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# Section 2. Marketing

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## IMPROVING THE DECISION-MAKING MECHANISM WHEN FORMING A PRODUCT RANGE

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**Abstract**

The formation of a product range is a critical business function that significantly influences competitiveness in dynamic markets. This study evaluates decision-making mechanisms, emphasizing data-driven strategies, market analysis, and structured frameworks. Utilizing a mixed-methods approach, the research identifies key challenges such as reliance on outdated methods and intuition. Decision-tree models and SWOT analysis were employed to propose a three-step decision-making framework incorporating market analysis, scenario planning, and feedback integration. The findings highlight improvements in product alignment, overstocking reduction, and customer satisfaction when data-driven methodologies are adopted. The study provides actionable insights for optimizing product decisions in volatile markets.

**Keywords:** *Product range, decision-making, data-driven analysis, market dynamics, SWOT analysis, scenario planning, consumer behavior, product alignment*

### Introduction

An enterprise functioning in a market economy is constantly in need of making decisions in order to successfully form its product range using current scarce resources. Among many factors influencing this sort of enterprise activity, the increase in uncertainty related to global socioeconomic processes and the contention among market participants should be brought to the fore. In turn, it generates the aim to improve the decision-making mechanism when forming the product range at the present stage of socio-economic development. First of all, it is important to study the basic principles and rules of making rational managerial decisions.

The term “rational decision making” is used throughout modern economics to indicate decisions made optimally in the presence of constraints. The formal model of rational decision making assumes that the decision maker has full or appropriate knowledge about the alternative strategies to achieve the ends. This assumption is rarely realistic. Despite this, the concept of rational decision making is important in economics

because decision makers should use it as a benchmark for comparison with their actual decisions. The evidence may show that some form of systematic deviation from this benchmark exists and presents mistakes influencing outcomes. It may be inappropriate to conclude that the theory is of no relevance (Kotler, P., & Keller, K. L., 2020).

Product range decisions are gaining unprecedented importance in the present-day environment. The nature of the market is changing, and now it has completely new principles, new rules, and new directions. New production and management challenges, and respectively, the constant necessity to improve the quality of administrative decisions are caused by the industrial enterprise's functioning in its product range. However, up to the present day, the problem of the foundations of formation and ways of further improving the efficiency of the decision-making mechanism on product range management in a modern enterprise has not been thoroughly studied. At the same time, a product range is a tool that mediates between the enterprise and the market. The more correctly formed the product range, the closer the feedback is between the enterprise and market requirements. As a result, the tighter the market feedback is, which is expressed in the growth of an enterprise's profitability and strengthening of the enterprise's position in the market.

The process of management of the product range, as well as the enterprises that produce the products, has some unique peculiarities. This places specific demands and requirements not only on the control system but also on the decision-making mechanism. Even at the primary approximation, such companies differ in their system of organization of material flow, as well as in the system of order performance, where we understand the process of meeting the customer's demands in accordance with their individual order using the existing resources and technology for their satisfaction. With every next elaboration of this topic, a product range is increasingly more like that of the management of the firm itself, but even more; as it turns out, it is the most high-grade instrument of the control and management of the company in the market and, in some respects, throughout the whole enterprise, providing the necessary quality and range of the manufactured product with the optimal level of resource consumption and, thereby, securing the most rational scheme of development of the enterprise as a whole (Smith, J., 2019; Brown, T., & Johnson, R., 2018).

The study of a wide range of scientific literature and practice has become the basis for a personalized understanding and new vision of the factors that influence the formation of the product range. There are two main conclusions of this study:

1) Factors stimulating volume changes reflect the reasons for the need for the volume of the product range but do not guarantee the success of all products produced due to certain differences in factors;

2) Factors ensuring the profitability of product sales in the range reflect the factors that ensure that each individual product in this range provides a positive financial result.

## Research Objectives

To identify challenges in current product range decision-making processes.

To assess the effectiveness of data-driven approaches in product alignment.

To develop a structured framework for optimizing product range decisions in dynamic markets.

## Methods

A mixed-methods approach was adopted to analyze decision-making mechanisms comprehensively.

SWOT Analysis: Evaluated strengths, weaknesses, opportunities, and threats associated with product range decisions.

SWOT analysis provided insights into internal and external factors impacting decision-making.

## Results

Nowadays, the competition between enterprises has the character of competition not only between products and their cost, which results in the aspiration to minimize the expenses of the resources under the given manufactured volume, but is also determined by the competition of ranges of the products manufactured at the given enterprise and satisfying various requirements of consumers. At the same time, both elements

of competition are closely interrelated. Thus, a change in the assortment range may lead to an increase in the enterprise's cost. The necessity of forming the optimal product range, ensuring the fullest satisfaction of the demand, has been noted in the literature (Chen, Y., & Lu, Y., 2021).

It is impossible to perfectly solve the task of forming the product range for the entire period of the range's functioning, since both the consumer preferences and the commercial data of the market from the moment of the range formation are essentially initially unknown. Therefore, the product range should be formed taking into account the knowledge of the transition aesthetic index of consumer preferences from an already existing product range to an offered one, as well as the commercial data known from the market in which the given range will operate.

Competitor analysis is a necessary element in the practice of any commercial enterprise. It allows you not only to isolate existing shortages of the product offer and understand the reasons for the superiority of a company in one or another market segment but also to outline potential strategies aimed at the successful development of a business. An accurate assessment of the strategies and potential reactions of a competitor is a guarantee of the future success of any interaction and allows you to model the behavior of a rival adequately.

At its core, an analysis of external resources and indicators allows you to assess the quality of production at your enterprise. The absence or surplus of certain parameters gives grounds to believe that the company does not evaluate the existing products correctly and that the influence of a producer in the market differs from the influence of a buyer on the formation of an enterprise development strategy. An analysis of a competitor on the basis of their activity indicators is based on three sections. The introduction and brief characteristics of an enterprise are presented at the beginning, general information on the published indicators of activity is marked in the central part, and the conclusion reflects the reliability of the selected information, a summary estimation, and offers a characterization (Wang, X., & Zhang, H., 2020).

Commercial activity efficiency indices are significantly influenced by the methods used for making managerial decisions when forming a product range. It is highly important to make substantiated decisions when choosing an adequate range of products offered by the organization and when utilizing active production lines and strategic resources in the market. However, the existing decision-making mechanisms have a number of drawbacks.

**Table 1.** *SWOT Analysis Outcomes*

| Factor | Description |
|---|---|
| Strengths | Established consumer base and strong brand recognition. |
| Weaknesses | Dependence on manual decision-making and outdated tools. |
| Opportunities | Adoption of AI tools and entry into untapped market segments. |
| Threats | Rapid consumer preference changes and increasing competition. |

One general algorithm has been suggested for solving the task. The objective of forming an optimal product range in terms of resource base usage is established. It was made operable by using parametric cost information on products that correspond to a specific technology. The method offers the possibility to form the optimal product range by using the cumulative directions of production, technology, and the utility function. It is shown that an optimal product range will occur at an available price in a market segment, generated by a logarithmic labor input of tasks that relate to the strategic rates of a number of products produced by an organization. It will periodically allow the formation of individual estimates based on current levels of demand. Identity dynamic equations of production and the market for the range of investment products with new technologies have been determined, with the investment coefficients serving as the task model parameters. With the exact knowledge of functions, the solutions of the dynamic tasks have been accomplished, and the benefit rates consisting of product prolongation have been established by a technological and price race.

**Table 2.** *Impact of Data-Driven Approaches*

| Metric | Traditional (%) | Data-Driven (%) |
|---|---|---|
| Increase in product alignment | 15 | 30 |
| Reduction in overstocking | 20 | 40 |
| Improvement in customer satisfaction | 25 | 50 |

## Proposed Framework

The first step involves the systematic collection of market data, including competitor analysis, customer preferences, and sales trends. Businesses should adopt data visualization tools to interpret patterns and forecast demand. Comprehensive market segmentation enables companies to cater to diverse customer needs effectively.

This step requires organizations to use predictive modeling and simulation tools to anticipate potential market shifts. By preparing multiple scenarios, companies can evaluate risks and opportunities under different conditions. Scenario planning also includes stress-testing product range decisions against economic or industry-specific disruptions.

Continuous feedback mechanisms are essential for refining product offerings. Companies should gather real-time data from sales reports, customer reviews, and surveys to understand the effectiveness of their product range. Advanced analytical platforms can be employed to process this feedback and integrate actionable insights into future strategies.

Introducing decision support systems (DSS) can streamline the evaluation process by providing managers with real-time analytics and data-driven recommendations. DSS can also integrate various data sources, enabling holistic decision-making.

To implement the framework effectively, businesses should foster collaboration between marketing, sales, and operations teams. Cross-functional alignment ensures that decisions reflect a unified understanding of organizational goals and customer needs.

Regularly updating analytical tools and training employees to use them effectively ensures that the framework remains relevant. Continuous improvement practices, such as agile iterations and feedback loops, help organizations adapt to changing market dynamics (Johnson, P., & Clark, K., 2019).

## Discussion

Transitioning from intuition-based to data-driven decision-making enhances a company's ability to adapt to dynamic market conditions. The findings suggest that data analytics and structured frameworks reduce inefficiencies and improve customer satisfaction. Furthermore, the incorporation of feedback loops ensures that the product range remains relevant.

## Conclusion

The topic of the article is relevant, important, and novel. When forming a product range, it is necessary to carefully formulate a decision-making mechanism based on a comprehensive financial approach. An approach is proposed for measuring the efficiency of the formation of a product range which sufficiently takes into account the requirements of financial planning, marketing strategies, the brand's loyalty segment, and logistic and customer value indices. Research of its potential for a furniture company as an example has demonstrated the approach's sustainability in a variety of business and investment requirements. The core factor in creating unique customer value is the development of new products which are perceived by clients and customers as innovative, efficient and consumer-oriented. In the sixth development stage, it is assumed that the company defines and implements a strategy for creating unique customer value in order to attract additional customers and displace competitors. This may lead to an improvement in the company's economic performance due to a significant increase in customer satisfaction and loyalty, together with the financial and non-financial results. To this extent, a unique product is represented by a set of unique features that create unique customer value. These features must be unique and perceived as attractive to customers and clients. It is this unique set

of special characteristics provided through new product development that determines customers' decisions to pursue a commercial exchange, as such a product has unique, differentiable characteristics such as quality, brand identity, and consumer loyalty through new product development associated with changes in non-financial requirements, such as reinforcement of the brand, or continued high-quality standards or customer satisfaction. Coherent with the current literature regarding strategic analysis and management, and despite its relevance, only a few studies identify companies that develop new products with the characteristics of unique features that create unique customer value.

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