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RISKINESS OF VALUE-CREATING CORPORATE ACTIVITIES AND THEIR INFLUENCE ON STRATEGIC MANAGEMENT OF ENGINEERING COMPANIES*

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Abstract. This paper presents a procedure for definition and analysis of value-creating corporate activities on an example of a selected engineering company and a newly proposed calculation of riskiness of the production process. The risk calculation is based on an analysis of the value chain or value stream of its primary activities. Three research questions were formulated within the framework of the solution concerning differentiation of the value stream in serial and custom production, significance of individual primary processes for creation of the corporate margin and differentiation of the degree of risk between serial and custom production. The obtained outputs from the model engineering enterprise showed that the intensity of added value creation is lower in serial production than in custom production. In terms of the importance of the primary activities for serial and custom production in the value chain, the production process can be considered dominant from the viewpoint of margin generation, followed by the technical preparation process. In addition to the already mentioned reduced level of generation of added value, the lower average riskiness of the production process was also found for serial production compared to custom production. The graphical presentation at the end of the paper suggests a correlation between the level of added value creation in partial production operations and their respective level of risk. The authors of the article assume that the presented results have general validity for engineering production enterprises, which will be the subject of follow-up case studies on similar topics.

Keywords: value chain; value stream; process added value; riskiness of production process

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1. Introduction

Companies in the corporate sector in general, including engineering companies, carry out their activities in a very difficult and demanding environment. This is true worldwide, and it has the greatest impact on developed national economies. Among other things, enterprises must face unexpected and unforeseen emergencies, most of which significantly affect their development, stability, and, in some cases, very existence. The current crisis has caused business restrictions and production cuts across nations due to various adopted measures. For this reason, some businesses need to eliminate unnecessary operating costs as much as possible, while others must reduce them to survive the current economic decline (recession). Every business faces the strategic challenge of finding new solutions to gain a competitive advantage. One possible solution is the decomposition of business processes based on their contributions to the added value generated by the company, as proposed by Porter (1985) and other authors; the processes can be used as described in the previous articles on supply chain. The analysis will make it possible to understand the decomposition of the primary activities in the supply chain into partial activities that contribute to the relative cost positions in the supply chain, and it will form the basis for their actual optimization with the objective of maximizing profit. For this reason, enterprises want to be competitive not only at the times of growth, but they must continuously adapt to the market even at the times of crisis to satisfy their customers and themselves. (Koc & Bozdog, 2017; Bedeley et al., 2018). Porter (1985) and his followers (added from previous articles) classify five primary activities as general activities in the supply chain of an organization's value chain, specifically input information management and processing, provision of resources, production and operations, and output operations management and services (Shobayo, 2017). Enterprise infrastructure, technological development, workforce management, and marketing are classified as supporting activities that create preconditions for the quality implementation of the primary activities. Mapping of value streams in an enterprise creates a basis for the development of value maps of the respective enterprise (Flanagan et al., 2018; Straková et al. 2021). In the current era of the worldwide coronavirus pandemic, business entities are threatened by serious risks, and one can agree with the authors' opinion (Straková et al., 2020) that the unique value chain in close cooperation with other components of the business environment is now becoming the crucial point for finding the competitive advantage, and that it is not possible to look for the competitive advantage only in the internal environment of business entities. When examining strategic risks associated with value creation activities, it is critical to achieve a successful interaction between the internal and external environments of the business, as this will help ensure the long-term success of the business (Kasych and Vochozka 2017). Managers who do not recognize prospective risks will not be able to adapt to future risks (Meinel, Schüle 2018). As already mentioned, risk management is dependent on the company's management, which sets the direction of the company. Risk aversion in strategic decision-making will determine the direction the company will take (Benischke, Martin, and Glaser 2019). Based on the classification of primary and secondary activities of an enterprise, the authors present a new approach to the identification, evaluation, and elimination of enterprise risks with the aim of increasing the competitiveness and profitability of the enterprise as its basic strategic goals at the present time. The article offers a fresh viewpoint on company risk-taking, claiming via various case studies that critical business risks include those linked with the sale of their goods (Korauš et al. 2021; Croitoru et al. 2021).

2. Theoretical background

Each project is different in terms of its size, how it is managed (its context type), and how it can behave. Jaime et al. (2016) also talks about the project's five stages: start, plan, implementation, evaluation and control, and end. Regardless of the technology or environment, managers and leaders of businesses must have strategies and processes in place to ensure a successful change management framework (Keengwe, Kidd, Kyei-Blankson, 2009). As a result, it's unsurprising that organizations are searching for ways to dramatically decrease costs and use outsourcing as a key business strategy, for example (Hira, 2019). The analysis of business processes in terms of their contribution to the margin or profit generation helps businesses generate a competitive strategy and grow the

value of the business itself (Ponomarenko & Sergeev, 2017; Clay & Feeney, 2019). In the value chain, especially in its primary activities, the relationship between a business entity and its end customer gets closer (Dobrovič et al. 2016; Boaventura et al., 2018; Mihalčová et al. 2021; Trypolska et al. 2022; Šimberová et al. 2022). Application of the value chain in business strategy allows a new perspective on the management of business operations, including the management of resources, goods, processes, financial resources, customer needs, and by-products and services (Zhang & Gallagher, 2016; Thomas-Francois et al., 2017). The value chain and its model identify how the enterprise achieves added value (Tang & Zhang, 2017). A value stream is a process that occurs during the actual production performed by the enterprise that is created in the value chain and can be measured as the added value for the respective product (Wang et al., 2020). It maximizes the added value by drawing on technological, market, and institutional capabilities to enhance the productivity and competitiveness of the business entity (Kilelu et al., 2017). Competitive intensity is considered the main factor used to understand the performance of an individual business entity, and added value is characterized as the core analytical concept to evaluate the performance of a business entity (Rodrigues et al., 2016). The concept of added value is becoming an important topic in the development of corporate strategy, and it will continue to receive more attention (Klimecka-Tata & Ingaldi, 2020). Processes and activities that generate added value lead directly to the creation of products and services that are demanded by the business entity's consumers (Shou et al., 2020). The Porter's value chain characterizes business entities as systems made up of inputs, transformation processes, and outputs (Simatupang et al., 2017). Porter (2008) identifies five factors affecting the competitiveness of enterprises: rivalry among competitors, bargaining power of suppliers, bargaining power of customers, threat of new entrants, and threat of substitute products or services (Keller et al., 2017). Further, the value chain contains production factors, such as land, labor, capital, and technology, and it also contains economic activities, such as purchasing, transportation, handling, distribution, and marketing (Stehel & Vochozka, 2016; Brečka and Korauš 2016; Ferdous & Ikeda, 2018; Korauš et al. 2020). In the value chain, each business activity is not only a component of the process that creates value, but it is also a component used for the elimination of corporate resources that generate costs for the business entity and gives rise to cost management and pricing in accordance with the value chain (Ma et al., 2018). The value generated by the value chain is the amount of money for which the customer purchases the product, and this amount shall be much higher than the costs; this is the principle of survival in any business (Nagy et al., 2018). Some of the latest theories identify important aspects extending the value chain, which include energy, information, and attention. The key role of energy is in thermodynamics and ecological activity; the role of information is in increased digitization; and the role of attention is in monitoring the market value of the company (Noga et al., 2020). In the current era of globalization, the concept of the global value chain has emerged, which represents the value of all activities, from the production phase to delivery to customers across the world (Oliveira et al., 2019). A sustainable value chain applies procedures that improve current production and its environmental performance with the intention of achieving social and economic improvements (Brennan & Tennant, 2018; Anthony Jnr, 2019). The very aim of a sustainable value chain is to optimize resources with their proper alignment and focus on management of all activities along the value chain within the business entity (Degato & Carlos, 2017; Anthony Jnr, 2019). On a global scale, there is an urgent need for higher sustainability and significant improvements in the way businesses manage sustainability (Cavaleri & Shabana, 2018; Song et al., 2018). Also, a strategic risk analysis contributes to a proper value chain and its analysis (Straková et al., 2020; Sotnyk et al. 2022). An efficient enterprise manages its risks in a way that ensures the necessary production and reliable manufacturing (Klober-Koch et al., 2017). A strategic risk analysis is effective only if it is supported by strategic management; a well-executed analysis improves management of the business processes and minimizes negative impacts on work efficiency and other business activities (Walaśczyk 2016, Virglerova et al., 2020). According to Man, Radu, and Tabor (2015) and Pour et al. (2019), a strategic risk analysis is influenced by many aspects, and human resources are among the factors associated with the highest risk. Blocisz and Hadas (2019) believe that the greatest risk is in the first stages of the production process. In connection with the identification of risks associated with the production process, Pakocs and Lupulescu (2017) mention, among others, trademarks, patents, production know-how, the risk of counterfeiting, and the disclosure of company secrets. The value chain, as one of the basic tools for the formulation of a successful competitive

strategy (Straková et al. 2020, Straková et al. 2021), also facilitates an effective strategic risk analysis. Since the intensity of the production process and the associated risks are highly differentiated according to the above-mentioned categorization (size and industry), the analysis of strategic risks and their elimination also depend on the size categorization of companies and on the specific industry (Váchal, Pártlová, and Straková 2017). The current era, along with risk analysis, makes businesses understand that the use of the latest technologies and an innovative approach provide them with a competitive advantage that is determined at the time of the creation of the value chain (Hensen & Dog, 2020, Straková et al. 2021).

In accordance with the conducted research and the focus of the research activities, the following research questions were identified to meet the defined objective:

1. Are there any discrepancies (e.g., in time, cost, space, or personnel) in value streams between serial and custom production?
2. Do the primary business processes have roughly comparable shares on the corporate margin?
3. Is the riskiness of business processes higher for serial production compared to custom production?

3. Research objective and methodology

A value analysis of business processes will be performed at a selected company, whose name will remain anonymous for data protection reasons. The enterprise deals with the manufacturing of school and office furniture. It is a medium-sized enterprise that has been on the market for 30 years. The company focuses mainly on serial production, while its production capacity is supplemented with custom production (piece production), according to customer preferences. The company's custom production is offered according to a catalog. The company's main business activity, according to the CZ-NACE categorization, is manufacturing industry, specifically CZ-NACE C-31.0, manufacture of furniture; C-28.23, manufacture of office machinery, except computers and peripherals (specifically manufacturing of school boards; whiteboards and chart boards). The enterprise also cooperates with a plant that manufactures industrial electrical installations and power distribution equipment. The cooperation consists in custom production according to the requirements of the plant—in a production center specialized in metalworking. The collaboration was prompted by the manufacturing plant's lack of capacity, which resulted in the transfer of a number of production machines to the company under consideration, which gained new revenue opportunities.

The value analysis of the primary processes in the company will be carried out using a descriptive method that will characterize partial components of the value-creating processes and activities of the company. The input information for the descriptive method will be obtained from the company's information system, and the information and process parameters will be provided by the company's technical director, subject to the commitment to keep the name of the company anonymous. A summary enterprise value stream will be generated and classified both for its serial and custom production. According to the equations provided below, the "process added value" will be determined, and from it, the "riskiness" of the production process. The process added value will be determined from partial production processes based on job cards, which contain all in-house information related to the production process of the company. The added value and riskiness of the production process will be monitored for the serial and custom production of the enterprise.

Calculation of the process's added value for partial production processes:

$$\begin{aligned}
 &\text{Process added value}_{\text{partial production process}} \\
 &= \text{Planned oper. profit} \\
 &\times \left[\sum \left[\left(\frac{\text{Cost price}_{(A \rightarrow Z)}}{\text{Sum of costs for production}} + \frac{\text{Number of worked hours}_{(A \rightarrow Z)}}{\text{Total number of worked hours}} \right) \div 2 \right] \times \left(\frac{\text{Sum of costs for production}}{\text{Total costs sum}} \right) \right]
 \end{aligned} \tag{1}$$

Determination of the average riskiness for the production process:

$$\begin{aligned} & \text{Process riskiness (avg. process added value)}_{(\text{production process})} \\ &= \left(\frac{\text{Avg. value of process added value}_{(A \rightarrow Z)}}{\text{Total sum of process added value}} \right) \times 100 \end{aligned} \quad (2)$$

Based on the results, it will be possible to figure out which production process has the highest process value and, at the same time, the highest risk. So, an effective tool will be made to show the risk of the selected company's production process.

The model value chain includes primary and supporting activities that make up its overall value system and the value of the entire chain. Figure 1 shows the analyzed value chain for the concerned enterprise.



Figure 1. Value chain of the concerned enterprise

Source: own

In the first step of the solution, each activity in the company's value chain was described and rated, and its primary and secondary functions were set apart.

Analysis of primary activities

The management and processing of input information is the first primary activity handled by the company's sales department, which is responsible for processing orders and purchasing necessary materials. The company's sales department cooperates with foremen of other departments, and based on applicable requests, they are supplied with materials in an effective and regular manner. Even so, there are sometimes not enough supplies, and the company is working on making this situation better. Most of the inventory is managed operationally. The company has three warehouses divided according to the material; a small warehouse contains basic and safety equipment used in the production. Another warehouse inside the complex contains material for the furniture production process (wooden panels, chipboards, moldings, seat cushions, etc.), and a newly built storage hall also houses material for metalworking and material used in cooperation with the manufacturing plant (sheet metal, bars, tubes, plastics, etc.).

Production and operation - The primary production of the company consists of school and office furniture. The main products of the company are chairs, tables, cabinets, etc.; another main product of the company are school

boards. In 2018, the enterprise opened a new production line that serves as a pre-production for the manufacturing plant dealing with industrial electricity installations. This production involves metal sheet and plastic sheet cutting, punching, and other works as requested by the manufacturing plant. Due to the different characteristics of the two production processes, two tables have been created to describe and characterize the value streams of a company's orders: in the serial production and in the custom production performed in cooperation with the manufacturing plant or based on other customer requirements. To improve the company's competitiveness, the production process is continuously optimized and improved. The individual production operations are linked to each other, and the premises are adapted to the process. In the production process of serial production, the first operation is the cutting or burning of the required material according to the catalog with a saw or laser. The next step is the welding of individual parts, and then the product in its basic form goes to the coating plant to be painted the required color. From the coating plant, the product is moved to the assembly department, where it is finalized. The last but one step is packaging, and the last step is dispatching the product to the end customer. The custom production for the manufacturing plant operates on request, and partial production activities produce the products; there is no assembly, only packaging and dispatching of the products to the manufacturing plant.

Management of output operations - The concerned enterprise manages output operations by scheduling individual orders. Equally as important as the unloading of materials, the loading of the products takes place in the company complex, both from the warehouse of the stored custom-made products and from the metalworking production hall, to ensure the safety of the individual products. The dispatching is carried out in cooperation with the sales department, which oversees the purchasing of material, the receiving of orders, and the dispatching of partial orders. The company has its own small transportation fleet, so the dispatching is carried out on request by company vehicles or by external forwarders. Dispatching of metal products for the manufacturing plant is performed as described above daily. The company has several regular customers in the Czech Republic and in other European countries, mainly Austria, Germany, and the Netherlands. The latest major cooperation has been established with IKEA.

Services - Services in the company emphasize the quality of the products. Inspections are carried out for various partial activities, and the maximum inspection focus is on assembly and subsequent packaging to prevent damage to the products during transport. The company also provides warranty and post-warranty service and spare parts for individual products where parts can be replaced. In the event of a complaint, the company is able to replace the product with a new one or repair it. Other services provided by the company are related to the fact that it offers assembly of the delivered products so that they can be used immediately. In addition to customer service, the company provides its employees with subsidized meals in a company canteen located in a neighboring complex. It also provides its employees with drinks at the workplace, and more information is provided on a notice board located at the entrance to the building.

Analysis of the support activities

Infrastructure of the company - In recent years, the company has switched from paper records to electronic records to reduce costs and time intensity. The company uses the internal accounting software HELIOS. The use of in-house accounting staff eliminates the problem of having to deal with external accountants and allows the company to solve any issues immediately. The company has a linear organizational structure, which eliminates the problem of communication noise at the workplace. The individual powers and responsibilities of the staff are identified and specified. The company also applies international ISO standards, specifically the Quality Management System according to ČSN EN ISO 9001:2009, the Occupational Health and Safety Management System according to ČSN OHSAS 18001:2008, and it holds the Environmental Management System certificate. The infrastructure has been expanded, with a newly built production hall now used for custom production in cooperation with the manufacturing plant and as a warehouse for materials used for this production.

Technological development - The company addresses the technological development of its production of school and office furniture by modernizing its production machinery. For this reason, the uniqueness of joinery production lies in its human resources. In the last two years, the coating plant has been modernized, and a new welding robot has been acquired. The coating plant has been upgraded with new automatic nozzles, which has increased painting speed. In tandem with the increased painting speed, a new welding robot has been acquired to weld unique types of chair sets and to improve weld quality and production speed. The aim of the technological development of the company is to improve the quality and stability of the production process and, at the same time, reduce the time intensity of the partial production processes.

HR management - The HR department oversees managing the company's personnel. The enterprise has a low employee turnover rate, and in recent years the enterprise has created new job opportunities due to the increasing demand for its products as well as due to the cooperation with the manufacturing plant. To fill the vacancies, the enterprise approached employment agencies that provided workers from abroad. The enterprise believes there is room for improvement in further education and regular training of the employees; currently, the company provides regular induction training and other training is provided on an as-needed basis. The enterprise does not currently offer paid training opportunities; however, it is considering improvements in this area. The enterprise's wage policy is at a medium level, and prior to the Corona crisis, the wages were growing every year due to increased demand for its products as well because of the newly introduced cooperative. The company is one of the leading employers in the area.

Marketing - In comparison with other companies, the enterprise pays less attention to marketing as its customers are mainly educational institutions. The company mostly uses its website, which includes a virtual tour of the production facility. Another marketing activity is an offered excursion to the facility. The company has set up an area in its building with products on display that visitors can try in person. Attention is also paid to the support of many social and cultural activities (Protected Workshop Proutek, Naděje Brno, Třeboň Theatre Festival, Auticentrum, School of Sight). The company is also classified as "green".

4. Results and discussion

Results of the calculations are presented in Tables 1 and 2.

Table 1. Value stream of the order in serial production of the company

Company department	Definition of activity	Order flow
Sales + Marketing	Product selection based on the catalogue of products, meeting the customer's requirement	1) Customer → Inquiry
Sales + Marketing	Order execution, order processing, preparation and conclusion of contractual terms and conditions	2) Order
Sales	Scheduling of the created order based on the agreed delivery date	3) Planning
Sales	Checking of inventory levels, any missing materials are ordered	4) Supply of material
Production	Ensuring the production process based on the received drawings and schedule	5) Production Process
Production	Final inspection by employees responsible for the corresponding production processes -> subsequent packaging of the product	6) Quality Inspection → Packaging
Logistics	Completion of the order based on the order card, preparation of the order for dispatching	7) Warehouse
Logistics	Transportation of the order by the company's means of transport or the order is handed over to an external forwarder	8) Dispatching
Logistics + Production	Based on the order the product may be also assembled, servicing and maintenance are also available	9) Services

Source: Own

In serial production and its value stream, as shown in Table 1, the increased complexity of the company's production process is obvious in terms of the involvement of all activities in the production process. All the departments are involved because the products are made based on the company's catalog of products. Although the complexity lies in the involvement of all the departments, activities in those departments are mostly automated, and therefore the process is not too demanding in terms of organization of the production or creative approach. For this reason, no higher added value is generated, as is the case with custom production (see Table 2). The table shows a difference in the number of workplaces involved, which is lower than in serial production, but their activities are not of the same administrative and regulatory nature as in serial production. The activities are creative and innovative, resulting in a higher added value in custom production. At the same time, however, it can be assumed that the degree of uncertainty in the serial, repeated production is considerably lower than in the custom production.

Table 2. Value stream of the order in custom production of the company

Company Department	Definition of activity	Order flow
Sales	The order is placed immediately based on the needs of the manufacturing plant, preparation, and conclusion of contractual terms	1) Manufacturing Plant (Customer) → Order
Sales	Creation of the order schedule, checking of inventory levels, any missing materials are ordered	2) Planning + Material Supply
Technical Department	Drawing documentation goes to the metalworking workplace	3) Delivery of Documentation
Production	Ensuring the metalworking production process, the production process takes place at one workplace only, in the production hall with applicable production machinery	4) Production Process
Production	Inspection is carried out during the manufacturing process based on specified dimensions and requirements	5) Quality Inspection
Logistics	The order is completed based on the order card, prepared for dispatching on external pallets and handed over to the carrier of the manufacturing plant	6) Warehouse → Dispatching

Source: Own

In the case of the serial production that was looked at, the company does not do any assembly at the place of delivery. This lowers the price of the product, which makes sense. Custom production is different from mass production because it uses non-traditional production methods, information sources, and ways of working. This makes the whole custom production process riskier, but it also increases the margin and adds value. Using these attributes, the riskiness of both types of production has been calculated.

A computational model for serial and custom production processes adds value and allows for risk analysis.

Input parameters for the computer model that was used to analyze the value added by the process and the risk of the process in enterprise serial and custom production:

- Invoiced price to customer: price excluding VAT → [211 500 CZK]; [150 000 CZK]
- Cost of materials: [37 500 CZK]; [20 000 CZK]
- Amount spent on
 - o Production: price based on the costs and time in hours → [76 600 CZK]; [53 400 CZK]
 - o Sales: Price to ensure ... % margin → [5000 CZK]; [3 500 CZK]
 - o Overheads: [3 000 CZK]; [5 000 CZK]
 - o Technical preparation: [3 000 CZK]; [5 000 CZK]
 - o Services: [1 000 CZK]; [0 CZK]
- Total operating costs: [126 100 CZK]; [80 400 CZK]
- Operating profit: [86 400 CZK]; [69 600 CZK]

Calculation of the process added value for the serial or custom production:

*Process added value*_{partial production process}

$$= \text{Planned oper. profit} \times \left[\left(\frac{\text{Cost price}_{(A \rightarrow Z)}}{\text{Sum } N \text{ for production}} + \frac{\text{Number of worked hours}_{(A \rightarrow Z)}}{\text{Total number of worked hours}} \right) \div 2 \right] \times \left(\frac{\text{Sum } N \text{ for production}}{\text{Total sum } N} \right) \quad (3)$$

$$\text{Process added value}_{\text{coating plant of the serial production}} = 66400 \times \left[\left(\left(\frac{8800}{76600} + \frac{8}{82} \right) \div 2 \right) \times \left(\frac{76600}{93600} \right) \right] = 5772 \text{ CZK} \quad (4)$$

$$\text{Process added value}_{\text{ser. production activities}} = \sum_{\text{ser. production activities}} 54340,17 \text{ CZK} \quad (5)$$

$$\text{Process added value}_{\text{punching machine of piece production}} = 69600 \times \left[\left(\left(\frac{12000}{53400} + \frac{8}{82} \right) \div 2 \right) \times \left(\frac{53400}{66900} \right) \right] = 13017 \text{ CZK} \quad (6)$$

$$\text{Process added value}_{\text{piece production}} = \sum_{\text{piece production activities}} 55555,15 \text{ CZK} \quad (7)$$

The process added value calculations show a higher process added value in the production process for custom production than for serial production.

Determination of the average risk value for the serial or custom production:

$$\text{Process risk (avg. process added value)}_{(\text{production process})} = \left(\frac{\text{Avg. value of the process added value}_{(A \rightarrow Z)}}{\text{Total sum of added value}} \right) \times 100 \quad (8)$$

$$\text{Process risk (avg. process added value)}_{(\text{serial production})} = \left(\frac{3622,678}{54340,17} \right) \times 100 = 6,67 \% \quad (9)$$

$$\text{Process risks (avg. process added value)}_{(\text{piece production})} = \left(\frac{9259,193}{55555,15} \right) \times 100 = 16,67 \% \quad (10)$$

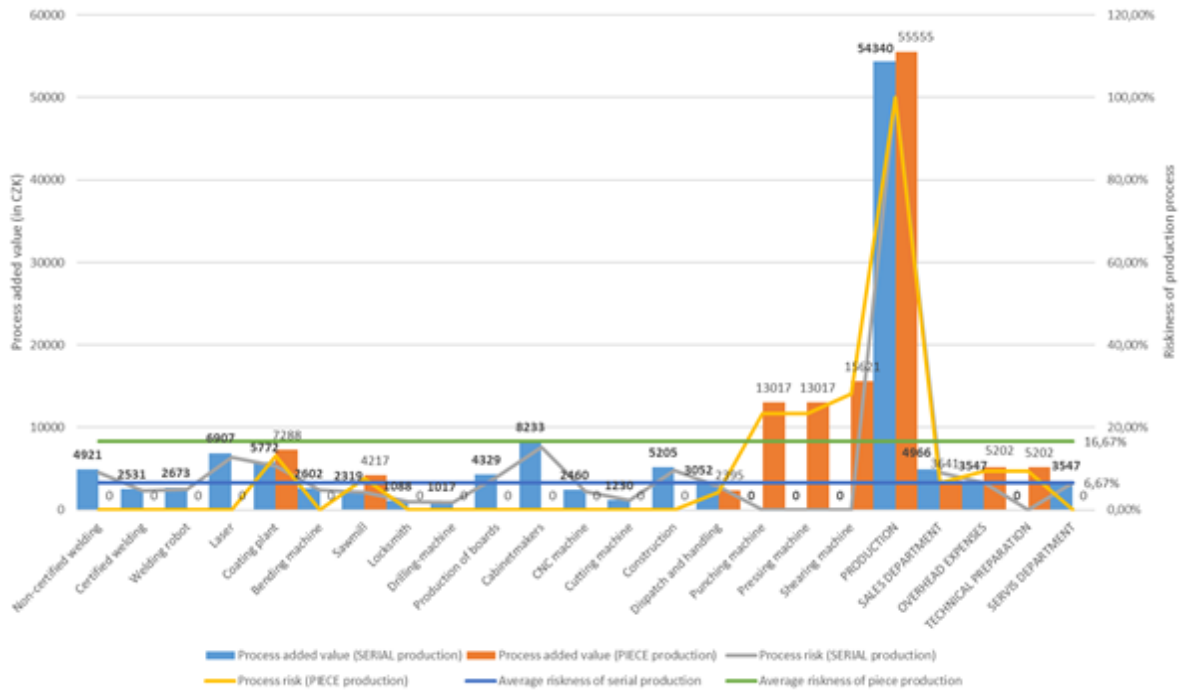


Figure 2. Process added value with riskiness of production process

Source: Own

In the next part of the solution, the calculation of the risk level for the analyzed types of production was carried out. The graphical representation clearly indicates that the serial production of the enterprise carries less process risk than custom production. The average process risk of the serial production is lower since this production process does not involve as much new preparatory (design) work, budgeting and pricing activities, or new workflows when compared to the custom production. At the same time, macroeconomic parameters (e.g., resource uncertainty, inflation, currency, employment, etc.) affect custom production much more than serial production. The average risk is lower for serial production because the risks can be eliminated or corrected during the serial production process. The risk is higher for custom production, as mentioned above, because the process is more complex and demanding, both in terms of production and organization, and, finally, recently also due to staffing issues. According to the company managers, the outputs are of crucial importance for the correction of the company's business strategy, both in terms of the definition of its business portfolio and the technical and technological equipment of the company, including the provision of necessary human resources.

The results presented in this paper resonate with findings gained abroad. For example, Clay & Feeney (2019) state in their conclusions that knowledge of the value of business processes contributes to the efficiency of business activities; the creation of strategies contributes to the efficiency of business activities, the creation of margin; and, last but not least, the development of a new business strategy. Similar conclusions were expressed by Boaventura et al. (2018), who brought the issue more towards the end customer and its relationship with the business. Along with the definition of the value chain, an analysis of value streams for serial and custom production was performed, and in this regard, one can agree with Wang et al. (2020), who define the value stream as a process created during production as well as the added value and stated margin that the company sets in relation to the added value. On the contrary, the value chain analysis of the enterprise did not confirm the results of Noga et al. (2020), who extended the value chain to include the aspects of energy, information, and attention. It is because the

enterprise is classified as "green," but its involvement in ecological activities could be greater, especially when it comes to the use of renewable resources. It should be noted that the enterprise is only working on its digitalization, which may also play a significant role in the creation of added value as well as the elimination of risks. In terms of the set research questions, the following conclusions can be drawn:

On the basis of the determined value stream in serial and custom production, there have been found to be significant differences, especially in the way that different departments of the company, or individual processes, are involved. This naturally leads to big differences in how production is planned, where materials come from, and how the production process itself is managed, as well as how orders are finished and sent out, including putting things together and giving services.

In line with the indicated outputs, the first research question can be answered positively. The discrepancies between serial and custom production in terms of process flow, process localization, personnel intensity, and, last but not least, efficiency, have been demonstrated. The answer to the second research question is negative because the findings clearly indicate that the added value is higher for custom production compared to serial production. Respecting the economic principle that added value depends on the invested human labor (creative activity), the share of creative activities is clearly higher in custom production than in serial production. Calculations of the process added value have positively shown that the highest added value is generated in the production department, especially in custom production, while the preparation phase and the sales department are also significantly involved. However, the importance of the production process is also evident in serial production, but with a lower process value. The primary business processes are important in both types of production evaluated, but their values are significantly different.

The goal of the last research question was to find out if business process risks are higher in serial production than in custom production. Based on the process risk calculations and the data presented in Figure 1, the answer to the research question is negative. The risk of the serial production was determined at 6.67 % compared to the custom production, where the risk was found at 16.66 %. The reasons for the findings include the complexity and difficulty, uniqueness and originality, as well as the dependency on personnel of the custom production compared to the serial production.

Conclusions

In the current economic environment, the issue of the riskiness of value-creating corporate activities and their impact on the strategic management of business entities can be considered one of the tools to improve the competitiveness and profitability of companies. The topicality is enhanced by the ongoing COVID pandemic and the decline of the economy worldwide and in Europe. It is no coincidence that businesses have increased their interest in this issue in recent years. Nowadays, it is generally agreed in the corporate environment that a corporate strategy is also a business strategy. As a result, it can be concluded that knowledge of value-creating processes in a company is a basic prerequisite for setting up a competitive corporate portfolio. The importance of understanding corporate processes in terms of their value is also demonstrated by the fact that most companies apply process-based management instead of functional management. A gradual introduction of business process supervisors in enterprises that achieve exceptionally positive economic results is not accidental; it is a targeted effort of their managements to generate competitive corporate strategies.

The categorization of a company's primary and support activities is a prerequisite for the definition of general procedures to achieve competitiveness of the company on the market as well as to create added value for its customers and itself. Understanding not only the value chain but also the determination of the process added value and risks of partial activities of the enterprise was the main objective of the paper.

The authors are aware that this is only the first approximation of the results, whose value they do not overestimate; at the same time, the obtained outputs indicate that the defined direction and the selected methods to solve the problem can be useful for further follow-up research activities in this area. It is objective to state that some enterprises, with which the authors of the article have been cooperating for a long time, already analyze their primary functions from the viewpoint of their value at a practical level using their pragmatic knowledge. They use results from their internal analyses for management purposes. This situation in corporate practice has motivated the authors to accelerate the solution and to propose a new methodological procedure for the generation of a corporate strategy based on an analysis of their processes.

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