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THE IMPACT OF DIVERSIFICATION STRATEGY ON COMPANY PERFORMANCE IN DEFENSE INDUSTRY

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Abstract: *This paper explores the impact of diversification strategy on company performance through a systematic review of existing literature. Diversification strategies, which involve expanding business activities into new industries or markets, are often employed with the aim of increasing profitability and reducing risk. A significant number of studies analyze how different diversification strategies affect company performance. However, the results are often contradictory, with some studies showing a positive impact, while others indicate a negative or neutral effect. There is a lack of consensus on best practices and contextual factors that influence the success of these strategies. The paper includes studies from various industries and regions, focusing on those covered by meta-analyses on this topic. This allows for insights into different economic contexts and market conditions that affect the success of diversification strategies. The goal of the paper is to contribute to a better understanding of the complexity of diversification strategies and their impact on overall company performance, as well as in the defense industry of Serbia. The paper also highlights the importance of a contextual approach and adapting strategies to the specific conditions of the company and market.*

Keywords: *diversification, defense industry of Serbia, contextual factors, industry.*

1. INTRODUCTION

In the modern business environment, diversification strategy has become a key aspect for many companies striving for sustainable growth and competitive advantage. Diversification involves expanding business operations into new products, services, or markets to reduce risk and increase profitability.

This paper provides a systematic review of the literature that investigates the impact of diversification strategy on company performance. The goal is to identify the key factors that contribute to the success or failure of these strategies and to consider various theoretical and empirical approaches in existing research.

The existing literature shows mixed results regarding the impact of diversification on company performance. Some authors point to positive effects, such as increased profitability and reduced risk, while others highlight negative consequences, including increased management complexity and unjustified dispersion of resources. Limitations of previous research include various methodological approaches, insufficient consideration of contextual factors, and inconsistencies in defining and measuring diversification.

The main idea of this paper is to analyze and synthesize existing knowledge on the impact of diversification on company performance and attempt to answer the question of how different types of diversification (related and unrelated) affect company performance. What are the contextual factors that moderate this relationship? How can growth strategies be successfully applied in defense industry enterprises?

This paper contributes to the literature by providing a structured review of existing research, identifying knowledge gaps, and proposing directions for future research. It also provides practical recommendations for managers considering the implementation of diversification strategies.

2. GROWTH STRATEGIES

After a brief introduction to the topic, the following sections of the paper will address corporate strategies, focusing on diversification strategy and its impact on company performance. Before proceeding, it is essential to understand the basic concepts related to growth strategies, formulated by Igor Ansoff in 1957 through his matrix.

Ansoff, using market and product as criteria, defined four possible growth strategies:

1. Market Penetration Strategy
2. Product Development Strategy

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3. Market Development Strategy
4. Diversification Strategy

Ansoff's matrix is still used in strategic management textbooks and represents a fundamental tool for considering possible directions for company growth.

2.1. Market Penetration Strategy

Market penetration strategy involves increasing sales of existing products in existing markets. This strategy is suitable when there is a quality product that meets customer needs and the market is not saturated. Although this strategy carries minimal risk, dynamic market conditions and competition may require additional measures to increase sales.
To increase market share, companies can:

1. Increase purchases from existing customers through promotional pricing, discounts, and volume discounts.
2. Attract customers from competitors through promotion and distribution.

While the market penetration strategy can bring significant benefits, it is not unlimited. The demand for the product is limited, and increasing our market share inevitably leads to a reduction in competitors' market share. This can cause price wars, which, if not resolved through acquisition or elimination of competition, can have negative consequences for the company's growth and development.

The application of the market penetration strategy in Serbian defense industry enterprises is limited by legal provisions. These enterprises face limited demand as the only customer of their products in the domestic market is the Ministry of Defense, so opportunities for increasing sales of existing products in the existing market are limited by the budget funds allocated annually for the procurement of armaments and military equipment. Despite these limitations, opportunities for increasing sales volumes to domestic and foreign customers exist, considering enterprises that operate on foreign markets on behalf of and for the state, whether they are state-owned or private enterprises licensed by the state for arms and military equipment trade.

2.2. Product Development Strategy

Product development strategy is applied when new or improved products can attract new customers or motivate existing ones to replace old products with new ones. This strategy is particularly effective when a product reaches maturity in its life cycle.

Successful application of the product development strategy depends on a strong research and development sector that can create innovative products.

While the product development strategy can bring significant benefits, it carries a higher risk compared to the market penetration strategy. Some research indicates that out of 50 newly developed products, only one succeeds in the market, highlighting the high level of risk and significant costs associated with research and development.

Although limited by legal provisions and internal regulations of the Ministry of Defense, which stipulate that only organizational units of the Ministry of Defense and the Serbian Armed Forces can initiate the development of new products through their program documents, this does not prevent these enterprises from offering innovative products to the domestic and foreign markets through their development sectors. These products, due to their superior characteristics, can be imposed on the domestic market through the procurement of finished products from the domestic market and can also be of interest to foreign markets.

2.3. Market Development Strategy

Market development strategy involves selling existing products in new markets or new market segments. This strategy often includes minimal product modifications to comply with the regulations and conditions of the new market.

The advantage of this strategy is the possibility of growth without significant investments in research and development, but entering new markets carries risks due to different market regulations and strong competition. Although less risky than developing new products, this strategy requires careful analysis and planning.

Although Serbian defense industry enterprises face limited opportunities for selling their products in other markets, and this is only possible with special permission from the Ministry of Defense, the application of this strategy in Serbian defense industry enterprises is possible. The application of this strategy requires a detailed cost-benefit analysis, and entry into foreign markets offers enormous potential for stable growth, profitability, and reduced dependence on government orders. On the other hand, increasing serial production volumes, reducing overhead costs, and using the effects of economies of scale can lower the unit price of the product, allowing greater competitiveness of the domestic defense industry in foreign markets.

2.4. Diversification Strategy

Diversification strategy involves entering new business areas through the development of new products that are marketed in new markets. This strategy is the riskiest but can bring significant advantages if successfully implemented.

The basic division of diversification strategy is based on the criterion of the new business's connection to the existing one:

- ✓ **Related diversification** involves investments in new business areas closely related to the existing activity and can be horizontal or vertical.
- ✓ **Horizontal diversification** involves expanding the production program by introducing new production lines.
- ✓ **Vertical diversification** involves moving within the value chain, either backward toward raw material suppliers or forward toward distribution networks.

- ✓ **Unrelated diversification** involves investments in new business areas that have no connection with existing activities.

Diversification strategy represents an important tool for long-term growth and stability of the company, but it carries significant risks and requires careful planning.

Given that the production and trade of arms and military equipment in the Republic of Serbia are regulated by the Law on the Production and Trade of Arms and Military Equipment, which imposes specific restrictions affecting the operations of defense industry enterprises, especially concerning market conditions such as cost analysis, price determination, supply, and demand. In this context, the application of diversification strategy can improve the sustainability and competitiveness of these enterprises.

Despite being subject to legal restrictions related to the production and trade of arms and military equipment, which affect their business operations, Serbian defense industry enterprises have the opportunity to apply each of these growth strategies, considering that legal restrictions protect the interests and needs of the state for its security, without limiting initiative and managerial abilities to increase market share, develop new products, and enter foreign markets to ensure greater competitiveness, profitability, and reduced business risk.

3. DIVERSIFICATION STRATEGIES AND COMPANY PERFORMANCE

The impact of diversification strategy on company performance is one of the most researched topics in strategic management. However, the results are often contradictory, with some studies showing a positive impact, while others indicate a negative or neutral effect. There is a lack of consensus on the best practices and contextual factors influencing the success of these strategies.

A study (Palich et al., 2000) examines the relationship between diversification and business success through a meta-analysis of data from 55 previously published studies. The results show that moderate diversification has a greater impact on success than limited or extensive diversification. This supports a curvilinear model suggesting that the effects of diversification increase when companies move to related diversifications but decrease when moving from related to unrelated diversifications.

Related diversification involves participation in multiple industries using common corporate resources and achieving economies of scale. This strategy can result from operational synergies and sharing activities and resources among enterprises. There are benefits from the efficiency of the learning curve, product and process technology diffusion within the firm, and limited access to production factors necessary for operations in certain industries.

However, there are also costs associated with diversification. Managing a diverse portfolio of businesses can lead to loss of control, conflicts, and inefficiencies in the organization. Optimal diversification thus involves balancing benefits and costs, which can vary depending on the specific circumstances of each company.

While it is suggested that both related and unrelated diversification are somewhat equal in their impact on performance, the challenges of managing a related portfolio can reduce the benefits of relatedness.

Unrelated diversification, on the other hand, can bring benefits such as risk reduction and dispersion and increased debt capacity.

Marginal benefits of diversification can be significant up to an optimal level, after which additional diversification can reduce overall efficiency. The study confirms the inverted U model, emphasizing the importance of finding the optimal level of diversification to achieve the best performance, although the effects of diversification are not as dramatic as previously thought, indicating that diversification may not be a key factor in achieving exceptional performance.

Research by Bausch and Pils (2009) examines the impact of related and unrelated diversification strategies on company performance, showing that both strategies are significantly associated with concurrent accounting and market performance but not with subsequent performance.

Modern theory suggests that related diversification has positive effects on performance, while unrelated diversification has negative effects on accounting and market performance. Companies with a related business portfolio can achieve benefits from transferring and exploiting business capabilities and knowledge, while companies with unrelated diversification must face high costs of organizing complex operations.

Analyses show that neither related nor unrelated diversification is significantly correlated with subsequent performance. Related diversification is positively correlated with concurrent market performance, while unrelated diversification is negatively correlated with concurrent market performance. Diversification in terms of business diversity is negatively correlated with both subsequent and concurrent performance.

The diversification strategy can have different effects on financial performance depending on the type of diversification and the time sequence of performance measurement.

Research findings emphasize several important points:

1. Measuring performance after diversification is crucial, but events during that period can distort the observation of effects;
2. Related diversification can lead to better long-term performance, while unrelated diversification can lead to poorer performance;
3. Neither related nor unrelated diversification is associated with subsequent accounting returns;
4. Industry profitability, market expectations, and risks can significantly influence the relationship between diversification and performance.

Research on the future of business groups in developed markets highlights the importance of unrelated diversification and its positive effects on company performance, especially when a certain threshold is exceeded. However, contextual factors such as the evolution of the institutional environment can affect the ability of business groups to generate value. This analysis indicates the need for precise data assessment and methodology, as well as the importance of understanding contextual factors that shape these effects.

Research (Schommer, Richter, & Karna, 2019) indicates a decrease in the level of unrelated diversification, while the levels of related diversification have increased since the mid-1990s, after an initial decline during the 1970s and 1980s. There is an improvement in the relationship between unrelated diversification and company performance over time, while the relationship between related diversification and performance has remained relatively stable. In developing economies, trends are less clear; some studies indicate a decrease in diversification with increasing institutional development, while others show that diversification remains an important strategy for firms in such markets.

By analyzing the development of diversification over time and distinguishing between related and unrelated forms of diversification through a meta-analysis covering over 60 years of research, changes in the relationship between diversification and performance were observed in the context of the evolution of diversification levels.

Increasing shareholder power, a more active market for corporate control, and a liberalized market environment have limited managers' ability to pursue potentially value-destroying conglomeration strategies. This trend led to the "deinstitutionalization" of the conglomerate form in the U.S. in the late 1980s and early 1990s, with similar trends in other Western countries, albeit at a slower pace.

Although overall levels of diversification have declined over time, the average performance of diversification may be becoming more positive.

It is believed that diversification has an inverted U-shaped relationship with company performance, considering rising costs and diminishing benefits with increasing levels of diversification.

The effects of diversification can be attributed to how resources are allocated in diversified firms, often with a bias toward good opportunities in the case of related diversification, while in highly diversified firms, resources are often allocated to poor opportunities.

Although traditionally believed that the effect of diversification on company performance follows an inverted U shape, where low levels and related diversification have positive effects on company performance, while high levels and less related types of diversification have negative effects.

There is no complete agreement on whether the strength or effects of diversification on performance change over time. The relationship between diversification and company performance depends on many factors, including time and institutional environment. Recent research suggests that the diversification premium can vary over time, and in particular, the relative value of diversified firms can increase during recessions. Empirical research shows that diversification among large American firms has decreased since the late 1970s or early 1980s, while trends in other countries are mixed.
The main factors identified that influence the decline in diversification levels are:

1. Focusing on business lines where firms have the clearest advantage over competitors;
2. Excessive diversification contributed to the decline in the competitiveness of American companies in the 1970s, and global competition forced firms to reduce the scope of their businesses to regain competitiveness;
3. Endogenous determination of optimal diversification strategy implies that firms will choose the level and type of diversification that best suits their capabilities and resources.

Results showed a continuous decline in the level of unrelated diversification over time, while levels of related diversification declined to a certain point before rising again. This suggests that the decline in overall diversification is mainly due to the reduction of unrelated diversification, with a simultaneous increase in related diversification after an initial decline.

In summary, the results partially support the hypothesis of decreasing diversification levels over time, with the decline in overall diversification mainly due to the reduction of unrelated diversification, while related diversification increased after an initial decline.

The results of this study indicate several key conclusions. First, overall levels of diversification have declined over time, with different trends for related and unrelated diversification. While unrelated diversification has declined linearly, related diversification has shown a tendency to increase again since the mid-1990s.

Second, the relationship between unrelated diversification and company performance has significantly improved over time, while the effect of related diversification has remained practically unchanged. This change in the relationship between diversification and performance suggests that conventional wisdom about the inverse relationship between diversification and company performance may not be universally applicable over time.

Third, the heterogeneity of diversification effects on performance indicates that there are no universal solutions for diversification. Decision-makers should define their diversification strategies in line with their firms' resources and capabilities and the external conditions in which they operate.

It is important to emphasize that, although the effects of unrelated diversification on performance have improved over time, this does not mean that excessive diversification is justified. Managers should carefully analyze the decision to enter a new line of business and consider each case individually.

4. CONCLUSION

Growth strategies represent key frameworks for the development and advancement of companies as a whole. The market penetration strategy focuses on increasing sales of existing products in existing markets and is ideal under conditions of stable demand and competitive advantage but carries risks of price wars with competitors. The product development strategy involves introducing new or improved products to existing markets. This strategy is beneficial when existing products reach maturity but requires significant investments in research and development, with a high risk of new product failure. The market development strategy involves selling existing products in new markets or new segments. This strategy allows growth without significant investments in new products but carries risks related to unfamiliarity with new markets and required marketing efforts.

The application of these strategies in Serbian defense industry enterprises is limited by legal frameworks regulating the production and trade of arms and military equipment. The main limitations for applying these strategies are reflected in the limited demand by the state, the inability to increase market share with existing products, the development of new products is conditioned by the needs and capabilities of the state, and entry into new markets is also determined by the state. Despite these limitations, Serbian defense industry enterprises have the opportunity to apply each of these growth strategies, considering that legal restrictions protect the interests and needs of the state for its own security, without limiting initiative and managerial abilities to increase market share, develop new products, and enter foreign markets to ensure greater competitiveness, profitability, and reduce business risk.

Research has shown that the effect of diversification on business performance is subject to changes depending on various institutional, economic, and managerial factors, challenging the established theoretical notion that the relationship between diversification and company performance is in the form of an inverted U. Leading research on this topic has confirmed that up to a certain limit, the impact of diversification on company performance has a linear relationship, i.e., a higher degree of diversification positively affects company performance. Beyond a certain maximum point, company performance begins to decline as the degree of diversification increases.

Diversification is a complex strategy that, instead of reducing risk, can help disperse risk by spreading it across multiple areas and reducing dependence on one field of activity. Although it can bring advantages in stability and competitive position, it can also lead to increased uncertainty and loss of focus if not carefully planned and executed.

A review of the literature on diversification strategy indicates that its impact on company performance depends on the type of diversification (related or unrelated) and the timing of performance measurement. Studies show that moderate and related diversification can bring benefits through synergies and economies of scale, while extensive or unrelated diversification can lead to increased costs and loss of focus.

Meta-analyses of research suggest a curvilinear relationship (inverted U), where moderate diversification yields the best results. Conclusions imply that diversification is not always a key factor for success, but its effect varies depending on many factors. Unrelated diversification has continuously decreased over time, while related diversification has increased again since the mid-1990s after an initial decline. The relationship between unrelated diversification and company performance has significantly improved, while the relationship between related diversification and performance has remained stable.

The effects of diversification on performance are diverse among firms, indicating that there is no universal approach to diversification. The results suggest the need to adjust the approach to analysis and strategy according to temporal changes and market specifics, which is important for strategic management. These conclusions contribute to a better understanding of the dynamics of diversification and its effects on company performance.

The main results indicate the complexity of the relationship between diversification and company performance, where success depends on many factors, including the type of diversification, industry specifics, and internal management capacities. These findings have significant implications for theoretical models of diversification and practical management strategies.

Although Serbian defense industry enterprises operate under specific conditions that include high dependence on the state and limited market demand, the application of diversification strategy can significantly improve their competitiveness and sustainability. Diversification of products and markets, investment in new technologies, and improvement of production processes, as well as the development of civilian products, can help these enterprises better adapt to market conditions and achieve better results.

References:

[1] ANSOFF, I. H.:Strategies for diversification. Harvard Business Review, 35(5)(1957) 113-124.

[2] BAUSCH, A., & PILS, F.:*Product diversification strategy and financial performance: Meta-analytic evidence on causality and construct multidimensionality.*Review of Managerial Science, 3(2009) 157–190.

[3] ĐURIČIN, D., JANOŠEVIĆ, S., & KALIČANIN, Đ.:*Menadžment i strategija*. Beograd: Ekonomski fakultet, (2016) 449– 474.

[4] KHANNA, T., & PALEPU, K..:*The future of business groups in emerging markets: Long-run evidence from Chile.* Academy of Management Journal, 43 (2000) 268–285.

[5] PALICH, L. E., CARDINAL, L. B., & MILLER, C. C.:*Curvilinearity in the diversification–performance linkage: An examination of over three decades of research.* Strategic Management Journal, 21(2) (2000) 155-174.

[6] PIERCE, J. R., & AGUINIS, H.:*The too-much-of-a-good-thing effect in management.*Journal of Management, 39*(2)*(2013)313-338.

[7] SCHOMMER, M., RICHTER, A., & KARNA A.:*Does the diversification–firm performance relationship change over time? A meta-analytical review.* Journal of Management Studies, 56(1) (2019*)* 270-298.