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# **Evaluations of endogenous efficiency of the norm**

## **Abstract**

In this article the problem of evaluation the efficiency of formal norm is examined. To this purpose the existing definitions of the notion “norm” are analyzed and summarized, their insufficient formalization is noted, whereupon with the approach, using the apparatus of theory of sets and Boolean algebra, a strict definition of the norm, which includes static and dynamic components, is proposed. The description of the norm is extended by the definition of the space of the norm – a group of notions related to the norm. It’s substantiated that these notions shouldn’t be regarded as component parts of the norm. The methods of evaluation the endogenous efficiency of formal norm (rule), basing on an analysis of its internal characteristics, but not on the results of its application is proposed. It’s suggested to determine the quality of the norm at three ways: norm as itself; accordance of the new norm to current ones; easiness of its compliance and easiness of its control. This approach allows identifying potential problematic points of the norm that can lead to difficulties in the future. Using the proposed methods of evaluation of formal norm in areas, where such norms are developed actively (e.g. jurisprudence), can increase the quality of projectable norms, thus reducing costs to their further support. For the already existing norms those methods allow determining their weaknesses. In the theoretical-economic research the apparatus of formalization of norms may be useful in examination of institutional dynamics – namely, the process of institutional change.

## **Keywords:**

norms; institutions; efficiency; evaluation; compliance; deviation; opportunistic behavior; mathematical economics

## **JEL code:**

C02, D02, D03

## **Introduction**

The process of formation of new formal norms contains resource-intensive procedures of a creation, an acceptance and an implementation of the norms (institutions, laws, rules). In each case they can be profitable only because of a long-time and successful (efficiency) operation of its own activities. Therefore, no such process is not directed at a quick rejection of the implemented rules. While regarding efficiency and permanence of the implemented norms usually begin to think, based on the analysis of their functioning the more unfortunate project is the norm, the more additional costs (that often greater than the costs for the initial development) requires their correction, support, and maybe replacement. In return the productivity of an ineffective norm it is evident is much less than of an effective one.

The following is offered the method of the system valuation of effectiveness (quality) of a formal norm (rule) “from within”, i.e. valuation that basing on an analysis of its internal characteristics, but not on the results of its application.

To analyze this problem previously it is need to consider the issues of creation and stabilization of the norms and institutions, its efficiency, correlation and mutual influence of formal and informal norms etc.

Problems of formation of norms and institutions, their evolution, institutional changes, factors and causes of these processes are currently the subject of numerous scientific researches. In particular, the evolutionary approach fundamentally is represented by Alchian (1950), Arrow (1978), Nelson and Winter (1990), Smith (1982) (he, however, operates other terminology, than institutional). The works of David (1985) and North (1990) justify the institutional changes by trajectory of historical development; the causes of formation of norms and rules through the prism of economic constitutional are considered in Brennan and Buchanan (1985). Arthur (1989) analyze the question of mechanism of norms and their components. In addition, we should note the works of Hodgson (1993), Andreff (1993), which are related somehow to those problems.

Formal norms, compared with the informal ones, are a compact phenomenon and usually are formed quickly – by revolutionary way. However, formal and informal norms form a single interconnected system. The reason for establishing the formal norm is a need whether on consolidation, on fixing some informal norm (series of norms), whether on their rejection (Andreff, 1993, 11-12) (although in any case, as North says, “norms are created primarily for personal, not but social welfare” (North, 1990). But if the creation of formal norms, usually is the relatively instantaneous, single, revolutionary process, analyzing the informal norms we can say about evolution: “although formal rules may change overnight because of political or judicial decisions, the informal constraints related to the customs, traditions and codes of conduct, are much less influenced by deliberate policy” (North, 1990).

The evolutionary process of stabilization of norms by considering the principles of functioning of populations and by introduction the notion of evolutionarily stable strategy is described by Smith (1982). The causes of possible stabilization of inefficient norms, despite laws of evolutionary selection, are often explained by dependence on the trajectory of development, on the historical way (David, 1985) – QWERTY-effect).

So we can conclude that there are objective mechanisms of stabilization of the norm. At the same time, the norm, which was introduced, but no verified before such introducing, may be inefficient, and its support can be expensive. Furthermore, the norm can't be accepted by agents, on those its action is directed.

In any case, evaluation of efficiency, quality and suitability is usually already done in the process of norm. As exception here can be considered the measurement of compliance between formal and informal norms. The general shortcoming of these methods is their narrow focus on industry-specific cases of implantation of formal norms. The main thing is that they all are limited only by the measurement of compliance, mentioned above, without concerning the other problems of efficiency of norms.

So there, object of research is determination of formal norm's “weak links” – eventual problematic points for its nature (content, structure, attributes), but not for

the result of an implementation, that can allow correcting the norm as early as the design stage, therefore it can allow reduction of costs to further improve the situation post factum.

The synthesis of results of research papers, mentioned above, leads to the conclusion that the norm can't justify the expectations of its developers and customers as a result:

- ✓ first, of its unsatisfactory nature, i.e. of the non-compliance to content of declarations, of the "holes" in defining the possible actions of possible subjects in the possible situations;
- ✓ second, of nonacceptance of the norm by agents – its the subjects for one reason or another;
- ✓ third, of difficulties when attempting to implement the norm and also of difficulties preventing opportunism.

Within the three trends, mentioned above (norm itself; the compliance to environment of functioning; easiness of norm's execution and control), we introduce a number of indicators – local characteristics of the norm, in accordance to those the verification is accomplished:

- 1) contribution (and matching) of its imperatives and requirements to goals and objectives;
- 2) completeness of coverage of subjects;
- 3) completeness and consistency of situations covered;
- 4) fairness of the norm;
- 5) easiness of perception of the norm – compliance with routine (with current formal and informal norms);
- 6) easiness of compliance of the {norm | deviation};
- 7) easiness of control (identification) of [not] opportunism;
- 8) easiness of [not] true proof of compliance of the norm.

The blokes of efficiency of the norm is report to be crossed – some attributes are elements of different blocks simultaneously. Generally, it is as follows:

- 1) a norm as such (attributes 1, 2, 3, 4);

- 2) accordance of the norm with the environment of her activity (attributes 4, 5, 6);
- 3) compliance of the norm and its monitoring (attributes 6, 7, 8).

Further we specify certain characteristics of efficiency (quality) of the formal norm and practices of evaluation of their local efficiency.

### **The scheme of evaluation endogen efficiency of the formal norm**

#### **Block 1. The direct norm efficiency**

1. Contribution (and matching) of its imperatives and requirements to goals and objectives. The goals and objectives, which are strived by creation (functioning) of the norm (by definition of (Crawford and Ostrom, 1995, 584) the marker “goals”), is defined and its compliance with these goals and objectives is examined.

The incompliance of norm to proclaimed goals and objectives can lead to inefficiency of its intended use and to accomplishment of unnecessary or even harmful functions.

2. Completeness of coverage of subjects. It consists in checking how deep the norm covers the objects and subjects of norm (Crawford and Ostrom, 1995, 584), “attributes” index).

3. Completeness of situations covered. It consists in checking how exhaustively the norm describes the actions in all possible situations for it (Crawford and Ostrom, 1995, 584), “condition” index). In the same item the norm’s consistency is checked, i.e. whether there aren’t possible inconsistencies in the application of some components of the norm in the same situations. In fact, checking for completeness and consistency of situations is an indivisible general process.

Partial coverage of objects, subjects and situations of the norms favors to opportunistic behavior of unengaged subjects of the norm, of these or other subjects in unaccounted situations and/or related to the uncovered objects. Contradictions between certain predicates if the norm causes potentially unsolvable situations.

4. Evaluation of fairness (positiveness) of the norm. Without getting into philosophical specifics, we define the category of “fairness” by comparing the results of the just and unjust actions in the norm, moreover the measure of righteousness is set externally (i.e. in this case we can say about fairness related to some righteousness). One can distinguish a number of variants of fairness: satisfactory, absolute, relative and subject–subject variant, and also for all of these variants (except the second one) – the fairness of compliance and non-compliance of the norm.

We define the norms as *absolutely fair*, if the expected gain of its compliance is positive, and the expected gain of its violation is negative.

The norm is regarded as *satisfactorily fair*, if it’s not entirely fair, but the expected gain of its compliance exceeds the expected gain of its violation.

The norm is regarded as fair respect to another such norm, if the expected gain of its compliance exceeds the expected gain of the violation of other compliance of the norm, and expected gain of violation in the first case will be smaller.

The subject – subject fairness of the norm (fairness for groups of subjects) is determined by equality of those subjects regarding the compliance of the norm: the equality in gains at [non]compliance of the norm, the equal opportunities of their monitoring.

We define the norm as *fair to compliance*, if it’s the norm for which all the statements, mentioned above (except satisfactory fairness) are performed in case of its compliance, and the norm is fair to non- compliance – if those statements are correct in case of deviation from the norm.

In addition to fairness of norm compliance, we emphasize the fairness of control on norm compliance and of appeal on control’s conclusions, which are defined by the same way as mentioned above. However, the latter two types of fairness we attribute to the third block – the block of norm control.

This unit is included into the norm inspection because the unfairness of the norm is another reason of opportunism on the part of some of its subjects. If we consider the specific types of fairness, we should say the following:

- ✓ the satisfactory (of course, as complete as well) fairness prevents the opportunistic behavior; however we note that if the norm is a satisfactorily fair, but the expected gains for both compliance and deviation of it are positive, the norm should be considered too merciful in terms of sanctions; contrarily, if the gains are negative – the norm is inefficient (despite of its fairness);
- ✓ the unfairness of the norm towards other similar ones causes to its nonacceptance, rejection and as a result – to deviation;
- ✓ the inequality of subjects leads to nonacceptance and opportunistic actions on the part of “injured”;
- ✓ the unfairness of compliance of the norm reduces the number of subjects wishing to comply it (thereat the number of subject wishing to evade can remain stable); the unfairness of non-compliance – vice versa.

## **Block 2. The norm’s perception**

5. Easiness of norm’s perception – accordance with current norms. When analyzing the current or the new norm an important factor is the compliance (consistency) to other existing formal and informal norms; that affect the perception of easiness of norm’s perception by concerned subjects. Locally this problem has discussed in item 3, where the internal consistency of norm has been analyzed. Point 5 differs by the fact that here a number of interrelated norms is checked for consistency. Since on the formal level the group of norms could be considered as one generalized norm, the selection of mentioned procedure as a separate item is made solely to applied easement.

In addition to easiness of norm’s perception the fact of its ease compliance, on which affect the factors of value of its [not]compliance and inspections of this fact, is also important. Easiness of {compliance| deviation} of the norm depends on agent’s expenses of resources, time, efforts and moneys spend on {compliance| deviation}.

### The cost of an agent’s compliance of its obligations consists of

- ✓ the direct payment (sale agreement) or the difference between income of principal, received as a result of the agent’s activity and the salary, received by the agent from the principal for his activity;



- ✓ the expected cost of penalty, when the agent complain the agreements with the principal (error or opportunistic b by behavior on the part of principal or inspector): the probability of penalty multiplied by the amount of penalty.

The cost of an agent's non-compliance of its obligations consists of

- ✓ the expected cost of penalty, when the agent evades from compliance of contract with the principal: the probability of penalty multiplied by the amount of penalty;
- ✓ the cost of “concealment” of opportunistic behavior.

The cost of the separate inspection consists of

- ✓ the cost of formal inspection (inspector's remuneration , eventual travel, resources, facilities, etc.);
- ✓ the cost as a function of the complexity of establishing the fairness (inspector should make an effort to ascertain the truth) – that are the costs of identifying, overcoming resistance, agent's “concealment”.

6. Easiness of {compliance of the norm | deviation}. Implementation the norm requires

- ✓ *easiness of compliance of the norm* and
- ✓ *complexity of deviation of the norm*:

	easy	complicated
compliance of the norm		—
deviation from the norm	—	

7. Easiness of control of agents' fairness. The calculation is similar to the previous point. In the course of control is desirable to ensure:

- ✓ *easiness of identifying the factual cases of deviation from the norm*;
- ✓ complexity of “discovering” of fictitious cases of deviation from the norm:

Identifying the violations	easy	complicated
factual		—
fictitious	—	

8. Easiness of [no] faithful of compliance of the norm. It should be taken into account the possibility of errors in control, then a significant factor of norm's evaluation is possible {availability | absence} of agent's right to appeal on actions of inspector (principal), and also the quantitative evaluation, how easy the contractors can make their case. Considering this, one should strive to:

- ✓ easiness of winnings the arbitration by fair agent;
- ✓ complexity of winnings the arbitration by opportunist.

Winnings the arbitration	easy	complicated
fair agent		—
opportunist	—	

9. The fairness Место для формулы. of application of norm and of control of its compliance are measured by comparing the known (directly or indirectly – wind, guess-work) couples for subject (wickedness, deviation – penalty), (good deed, compliance – compensation). One should consider a psychological asymmetry: when there's an objective advantage of the situation in the subject's favor, he's usually unconsciously inclined to play down or even level, i.e. the favorable things are considered as normal by him, and unfavorable are unfair for him.

10. Identification of the norm (clarity, interpretation):

- ✓ easiness to prove the right position;
  - ✓ complexity to make the false position
- both for agent and for the principal (inspector).

**The detection for subjective interests of contractors by evaluation of endogenous effectiveness of the formal norm**

The norms are not always designed to achieve general efficiency; rather it is about the individual efficiency who implements such norm. These identified problematic issues could intentional but not the result of imperfect development. The offered method, besides the evaluation of quality norms, can also contribute to the

definition of actual interest of its figurants and developers. Should be considered the interests of main actors of its implementation.

### **The principal's interest**

The principal's real object in this case must be an achievement of justice relations. Its components can contain:

- ✓ the equity ("transparency") of organization of the agent's activity:
  - ✓ an easy compliance with the contract and a difficulty of evasion contract (item 6);
- ✓ the equity of organization of the inspector's activity:
  - ✓ an easy detection of real violations and a difficulty detection of false ones (item 7);
- ✓ the equity of arbitration:
  - ✓ the plaintiff win the real appeal with high probability than the false one (item 8).

However, the principal can has also other interests, e.g.:

- ✓ to make the most profit on [entrepreneurial] activity of agents;
- ✓ to ensure the principle: "thief should be in prison", i.e. to minimize escape from punishment for avoidance the responsibility (the among of the inequitable punished agents is insignificant);
- ✓ to ensure maximal reduction of the unjust punishment of fair agents (principal's liberality);
- ✓ to organize the maximal "transparency" of the "game rules".

The aim to maximize the agents revenue can induce the principal not only to distort the norm's imperatives (item 1), and also to simplify the control (item 7) and to prove of the inequity of agent's activity (item 8).

The following two positions cause the disequilibrium also in items 7, 8: first – towards simplifying the detection of agents–opportunists and a complicating the proving of an injustice of their punishment; second – towards simplifying control over fair agents and a proving by them their honesty in arbitration.

### **The agent's interest**

Evident the agent object is to maximize his revenue:

- ✓ or by fair implementation of the contract with a principal (employment contract) or by providing conditions for the receipt of profit from own activity (contract of the sale);
- ✓ or by violation the contract with the principal.

If the new norm in his opinion will contribute to his interests, the agent will aim to comply with it. This process could be complicated by difficulty of its compliance (item 6), the control his operation (item 7) and true proving of compliance norm. Also the problems can arise, if the norm is in conflict with an agent's routines (item 5). The same is for sub-items of item 4.

If the agent finds that to comply with new norm is unprofitable, he will avoid such norm. The complexities related to the implementation of the plan are determined by items 5-7 and sub-items item 4, but the opposite is true.

### **The inspector's interest**

The real purpose of the inspector, as an agent, employed by principal in order to help solve his problems, must be achievement of the fair control of the agent, i.e. to a maximize the punishment of unfair agents and to minimize the punishment of the fair agent (the field of item 7). Also the equity could be considered as an the same attitude to all agents, regardless of their productivity (or economic power), of compliance/easiness of evasion of observance of contracts etc. It is true, if the attitude to agents who violated the contracts previousдн is more thorough (consideration of agent's reputation).

Though, the purpose of the inspector as a specific agent with clearly defined – control – functions cloud contain also:

- ✓ the maximization of his revenue, that can be in two ways:
- ✓ by ensured the payment from a principal for the control of agent (employment contract) (high level of “transparency” of relationships);

- ✓ by agreement (of the sale) with agent related unfair to the control and by ensured the benefit of accessory pay (bribe) (the probability increases with the easiness of avoidance the norm (item 6)).
- ✓ the principal's revenue maximization (see principal's interest);
- ✓ the optimization reporting to the principal (that for different reasons can be opposite to reality, because the principal cannot control inspector totally) (low relationship's "transparency").

Concerning the first component, the possibility of increase the inspector's own salary with the improvement of its activity by its opportunistic behavior towards the agent (a punishment the fair agents) should be taken into account.

### **Conclusions**

The result of this research is the methods of evaluation the endogenous efficiency of formal norm (rule). She is basing on an analysis of its internal characteristics, but not on the results of its application and determines the quality of the norm at three ways: norm as itself; accordance of the new norm to current ones; easiness of its compliance and easiness of its control, are proposed.

Those methods allow identifying the potential problem points of the norm that can cause difficulties in its future use.

Using the proposed methods of evaluation of formal norm in areas, where such norms are developed actively (e.g., jurisprudence), can increase the quality of projectable norms, thus reducing costs for their future support. For the already existing norms those methods allow determining their weaknesses, elaborating guidelines for their replacement or correction, at least, being ready to respond quickly in case of norm "refusal", norm rejection by its agents, their attempts to deviate. As well, the apparatus of formalization of norms may be useful in examination of institutional dynamics – namely, the process of institutional change.

In applied institutional researches betweenwhiles arise a problem of evaluation of quality and efficiency norms and institutions, e.g., quality of elaboration the legislative framework; as well the study of transformation processes causes concerns

like: are taken hold the institutions in the national institutional environment and how far easy they can be imported etc. Proposed defines norm and institution can be useful for they researches.

Moreover, the offered method can contribute also to the definition of actual interest contractors from scope of the norm's action.

Evident further a development of method of the evaluation of a formal norm first of all should be directed towards developing quantitative evaluates of norm's efficiency (quality), of consistency the different norms etc.

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