This text is too long for being a long abstract. But it has no footnotes and bibliography; so it's not a paper either, properly speaking. It's a naked draft of a would-be paper.

EFFECTIVENESS, EFFICACY, EFFICIENCY

Giovanni Tuzet, Bocconi University

Abstract
The work aims at bringing conceptual clarity on the notions of effectiveness, efficacy and efficiency of the law. It claims that effectiveness, efficacy and efficiency are conceptually independent notions and independent properties of law. As a consequence, there can be law that is effective but neither efficacious nor efficient, as there can be law that is efficacious but neither effective not efficient, and law that is efficient but neither effective nor efficient. In particular, the work discusses different notions of efficiency of the law.

Keywords
Economic Efficiency, Effectiveness of the Law, Efficacy of the Law, Law & Economics, Normative Purposes.

1. *Introduction*

The notions of effectiveness, efficacy and efficiency of the law are often given a loose meaning, especially when one uses "effectiveness" and "efficacy" as synonyms and uses "efficiency" in a broad sense that encompasses distinct conceptions of economic efficiency. Misunderstandings and conceptual confusion follow from such loose habits of thought and speech.

Suppose that someone tells you that a given legal rule is "effective". How do you understand this? Do you take it as the claim that its addressees comply with the rule? Do you take it as the claim that the rule achieves the purpose it is for? Suppose instead that someone tells you that a given rule is "efficacious". How do you understand this? That the rule is complied with? That it achieves its purpose? Suppose finally that you are told that the rule is "efficient". Does this add to the previous determinations? If yes, what is the point of it?

The purpose of this work is to bring some conceptual clarity on that, and to regiment, to a certain extent, the use of those words. If successful, the work will clearly distinguish the notions of effectiveness, efficacy and efficiency of the law. Such notions admit of different readings, in fact. They can be understood in different ways. I discuss in the following what I take to be their most prominent readings.

In a nutshell, the work claims that effectiveness, efficacy and efficiency are conceptually independent notions and independent properties of law. As a consequence, there can be law that is effective but neither efficacious nor efficient, as there can be law that is efficacious but neither effective not efficient, and law that is efficient but neither effective nor efficient.

In the best possible world the law is effective, efficacious and efficient. In the actual world there is no guarantee that it has all of these properties. In addition, one must consider that at least some of these properties come in degrees: a piece of law can be more effective, or more efficacious, or more efficient than another in some sense of the relevant notion. All of this needs conceptual clarification.

Section 2 discusses *effectiveness* and claims it can be taken in two senses at least: compliance by citizens and application by officials. Overall, there can be degrees of compliance and application, notwithstanding the fact that in many instances compliance and application are a categorical matter (either you pay the required tax amount or you don't; either you convict the defendant or you don't). Section 3 deals with *efficacy* and claims that it depends on the extent to which the law achieves its purposes (or, better, the purposes it is given by the lawmakers, or by the officials that implement it). Section 4 deals with *efficiency* and claims that there are at least three conceptions of it, namely productive efficiency, Pareto efficiency and Kaldor-Hicks efficiency. A piece of law can be efficient in one of these senses and not in some other. Section 5 concludes by claiming that the three notions (effectiveness, efficacy and efficiency) are conceptually independent from one another, and that law can have one of these properties without having the others.

A caveat is in order. Legal rules, standards and principles are the content of legal provisions or of other authoritative sources of law. Understanding or interpretation is needed to identify the normative content of such sources. So, to be precise, effectiveness, efficacy and efficiency are properties of the law as it is understood or interpreted. In order not to complicate things too much, I will make abstraction from the aspects that pertain to the understanding or interpretation of legal sources.

2. *Effectiveness*

Suppose again that someone tells you that a given legal rule is "effective". How do you understand this? As the claim that its addressees comply with the rule? Or, rather, as the claim that the rule achieves its purpose? As already said, confusion follows from the usage of this and similar terms, if one is not careful to distinguish the distinct meanings they have.

By "effectiveness" of a legal rule we can mean the fact that a norm is complied with or applied. Or that, in other words, what it prescribes is fulfilled. Thus, we must identify (at least) two aspects: who the addressees are, and what the regulated conduct is. An easy example is the rule that prohibits theft. If we consider the citizens as its addressees, the rule is effective to the extent that they do not commit thefts. But if its addressees are rather judges and officials more generally speaking, the rule is effective to the extent that the citizens who have committed a theft are properly sanctioned (i.e., sanctioned in the prescribed manner). A rule is therefore effective when citizens comply with it or judges and other officials apply it to the relevant circumstances.

An interesting consequence of this distinction with regard to addressees and their conduct is that a presupposition of the second kind of effectiveness is the negation of the first, if the two are considered as categorical ("all or nothing") rather than susceptible to gradation (as we will say later). The effectiveness of the rule addressed to judges (to sanction thefts in certain ways) presupposes the ineffectiveness of the rule addressed to citizens (not to commit thefts). Such a rule cannot be effective in the second sense if it is effective in the first. If citizens do not commit thefts, the law addressed to them is effective, but it cannot be said that the law addressed to judges or officials is effective. On the other hand, that does not mean that the rule addressed to judges is ineffective if that addressed to citizens is effective. More correctly, one could say it is neither effective nor ineffective, since a presupposition of its application is missing. If there is no theft, there is no reason to apply the sanctioning rule. However, it may happen that a theft has been falsely reported and a judge or jury finds the accused guilty. This would constitute an error, namely a false positive, being a false conviction. In this sense there is room to argue that the rule addressed to judges (to sanction true positives) is ineffective. It would be effective, on the other hand, when judges acquit innocent defendants (true negatives).

We can call these two kinds of effectiveness *primary* and *secondary*. The first concerns the conduct of citizens to whom a rule of other piece of law is addressed. The second concerns the conduct of public officials, or the enforcement bodies in general and judges in particular.

Defined in this way, effectiveness is not a categorical property. Rather, it is susceptible to gradation: a rule can be more or less effective depending on its degree of compliance or application.

One question which is not essential to our argument but has significant interest is whether or not compliance requires not only behavior but also the addressees' intention to comply. This concerns primary effectiveness since it is not difficult to think of behaviors that comply with the law despite the ignorance of the same law by the acting citizens. Moreover, one can imagine compliant behavior that is not accompanied by an intention to comply even though the agent is aware of the law (this happens if agents are coerced or act distractedly). This phenomenon, on the other hand, is of less interest in the perspective of secondary effectiveness, given that the circumstance of an official who acts in accordance with the law while ignoring it seems rather difficult to occur, while that in which an official acts in accordance with the law while not having the intention of it seems

somehow residual. The question has a philosophical and conceptual interest that connects to the possibility of measuring the degree of effectiveness of a piece of law. Is primary effectiveness dependent on the epistemic and intentional states of the agents? From a practical point of view, however, that is not terribly important, for compliant behavior usually raises no concerns in a legal perspective (no need to investigate intentions or epistemic states, when behavior is in accordance with the law). A source of concern, instead, is behavior that deviates from the law. Regardless of intentions, deviant behavior elicits a legal response.
Another theoretical question that is worth discussing (but the present work will not do it) is the extent to which effectiveness impacts the very existence of law. It is widely accepted in the literature that a legal system cannot exist as a whole if it is not endowed with a significant form of effectiveness (primary first of all, but also secondary). This is sometimes called "principle of effectiveness". It is highly questionable, however, that effectiveness affects the existence of a single piece of law. If the existence of a rule consists in its belonging to a legal system by virtue of some criterion of legal validity (formal or material), the effectiveness of the rule does not seem relevant in this regard. Yet there are cases in which desuetude (ineffectiveness) leads to the conclusion that a piece of law is no longer existent, or no longer belongs to the system.

3. *Efficacy*

Let us consider again, now, the situation in which someone tells you that the law is "efficacious". How are we supposed to understand this? By "efficacy" of a piece of law we can mean (at least) two sufficiently specific things. First, in a technical legal meaning, the fact that it produces or at least can produce certain legal "effects", namely certain legal consequences that it is supposed to produce. Second, in a less technical understanding, efficacy can be taken as the achievement of the purposes for which the law is created or used. In other words, this obtains when the intended effects or consequences of the law materialize. This is the meaning on which I will focus here. In this perspective, the law is a means to a number of ends. Lawmakers, interpreters, and officials in general have purposes of some kind. They assign purposes to the law they create, interpret, and apply. Sometimes these purposes are realized, sometimes they are not. In the former the law is efficacious, in the latter it is not. Or, in a weaker sense, we can consider efficacious the law that at least contributes to the realization of the purposes for which it is set or used. Sometimes the relevant purposes are only partially realized, and this turns efficacy into a matter of degree.
The relationships between efficacy thus defined and effectiveness as defined above are particularly interesting.
Let us go back to the example of theft. If the rule prohibiting theft has primary effectiveness, it is also efficacious insofar as it fulfills the purpose of protecting legal entitlements and property in particular. The law manages to dissuade citizens from theft, or at least contributes to obtaining the intended result. But if the rule has secondary effectiveness, its efficacy can be doubted: to the extent that it is not capable of deterring theft, the rule is not efficacious. In fact, the rule is not set to sanction thefts, but to induce citizens not to commit them. Thus a rule that maximizes secondary effectiveness (for each theft there is a correct application of the sanctioning rule) cannot be said to be efficacious with respect to the aim pursued (there are citizens who perform that criminal behavior notwithstanding the sanctioning rule and its application).
On the other hand, over time the secondary form of effectiveness can positively affect the primary one. Again using the example of a criminal law, it could be that secondary effectiveness (i.e. the application of a criminal sanction) increases in the medium or long term the primary effectiveness rate (compliance by citizens). In other words, deterrence would be greater over time through the application of sanctions in past cases.
But it should be noted that primary effectiveness does not necessarily imply the efficacy of a piece of law. The disconnect between effectiveness and efficacy occurs when the law is poorly designed,

so to speak: when those who set or use it expect a result that in fact compliance with the law does not achieve or even cannot achieve. In these cases the law is obeyed but does not produce the expected results: the law is effective but inefficacious. Or, somehow paradoxically, it could be efficacious without being effective. This would happen if the law were so badly designed as to produce the expected results not through compliance but on the contrary. It is not easy to find examples of this, but it cannot be excluded in principle. One interesting example, which involves secondary effectiveness too, is this: suppose a rule is set precisely with the intention of marginalizing a certain social group, on which a particular obligation is imposed; then, if the members of the group do not comply with it (the rule has no primary effectiveness), the relevant authorities sanction them (the rule has secondary effectiveness); therefore, if the sanctions have the effect of marginalizing the group, the rule is efficacious without being effective in the primary sense (but in virtue of being effective in the secondary sense).

Of course, here too some clarifications must be made. The idea of a normative purpose is notoriously plagued by some difficulties. First, there is the ontological difficulty that laws do not have purposes by themselves; their drafters, creators, interpreters, or users have them. Second, there is the epistemic difficulty of knowing the purposes of lawmakers, interpreters, or users. If these are explicit, that is not a difficult task; it becomes problematic when purposes are left implicit, or are ambiguous, or the practical agents themselves are not clear about their own purposes or the scope thereof (which is not a rare event, unfortunately). Third, there is a theoretical difficulty depending on a special characteristic of practical reasoning: that of being an inferential process in which purposes are embedded, so to speak, in other purposes, that is, where a given purpose is also a means to achieve a further purpose, and so on. In the chain of means and ends being means to further ends, it is difficult to draw the line between "the" purpose and what serves it. Moreover, it is almost always impossible to identify, in a context characterized by complexity, something like an "ultimate purpose" (that is, a purpose that is not a means to another purpose, as the end of the practical chain). Alternatively, when ultimate purposes are equated with supreme values like well-being or happiness, the indeterminacy of these values generates more problems than they solve when referred to in a practical controversy.

For instance, what is the purpose of the theft rule? That of protecting legal entitlements, say, and property in particular. But perhaps one must say, analytically, that the rule has the purpose of deterring theft, which is done by posing a criminal sanction. Therefore the threat of a sanction is a means to the end of deterring theft, which is a means to the end of protecting property. Then, is the protection of property an ultimate end or is it an intermediate end and a means to further ends? Plausibly, it is a means to the end of protecting autonomy, which can be taken as an ultimate purpose, or as a means to the end of well-being. These arguments easily turn into moral ones and it becomes quite difficult to establish whether a given piece of law is efficacious. To mitigate the problem, one has to carve out a certain purpose (albeit intermediate) pursued by the agent posing or using that law; then one has to find out whether the law realizes it and in what degree. Which, as we said, can also happen in spite of the ineffectiveness of the law, or not happen in spite of its effectiveness.

To put that differently, the efficacy of the law is relative to the perspective of the social actor that uses the law to a certain purpose. Remember, in this respect, that legal rules, standards and principles often have unintended effects; different social actors can take them as good or bad depending on their desiderata. As a perspective that one must privilege, one can take the perspective of the lawmakers and assess efficacy in this respect, by making ex ante predictions on the expected effects of the law and ex post findings of its actual effects. This requires, inter alia, a specification of the lawmakers' purposes, as discussed above. In any case, nothing guarantees that an effective law will be efficacious. Predictions and subsequent findings can frustrate the lawmakers' purposes, when they reveal that the law was badly designed, or that the circumstances have changed in a way that makes effective law inefficacious.

Summarizing the argument, we can say that efficacy is conceptually independent of effectiveness, whether primary or secondary. There can be effective but inefficacious rules, as well as ineffective but efficacious rules.
Of course, efficacy is also a property susceptible to gradation to the extent that the purposes of the law can be achieved to varying degrees.

4. *Efficiency*

Legal philosophers and theorists including Richard Posner, Ronald Dworkin and Guido Calabresi have debated over the value of efficiency in the legal domain. One question is whether efficiency is a principle or a purpose that has legal value and deserves being pursued, and, in this case, in what relations it is placed with other principles or purposes that are legally deserving. Another question – which analytically comes before the value issue – is what we mean by "efficiency" in the legal domain. I intend to address this question here.
There are, in the "law and economics" literature in particular, three major conceptions of efficiency: (1) productive efficiency, (2) Pareto efficiency and (3) Kaldor-Hicks efficiency.
The first applies straightforwardly to the production of goods and services. It provides a test for the economic efficiency of a production process. In this sense, efficiency obtains when either of the following conditions obtains:

> (a) it is not possible to produce the same amount of product (output) using a lower cost combination of production factors (inputs); i.e., it is impossible to produce the same quantity at a lower cost;
> (b) it is not possible to produce a greater amount of output using the same combination of production factors; i.e., it is impossible to produce a greater quantity at the same cost.

Applying this notion to law is not straightforward, but one can discuss, in this sense, topics like procedural efficiency or efficiency in the public administration. To give an elementary example, if, other things being equal, an administrative office produces 5 measures of a certain type while another office, in the same time frame, produces 10 measures of the same type, the first is inefficient.
Now, can rules and similar legal items be evaluated along the same dimension? Does it make sense to say of a rule that it is efficient in the productive sense? There is a way of arguing to that effect. The idea is to take the result a rule is supposed to achieve as its output, and the means employed to achieve it as the input. In this way, a rule can be said to be productively efficient when (a) there is no way to achieve the same result at a lower cost, or (b) there is no way to improve that result at the same cost. When at least one of these conditions is fulfilled, the rule is productively efficient.
Note that conditions (a) and (b) define productive efficiency categorically, but one can take them as definitions of productive optimality. Then, below optimality, productive efficiency becomes a matter of degrees and pieces of law can be more or less efficient. In a comparative way, one can find that a rule is more efficient than another if it employs less expensive means to achieve the same result, or if it improves the result at the same cost. In the above example, if one finds that another offices produces 12 measures of the same type all else being equal, the first office is inefficient compared to the second and the second is inefficient compared to the third. As for rules, if a first rule generates the desired result at a cost which is greater than the cost of another rule that generates the same result, the first is inefficient compared to the second, but the second is inefficient compared to a third one if this generates the same result at an even lower cost.
However, it is not easy quantity the costs of rules and the degrees to which they produce certain results or achieve certain goals. If one is optimistic, this problem is more empirical than conceptual

and there are no theoretical obstacles to the use of the notion of productive efficiency in the legal domain.
Note that this conception of efficiency is linked to the efficacy of the law, as it recalls the degrees of achievement of a regulatory purpose. But here too there are asymmetries. A rule can be highly efficacious but excessively expensive if it achieves its purpose at too great a cost; if this is the case, the rule is efficacious but productively inefficient. Conversely, an efficient rule is also efficacious if the result that it achieves efficiently is the result sought by the relevant social actors, say the lawmakers. The link between efficiency and efficacy weakens if one starts considering the different purposes that a rule may have, or the different perspectives in which the rule is taken by those who create or use it. The basic fact is that efficacy is agent-relative. The efficacy of the law relates to the agent – creator or user of the law – and to the way in which a purpose is cut out.
The second notion of efficiency is the Paretian one, which concerns the satisfaction of the ordinal preferences of individuals and can be divided into two concepts, namely Pareto superiority (PS) and Pareto optimality (PO). Here is a definition of the first:

> (PS) a state of affairs S_2 is *Pareto-superior* to another state, S_1, if and only if no individual is worse off in S_2 compared to S_1, and at least someone is better off in S_2 compared to S_1.

And here is a definition of the second concept:

> (PO) a state of affairs S_o is *Pareto-optimal* if and only if there is no state S_n such that S_n is Pareto-superior to S_o.

Regardless of the merits or demerits that can be attributed to it and the literature discusses, this notion applies to states of the world and to what (like a transaction) determines the transition from one state to another.
Can it also apply to legal rules and to law in general? My answer is in the positive, at least in a indirect way. The idea is to consider the law as what makes states of affairs different from the viewpoint of individuals and their ordinal preferences. Thus a piece of law is Pareto-superior to another if in the state of the world in which there is the first no one is worse off (according to their own preferences) and at least someone is better off (according to their own preferences) compared to the state of the world in which there is the second (assuming that the two pieces of law cannot coexist, of course). As a consequence, a piece of law is Pareto-optimal if there are no states of the world that include a Pareto-superior law. Therefore, in summary, the law is Pareto-efficient when it increases the well-being of at least one individual without decreasing that of the others. As an example, consider the state of the world in which a right is conferred upon certain individuals without thereby worsening the situation of other individuals.
Now, this notion of efficiency is linked to the capacity of the law to satisfy certain preferences of individuals. And, somehow, this will depend on the capacity of the law to realize certain states of affairs that individuals prefer. If this amounts to the realization of certain purposes, the law that has Paretian efficiency also has efficacy. But, again, this is just agent-relative. The law which is Pareto-efficient is also efficacious when it realizes the purposes of the relevant social actors. If, instead, some individuals are worse off in the state of the world where the normative purposes are realized, then that law is Pareto-inefficient notwithstanding its being efficacious.
One of the weaknesses of the Paretian conception is that it gives a poor account of the scenarios in which there is someone who "wins" and someone who "loses", that is, someone who gains benefits and someone who bears costs. All such scenarios are Pareto-inefficient, if we reasonably assume that the individuals who bear costs are worse off. Though, there are significant differences that the Paretian conception does not capture and, as it is reasonable to claim, the law typically operates by allocating resources that make some people better off and some worse off. To capture this logic, we

need a third conception of efficiency, namely the Kaldor-Hicks one (KH). We can define in this way:

> (KH) an allocation of resources S_2 is efficient compared to S_1 if those who benefit from S_2 could compensate those who bear costs, and still be better off.

If compensation occurs in such a way that no one in S_2 is worse off compared to S_1 and at least someone is better off, then the allocation of S_2 is efficient. Note that the Kaldor-Hicks criterion only requires potential compensation. There is no requirement of actual compensation. If compensation becomes actual, an efficient allocation in the Kaldor-Hicks sense becomes a Pareto-superior move. Indeed, the Kaldor-Hicks criterion is also taken as the potential Pareto-superiority criterion.
The efficiency of Kaldor-Hicks therefore requires a comparison of someone's gains with someone else's losses. When the winners gain more than the losers lose, the allocation is efficient.
Also this conception of efficiency applies to states of affairs as potential allocations of resources, and to actual states of the world and their changes. Does it apply to law as well? The answer is in the positive, following the argument above and claiming that a rule or other piece of law is efficient according to the Kaldor-Hicks criterion when it benefits someone in a way that they could compensate those who are worse off, and still be better off. We can imagine a rule that, by allocating certain resources, confers a benefit on some and, while imposing a cost on others, confers on the former a benefit which is greater than the cost borne by the latter. Here it is not difficult to imagine legislative examples, or judicial decisions that allocate rights and obligations in that way.
That said, here too we can repeat the considerations already made on efficacy and the other forms of efficiency: if a piece of law is efficient according to Kaldor-Hicks, it is because it satisfies the preferences of individuals in a way that benefits someone and leaves them the possibility of being better off even after compensating those who are worse off. If this happens because the rules fulfill certain purposes, it means that these efficient rules are also efficacious. But, on the other hand, there may be rules that achieve the purposes of those who create or use them without, however, satisfying the Kaldor-Hicks criterion, since the benefits that some derive from them are lower than the costs imposed on others. Here too efficacy is agent-relative, of course.
Let us take stock. The three conceptions of efficiency, applied to law, amount to this: (1) an allocation of resources is efficient when there is no way to achieve the same normative purpose with less expensive means, or there is no way to achieve the purpose to a greater extent using the same means (productive efficiency); (2) an allocation is efficient when the law increases the well-being of at least one individual without decreasing that of the others (Pareto efficiency); (3) an allocation is efficient when the law confers benefits on someone such that they can compensate those who bear costs, and still be better off (Kaldor-Hicks efficiency).
For each of the three conceptions of efficiency distinguished here, an efficacious law is not necessarily efficient, and the efficacy of an efficient law is only agent-relative.
Of course, efficiency is also a gradable property. With respect to productive efficiency, we have specified that there are degrees of it, culminating in productive optimality. With respect to Pareto efficiency, a similar argument applies depending on how many individuals are better off and how much they rise in the ranking of their ordinal preferences. With respect to the efficiency of Kaldor-Hicks, a similar argument applies depending on how many are the "winners" and how much they win compared to what the "losers" lose.

5. *Conclusion*

Therefore, having made the necessary distinctions and considerations, how can we summarize the relationships between effectiveness, efficacy and efficiency? The three are conceptually independent. Therefore it is incorrect to deduce the one from the other, or to deduce the negation of

the one from the negation of the other: their concrete determination cannot be a priori. The relationship between efficiency and efficacy constitutes a partial exception to that, because an efficient law (in one of the three senses of efficiency) realizes some purpose. In this sense, efficiency implies efficacy. The reason of this is the common teleological dimension of efficacy and efficiency (with the latter as a specification of the former). However, this dimension is just agent-relative. Effectiveness, in contrast, does not conceptually require a teleological dimension. It amounts to the facts of compliance and application, regardless of purposes.