

BENCHMARKING RESERVES FOR QUALITY IMPROVEMENT OF PRODUCTS AND SERVICES

Huang En, B.I. Gerasimov

Tambov State Technical University, Tambov

Key words and phrases: benchmarking strategy; product competitiveness; quality development; reserve.

Abstract: The paper considers the reserves of the benchmarking strategy of modern organizations under the conditions of continuously changing internal and external environments.

The nature of quality is necessary to define as a complex one. In order to classify the theoretical approaches to the complex structure of quality the research of the conformity of the economic theories of quality to the paradigms of economic theory (classical, neoclassical, informational) and to the paradigms of quality (philosophical, mechanistic, cybernetic, systematic and informational) is carried out.

Being a complex category, quality reflects the multitude of the aspects of production and a person's life-support. The formation of new informational economy and the globalization of economic relations have considerably raised the requirements to the quality of welfare and services. Moreover, quality becomes the main component of product competitiveness. The more qualitative a commodity is, the faster it will be realized. Nowadays quality provides the authority of industrial and social structures and the prestige of national economy. The spectrum of the modifications of the concepts of quality was being formed during the process of a person's public and labour activity, having absorbed the elements reflecting the level of technical equipment of production, a person's diligence, his intellectual and moral qualities, aesthetic ideas. The systematic multidimensionality of quality and its multi-aspect character reflect the applied (concrete) level of quality and can be used as a practical platform for the formation of the uniform synthetic conception of production quality [1].

The quality of the production of an industrial enterprise (**IE**) is formed due to crossing the field of its conformity to the micro- and macroeconomic institutional requirements of IE functioning (mission, vision, credo, standards, public requirements, quality expenses, environment influence, etc.) with the field of the expectations of consumers oriented on the continuous improvement of production quality. This adaptive management is carried out with the help of the system of quality control providing the steady competitive advantages of

Хуан Энь – аспирант кафедры «Экономический анализ и качество»; Герасимов Б.И. – доктор экономических наук, профессор, заведующий кафедрой «Экономический анализ и качество», e-mail: econa@admin.tstu.ru, ТамбГТУ, г. Тамбов.

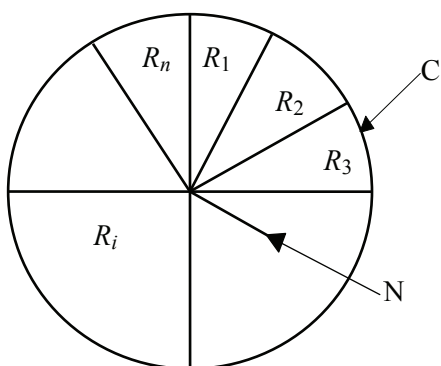


Fig. 1. The scheme of the script modelling of quality reserves:

N – nucleus; C – covering; R_i – the i^{th} reserve of quality improvement, $i = 1, n$;
 n – quantity of reserves

production in the national and world markets. The filling of the TQM (Total Quality Management) strategy of IE development is carried out due to the set of the reserves of the improvement of production quality. Conceptually the family of reserves can be presented with the help of script modelling (Fig. 1).

The nucleus N (Fig. 1) displays the phenomenology of quality, and covering C is formed by TQM conception and the institutional preconditions of its realization. The phenomenology of quality has passed three stages during its development (Table 1).

The laws of quality development are displayed with the help of the dynamic curve of continuous improvement of production quality as a S-shaped curve (Fig. 2) and as an integrated effect of the influence of R_i reserves on the quality of IE functioning and production quality as the latter is a component and consequence of the quality of the whole IE work.

Any reserve P_i influences the quality as a single disturbance of the kind (Fig. 3), with IE reaction as a dynamic curve of quality (Fig. 4). As a whole if

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Table 1

Development of quality phenomenology

Stages of quality phenomenology	Basic contents of quality phenomenology
XVIII–XIX centuries	Philosophical doctrine concerning quality
XX century	Philosophical school concerning quality
XXI century	Doctrine concerning essence and laws of quality development

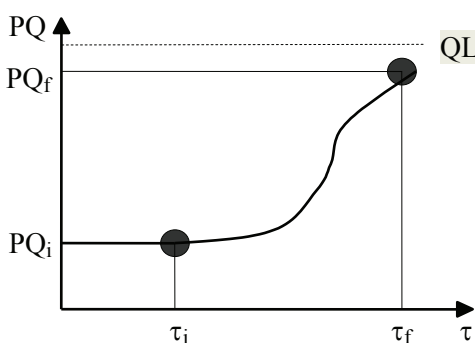


Fig. 2. Dynamic curve of production quality (KП):
 QL – quality level; PQ_i , PQ_f – production quality at the initial τ_i and final τ_f moments of time

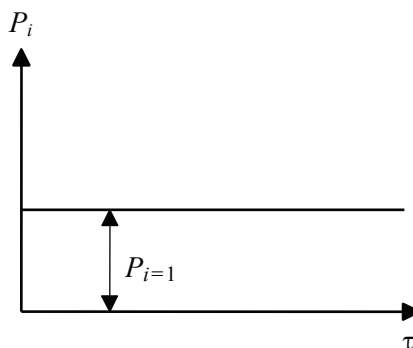


Fig. 3. Reserve as a single disturbance

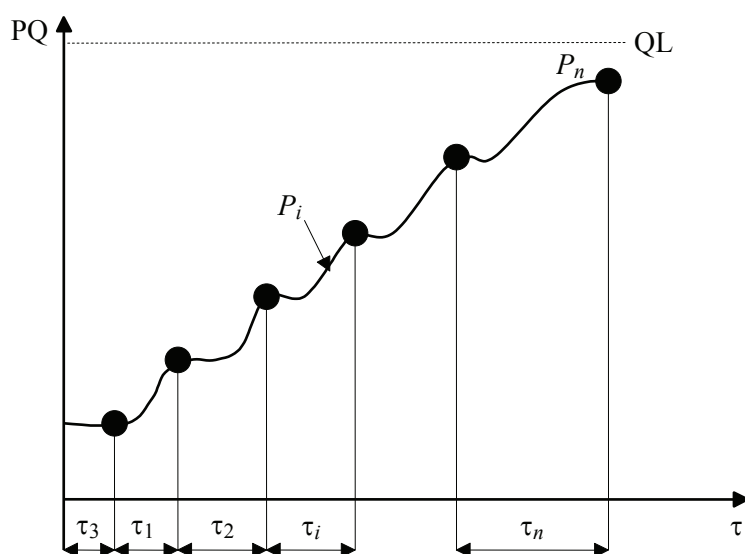


Fig. 4. Curve of IE production quality with the influence of n reserves:
the i^{th} reaction, $i = 1, n$; τ_3 – time of delay; the $\tau_i - i^{\text{th}}$ time of the realization
of the influence of R_i reserve on the quality of IE functioning

we have the influence of n reserves of the improvement of production quality at IE entrance as a quasi-linear dynamic stationary economic system with the concentrated parameters, the production quality follows the law of fitting (the account of the previous quality level) with time and is displayed as a stepped dynamic function (Fig. 4), which envelope corresponds to the S-shaped curve of IE development.

The quality of metric (tabular), diagnostic and operational benchmarking corresponds to IE mission, vision and credo, and the quantitative estimation is displayed through the self-estimation of IE quality management with revealing the script trees of the purposes of the realization of reserves within the framework of the corresponding program.

The mission of the enterprise M is formed due to the systematic integration of vision V and credo C : $M = V \cup C$, in which connection the vision reflects the essence of IE purposes (the rational side of benchmarking), and credo – the essence of IE corporate culture (the intuitive side of benchmarking). Within the framework of the realization of the benchmarking strategy of the improvement of production quality of Chinese IE the mission gives the subjects of external environment the idea about the direction of IE activity, its philosophy and quality paradigm, institutional norms and social purposes that promotes the creation of a certain IE image. Besides the mission is capable to become the internal driving force of IE, to consolidate the personnel around the corporate quality and some kind of «destination» [2].

The benchmarking strategy of IE development as a component of TQM strategy quantitatively displays the mission, vision and credo of IE within the framework of the self-estimation of its quality management which is based, as a rule, on the model of national prizes for quality.

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Бенчмаркинговые резервы повышения качества продукции и услуг

Хуан Энь, Б.И. Герасимов

ГОУ ВПО «Тамбовский государственный технический университет», г. Тамбов

Ключевые слова и фразы: бенчмаркинг; качество; резерв.

Аннотация: Рассмотрены резервы бенчмаркинговой стратегии современных организаций в условиях непрерывно изменяющихся условий внутренней и внешней среды.

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