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**KPI AS MARKET SURROGATE**

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*Abstract*

Currently, the concept of innovative economy has become highly demanded as Russia needs to move to its standards. In addition, the recent years have seen the appearance of many new professions in different spheres, and most of them belong to the services sector. As a result, it has become necessary to assess personal contributions to the overall result of the collegial work. That is why the Russian managers have turned to the foreign practice of using the system of Key Performance Indicators also known as KPI. KPI study began in the USA more than 60 years ago and was quite successful; although, this system did not become the ideology of business in America. Russia adopted this system only several years ago, so it is too early to draw conclusions regarding its success.

The article covers the peculiarities of the KPI system application in modern Russia. This work presents an analysis of the reasons for the widespread use of the KPI system and its variations in Russia, and it reveals the factors that limit its application. The research provides the real-life examples of KPI system implementation in different areas and sectors assessing the effectiveness of this implementation. The object of the research is government-owned corporations, private companies, and commercial banks.

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**Keywords:** KPI (Key Performance Indicators), market, assessment, rating, set of criteria.



## 1. Introduction

The history of "Key Performance Indicators" began in 1954 as a part of the study devoted to the management by objectives methodology. Peter Drucker was the first to employ this term. He believed that only a few of the management constituents had as serious impact on a company as the assessment of each department's contribution and the assessment of the company's overall achievements. The scientist suggested a set of metrics and indicators that could be used in business. However, the KPI system (Key Performance Indicators) had not become a widespread approach at that time. Only by the end of the 1990s, a number of prerequisites had forced researchers to return to the study of this issue. There were three such prerequisites (Drucker, 2004).

First, the existing business became more complex. It developed multiple objectives and it took more efforts to achieve them. These changes necessitated a review of the employee motivation systems, taking into account the multiple criteria mentioned above. Second, new types of businesses with an increased role for the commercial sector began to appear. They need to assess the effectiveness of their promotion, analysis and market research, which was different from the simplest of labour productivity. Third, specialized technologies emerged allowing businesses to calculate the KPI within the system, to evaluate it in dynamics, and to make a plan for the future.

Professor of the Harvard Business School R. Kaplan and the Executive of a consulting firm D. Norton continued to improve the KPI system in 1992. They proposed using a system of Balanced Scorecard in which key performance indicators serve as a tool to achieve the company's strategic objectives. The Balanced Scorecard can be defined as a strategic performance management framework that allows organizations to define their strategic priorities and then design indicators and measures to monitor how well they are executing them. It's a performance measurement tool that added strategic non-financial performance measures to traditional financial metrics to give managers and executives a more "balanced" view of organizational performance<sup>4</sup> and help them to align the organizations' activities to their strategy to achieve their goals.

The vision behind the Balanced Scorecard was to meet the need to bring an outline to strategy and his execution as well as the need to bring together all the disparate analytic and measurement instruments in a corporation under one framework or conceptual umbrella. The idea behind all this is that companies should focus on a mixture of key measures - financial and non-financial, to guarantee short and long term success. In addition, these measures should be cascade down the organization to appropriate levels, so that they can be used as daily performance measures by operational managers and teams. Another big question was also to know how companies could make money whilst still keeping their customer happy? The answer to this question resides in the alignment of the internal processes with the customers' requirements. By focussing on the key attributes their customers valued and designing processes that delivered these attributes, companies found they could deliver both to their customers and their stakeholders at the same time. The Balanced Scorecard then assists organizations in overcoming the effective organizational performance measurement, the rise of intangible assets, and the challenge of implementing a strategy.

The basic principle of the balanced scorecard system is that people can manage only what is measurable. In other words, a company can achieve its objectives if there are numerical indicators that can measure the extent of these goals achievement. Kaplan and Norton highlight four major groups of such

indicators: finance, customers, business processes, staff, innovation, and development. In addition, they recommend that a company should use a maximum of 20 KPIs per each group of metrics (Panov, 2013).

Further studies of key performance indicators have resulted in the basic rule – "10/80/10". The essence of this rule is that the firm should have about 10 key result indicators, 80 production indicators and 10 key performance indicators. Otherwise, the managers will be overloaded with planning, and the company's executives will work too hard for control implementation (Rasulov, 2007).

## 2. Problem Statement

In autumn 2015, Malaysia hosted an economic forum dedicated to the issues of KPI and productivity growth. Shortly before the forum, 73000 respondents took part in a large-scale survey. It showed that the respondents use the efficiency management system in one form or another: 49% use it at the operational level and 39% - at the strategic level. The survey also showed that 42% of respondents use a balanced system of indicators, 12% of the respondents do not use the efficiency management system. With the introduction of KPI, 68% of respondents reported positive effect, 15% were undecided, 14% were sure that KPI had no positive influence on business, and only 3% noticed some negative effects.

The main reasons for the implementation of the KPI system were the following: the need to improve the condition of the business (more than 43%); identification of general goals and objectives (18%); quantitative evaluation of the result (17%); understanding the results of the company's management by means of responsibility and accountability development (13%); provision of information to external and internal stakeholders (6%) and making a better understanding of business (3%). The respondents identified the following as the main problems of using KPI: the identification of the key indicators (32% of respondents consider it difficult). About 28% of respondents reported data collection problems, 19% had difficulties with KPI target values, 14% had problems with the analysis of indicators, 5% with documentation and only 3% with the visualization of KPI data.

Having developed KPI systems, 32% of respondents find it hard to build and fine-tune the culture of performance management, 22% consider it difficult to implement innovations improving the KPI system, 18% have difficulty in making decisions about taking corrective actions, 16% experience problems with analysing the data received, 6% do not understand how to make reports and how to organize training based on the results. Moreover, when establishing the correspondence between the employees' KPI plans and the company's strategic objectives, 16% saw the total discrepancy, 23% reported full compliance and 56% agreed that the plans corresponded partially. The results of this study lead to the conclusion that with all the advantages of the KPI system, there are many difficulties and specific aspects of its use (Region Soft Developer Studio, 2016).

## 3. Research Questions

In recent years, the KPI system and its variations have become widely used not only in the Russian economy, but also in closely related fields. At first glance, the widespread application of this criterion for the estimation of personal work efficiency in modern Russia may seem surprising. In fact, there is nothing abnormal about that. The extensive application of KPI is supposed to fill in the gaps caused by reducing the scope of the competitive market mechanism in economy.

#### **4. Purpose of the Study**

The study provides the insight into the role of key performance indicators in a broad sphere of economic relations. It also reveals the ways of market mechanism neutralization with the help of KPI used by some managers.

#### **5. Research Methods**

There are only two principal ways to evaluate the effectiveness of an actor. An actor can be not only a particular individual, but also an entity or its division or department. In the first version, an impersonal competitive market mechanism, also known as "blind market", assesses an actor. The part of society's net income that remains with an actor as a result of its efforts plays the role of this assessment. Net profit received by a company is the best illustration of such assessment.

In fact, the company's profit is the only example of pure market valuation. It is not always possible to transfer the action of market valuation to the efforts of a separate employee. Quite often, while evaluating the contribution of a particular employee to the achievement of the final result, some difficulties arise. They are related to the fact that this final result is the fruit of collective efforts. The rubric called "Sector of Measurements" meticulously addresses this problem within the framework of modern institutional economy. It is focused on the ways of "achieving greater correspondence between creative actions and remuneration (or the value of goods and the price)". The same problems arise when it is necessary to assess the contribution to the company's final net profit performed by its department (Williamson, 1996). In this case, the market method of assessment is inappropriate, and managers apply another technique based on *conscious evaluation* of the actor's activity.

#### **6. Findings**

The problem is to assess the specific contribution of the actor as objectively as possible, id est to observe the mentioned correspondence between the "conscious actions" and the result. If a conscious assessment proves to be incorrect, the motivation will be lost. Consequently, the limitation of public resources will lead to their inefficient use.

To overcome the risk of subjectivism resulted from conscious evaluation; a standard set of criteria is usually used. The level of the community, within which the resources are used, centralizes the definition of the composition of this criteria set (as well as the weights that are given to each component in this set). It is easy to notice that in this case the community has a task to "copy" the market, because it can not have a direct impact on the actor. It may seem that the only challenge here is to choose the criteria that would reflect to a large extent the value of the employee's efforts for the sake of the community, or rather, for the sake of "market". But this appears to be a very difficult task. It is very problematic to come anywhere near the ideal solution.

There are several obstacles on this way. First, it is impossible to find out a priori what material goods are preferable at the market and, accordingly, what efforts of company departments or employees should be encouraged. To support this thesis, let us remember the experience of the USSR economy. The top-bottom pricing policy, which can be interpreted as an attempt to replace a market mechanism by conscious regulation, always led to either deficits or surpluses on the market for consumer goods. As for the market

of investment goods, there was a chronic deficit, the nature of which was described by Kornai (1990). Actually, the fact that the economy of the USSR ended in a vast structural crisis, during which the volume of GDP by 1998 halved (relative to 1989), is another confirmation that there are no conscious structures, capable of "copying the market".

Secondly, as soon as a system related to KPI is developed, providing a set of criteria to evaluate the employee's efforts, the moral risk immediately comes into action. Employees (or company departments) are making every effort to achieve key performance indicators that guarantee high revenues. But in so doing, they completely or partially ignore other parameters of their activity, which actually affect the final result, but for some reason are not included in the list of KPI items. It turns out to be the demonstration of Heisenberg's uncertainty principle in the application to the elementary particle of the economy: as soon as we focus on the parameters of the actor's behaviour, it changes. The actor starts to behave differently compared with the moment we began our observations.

Third, even if we have the results in the form of a certain KPI value, those who decide on the remuneration of the employee or the department can often interpret them. As an instrument, KPI becomes less effective if some of its ratings are determined by the manager of the department. There is a risk that politics will prevail over purely economic indicators. Or the head of the department and some of the employees will conspire with each other, and so on. Economic studies discusses these variations (Tyrol, 1996).

Thus, there are quite strong arguments against the overall use of KPI in the practice of commercial firms and non-profit organizations. A non-market assessment of the actor's contribution is considered as the last resort worldwide. For example, it is applicable to the salaries appointment of public officials or military personnel. It is obvious that in these cases market estimation is impossible because of the total lack of the competitive market as such. But, in Russian, as it was noted before, the use of the KPI system or its numerous derivatives, has become atypically popular.

One of the most recent examples supporting this statement was a Decree aimed at the assessment of the governors' performance adopted on the 15th of November. According to this, in 2019, the effectiveness of Russian governors will be evaluated by 24 indicators. Among the new indicators, there are the following items: the proportion of the population with incomes below the subsistence level of the constituent entity of the Russian Federation, the rate of housing availability (based on the amount of time necessary for a family of three to purchase a standard 54m<sup>2</sup> apartment), the ratio of incomes of the population and a set of basic goods and services, quality and accessibility of housing and communal services and so on (Bondarenko, 2017).

The assessment of the efforts of almost all employees engaged in the public sector of the economy has long been conducted with the help of KPI or related rating systems. Government-owned corporations use the same systems. Major privately-owned corporations have also switched to the use of KPI systems. Commercial banks in Russia have finally broken the personal links between credit inspectors and applicants for the loan. Now the scoring system has become the basis for credit extension. This system relies on a strictly regulated procedure of giving points to the client based on a variety of aspects. Similarly, the specific terms of the loan – its duration, amount and interest rate – depend on the amount of points earned by the client.

The efforts made by Russian public officials to implement the "Program 5 –100" confirms this thesis. The program's aim is that 5 Russian universities are ranked 100 as the best universities or educational institutions of the world by 2020, so the reform of higher education, started a few years ago, is considered to be successful. Of course, the problems of the Russian higher education non-conformity to the international standards have now drawn the attention of both politicians and economists. However, it is surprising that none of them links the success of the transformation to moving up on the ranking ladder (Greenspan, 2010).

Another example is the attitude of the Russian authorities towards the position that the country occupies in the Doing Business ranking. In recent years, Russia has made an impressive step forward, rising from the 120<sup>th</sup> place in 2010 to the 35<sup>th</sup> position in 2016. And the fact that Russian businessmen have missed out this success is also very surprising. Nevertheless, during the same period, the number of small enterprises in the Russian economy increased by 69% (from 1.644 to 2.771 million). However, for the six-year period, the number of employees in small enterprises has increased only by 13%, (from 9.79 to 11.04 million people) and the volume of real terms investments has risen only by 23% (from 431.5 to 801.6 billion roubles with the deflator coefficient of 1.505) ([www.gks.ru](http://www.gks.ru)). This dissonance contributes to the evidence of the moral risk impact on the work of government entities responsible for the actual development of small business in Russia (Kolmakov & Bogatyreva, 2018).

This study explains the reason of aggressive expansion of KPI systems in Russian society. The first quite obvious explanation is that KPI self-propagation results from an unusually high degree of government involvement into the Russian economy. According to some estimates, the state's share in the Russian labour market is up to 45%. But the point is that the KPI system is supposed to deal with the cases when it is impossible to observe the employee's efforts, but not with the entities where the state ownership dominates. It is difficult to imagine that the scale of unobserved efforts of the worker in the Russian economy considerably exceeds similar indicators in the world economy.

It will be reasonable to divide the Russian economy into several sectors, according to the degree of application the KPI systems and related criteria. First, it is the sector of economy where the buyer is the state. Since the entire public sector of the economy is susceptible to corruption, a variety of KPI and other scoring and rating systems and other surrogates of the market price are prevailing here. All of them differ from each other only in the degree of likelihood, commitment or, as it is typical of Russia, "justice". In most cases, it is difficult to judge the effectiveness of these criteria, when they replace the market assessment of an employee's efforts.<sup>1</sup> However, this problem is universal for all cases when it is impossible to apply market valuation directly, for example, to assess the work of librarians.

The situation is entirely different, when some facts indicate that in Russia the KPI systems often pursue any other purposes, but not the aim of achieving the optimal match between the employee's efforts and his reward. For example, the Ministry of Education and Science strictly prohibited publishing in the open press the ratings of general education schools, based on the average examination scores of the pupils (Standardized State Examination). But the average score on the exam is a universal criterion of school efficiency from the point of view of buyers (parents), because it determines the choice of high ranking

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<sup>1</sup> This, of course, does not apply to the 24 indicators assessing the governors' efficiency that were mentioned above. Apparently, here is a tendency to completely give up applying the market criteria for the assessment (the results of the election of the head of the region are considered as such criteria). Instead, the relations based on personal dependence are in use.

university. In other words, the rating of schools, compiled on the basis of the Standardized State Examination, corresponds to the market assessment of the quality of the good (in this case it is the quality of secondary education). Therefore, the Ministry's decision to ban the rating may seem illogical. Actually, there is a reason here (Buvin, 2018).

The Ministry now manages the budget money; it distributes these funds between schools according to a set of its own criteria, which are undoubtedly the practice of using KPI. Even if we reject the direct opportunism in relations between the Ministry and subordinate schools, then this conscious distribution of income is the basis for the existence of a huge hierarchy. To put it simple, the Ministry acts as an employer of a great number of people. If the parents of the pupils begin to base their choices of schools on the examination rating, then the schools will take part in the direct competition, in which the strongest gain the best resources and the wealthiest buyers. A side effect of this is that the income distribution policy proposed by the Ministry of Education would be totally compromised. That is why the Ministry is trying to take the market of educational services under its control. Of course, such primitive measures as a direct ban on the dissemination of information cannot provide this control.

The second sector of the Russian economy, where KPI systems became widely spread, are large corporations having a complex hierarchical structure. The use of KPI in this segment seems to be quite justified, because in this way it is possible to coordinate the work of the company's divisions or departments using the principles of "selective intervention".<sup>2</sup> Then the management of the department converts these signals and brings them to the employees in the form of specific KPIs. However, a thorough analysis of these individual criteria presented by Russian corporations results in contradictory.

For example, in the KPI of a high-tech company operating in a competitive market (cellular operator "MTS"), the weight of corporate successes is only 15%, while the estimates of individual efforts of the employee occupy the remaining 85%. At the opposite pole is the company called "Post of Russia", which is not only a monopolist, but also a firm financed from the budget. Here they also use individual estimates in the KPI system to evaluate the post office operators. The most important criterion is the processing speed of the claims, but its weight in the overall KPI is noticeably lower. But the most fundamental point is that the income increment, which will be the result of productivity growth, is not enough to induce an employee to increase the intensity of work and, moreover, to provide better service (Nosyrev, 2018).

Finally, the KPI system is virtually non-existent in large retail chains. For example, in department stores, a cashier salary does not correspond with the productivity of his work. Sometimes not only primitive, but even destructive forms of control and motivation of work are used instead of KPI. For example, if there is a shortage in the cash of sales departments, the amount of loss is ordered to pay by all employees in the department. Thus, the mechanism of adverse selection is launched, which first of all pushes the most responsible and skilled workers out from the company (Chernozubenko, 2010).

The reason of the rapid expansion of the KPI system in these two sectors of the economy is that there is very little trust in the relations between Russians. We define "trust" as the tendency of people making a deal with each other, to rely on the promises of the other party (Kolmakov & Bogatyreva, 2014).

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<sup>2</sup> According to Oliver Williamson, the principle of "selective intervention" leaves the division or department of a company in conditions that are maximally close to the market relations. For example, the departments can receive net income as a result of their performance. This provides motivation in the form of strong market incentives. The KPI system is the mechanism by which the strategic objectives of the company are brought to the departments. If the strategic goal changes, then the system of criteria that make up the KPI is revised.

A trustful relationship can only occur between the participants of a market transaction, that is, between the parties that are actually independent of each other. Nothing contributes more to the formation of trust between the parties as the possibility of control. The more control the parties have against each other during the contract performance, the more trust between them arises. Finally, the use of trust becomes advantageous only for long-term contracts (one of the parties is going to exploit the trust as a resource for a long period of time). That is, a scale effect is required to implement trust. If for some reason these prerequisites are absent, the emergence of trust and its use as an economic resource will become impossible. At the same time, the assets based on reputation will be useless for the contract.

This is the pattern observed in the Russian economy, where the relationship between the parties is literally depends on suspicion. The most illustrative example is the practice of organizing and controlling the procurement within the public sector of the economy. Now the only criterion proving the budget efficiency of the enterprise expenditure is the minimum price. The State enterprise is obliged to choose the option of the transaction where the transaction price will be the lowest. Such options apparently bear high risks of receiving goods and services of poor quality, which, of course, will lead to high alternative costs. However, any violation by the buyer of the minimum price rule will be *clearly* interpreted by the controller as opportunism. The legal consequences of such an act often include the criminal liability of the buyer acting on behalf of the state.

Gradually, this practice of depersonalizing the employee leaked into the commercial sector of the economy. For example, Russian commercial banks have switched to the use of so-called "credit factories". This is the name of a system where the credit inspector is completely deprived of the opportunity to differentiate the loan terms to the client based on his own experience. The system of professional standards is used as a tool allowing the manager to remove the responsibility for the quality of work of his subordinates. The requirements to the teaching staff at higher educational establishments do not include the points, testifying to professional competence. This is not an exhaustive list of examples.

Finally, there is also the third sector of the Russian economy, which includes numerous small and medium-sized enterprises, little firms that existed in the period of the socialist economy and even the divisions of large corporate structures. They do not use the KPI system. Sometimes they simply do not need to use it, for example, when the owner of the firm or the head of the department can independently determine the value of efforts performed by an individual employee. In other cases, the KPI is not applicable because managers neglect the control and motivational functions (Delakhov, 2015).

## 7. Conclusion

The epidemic of KPI touched the public and quasi-public sectors of the economy and at a certain degree affected the small and medium business sector. The KPI expansion in these sectors partially resulted from the objective factors, which include the employee's non-observed efforts or the inability to measure the results of these efforts. The crucial point is that in the Russian economy there are virtually no trusting relations between the entrepreneur and the employee. The spread of the KPI, which is supposed to be "dispassionate and unprejudiced", as many managers and government officials hope, is aimed at filling the vacuum of total distrust. The absolute belief in the effectiveness of KPI ultimately leads to the situation



when some authority imposes it even in cases when the market mechanism could easily verify the effectiveness of the employee's efforts.

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