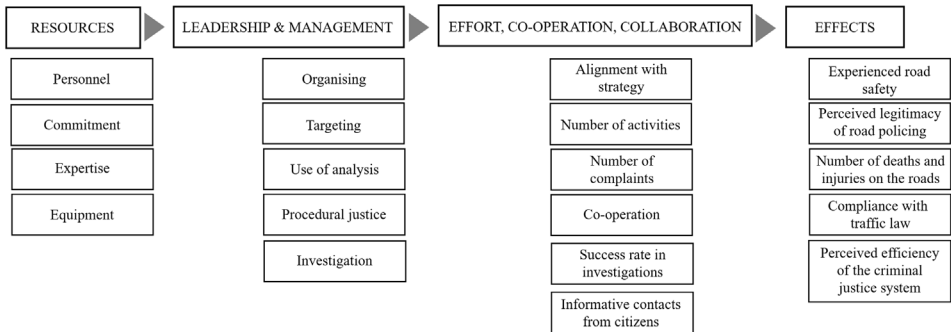


FIGURE 2. Criteria for the effectiveness of traffic law enforcement and its components from the point of view of the police

themselves, that does not aim at helping them to do their work better and that bypasses the critical role of citizens and other agencies in road safety, remains flawed. Road safety issues are not solved by one action or agency, but by proceeding co-operatively in a progressively informed way and with the consent of citizens.

CONCLUSIONS

I started with a brief and compact discussion on the difficulties of figuring out the effectiveness of anything. My focus has been on the effectiveness of public service providers, especially on the enforcement of traffic law by the police.

Arguably, any state of affairs in society at one point of time emerges as a joint or cumulative effect from all the interventions, approaches and policies that touch the lives of citizens and either make a difference to it or fail to do so, eventually influencing everyone's situation. When systems for social care, education or political representation fail, the price is paid in several spheres of life, including criminal pursuits, compliancy, and public order. From this perspective, no matter how effective the police are, one should not expect them to compensate for failures in other systems and service providers in society. Nevertheless, often the blame is put on the police. They are claimed to be inefficient, lacking effectiveness, integrity, and up-to-date, evidence-based approaches (James 2014).

Wherever and whenever all laws are followed both in terms of their spirit and letter, and compliance with them prevails, there is not much left for the police to do in meeting their purpose or fulfilling their role in society. Another question is how well the true risks are kept at bay and how road users find a balance between their perceptions of the risks and their needs for moving smoothly from one place to another.

Risk management concerns the identification of risks, their sources, severity, and the risk level that is found acceptable by society. Traffic law should encapsulate the results of that work. In principle, by enforcing traffic law, the police work to keep the risks at an agreeable level. The risk level they see as acceptable at a given time and place is continuously being negotiated between the police, drivers, and other road users. The actual restrictions that the police should enforce are usually equally imposed upon all road users without any of them having a say in the issue. This is hardly the ideal situation from the point of view of respect for and compliance with them.

Questions about effectiveness directed at the police by, say, a national audit authority, and questions of effectiveness put forward by the police themselves may appear identical, but they originate from very different perspectives, give rise to different assumptions, and aim at satisfying different interests in terms of knowledge. I believe that the police are interested in getting a better picture of their effectiveness, mainly to do their work better, to draw the right lessons from their experiences on the roads, and to do things right as well as the right things. Meeting their interest in effectiveness calls for indicators that capture both the situation reflecting safety on the roads as experienced by users and the very efforts the police put into action to influence the behaviour of road users.

This article has outlined a scheme that points out the key components and core elements behind road safety from the perspective of the police. Arguably, the infrastructure of the roads, safety devices in vehicles, the level of health care and the licence requirements play their part too, but these factors tend to remain very much beyond the control of the police. It is essential that the effectiveness of traffic law enforcement by the police is conceptualised in terms that are relevant to police work, and that police officers consider it helpful in their efforts to make the roads safer for their users.

At the aggregate level, safety on the roads is a complex result of a multitude of activities and numerous agencies in an environment where the level of risk does not remain constant. Identifying and measuring the specific contribution to it from the enforcement of traffic law by the police requires both conceptual work and experimentation in practice. Ideally, we would proceed both from a more ambiguous concept to a less ambiguous one in an evaluation model that is formulated in close cooperation with the end-users of the information, and that progressively serves their interests in the continuous growth of expertise in the enforcement of traffic law for greater safety on the roads.

Undoubtedly, the aforementioned task represents a complex endeavour with many layers. However, the challenge posed by it is best tackled by approaches that aim to reflect that complexity authentically rather than to reduce or misrepresent it in one way or another. It seems that the notion of complexity, at least occasionally, is used as an excuse for disengaging a task, the tackling of which in its complex multi-dimensionality

requires an alternative approach or set of conceptual skills. I believe that the path forward in research requires opposite approaches that come with clear risks and include wrestling with conceptual complexities at every level, along with crossing over disciplinary boundaries as well as the wastelands between them.

Contact:

Vesa Huotari, PhD

Senior researcher

Police University College

Finland

E-mail: vesa.huotari@polamk.fi

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