EXPLORING THE DEVELOPMENT OF ORGANISATIONAL AND MANAGEMENT STRUCTURES IN THE CZECH REPUBLIC AND THE NETHERLANDS

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Abstract. The paper aimed to examine the changing organisational and management structures in Czech and Dutch companies, emphasising the importance of adaptability and resilience today. The research methods used in the study used a strong comparative approach to analyse the detailed differences and statistical significance between the organisational and management frameworks of these two locations, utilising Chi-Square and ANOVA One-Way analyses. This analytical method enables us to accurately measure the frequency and effects of different management approaches, establishing a solid statistical foundation for our comparison analysis. The research shows a clear shift towards using agile and hybrid models in these companies, emphasising these structures' vital role in improving operational flexibility and market adaptability. This transition is not just a reaction to present market forces but a deliberate repositioning to safeguard companies against global economic risks in the future. The study has consequences that go beyond regional borders and provide significant insights for businesses globally. The study's results demonstrate how agile and hybrid frameworks can effectively promote resilience and responsiveness in businesses facing rapid change and global market challenges. This study emphasises the importance of strategic adaptation for modern corporate performance and offers a guide for companies aiming to navigate today's complex economic environment. This study adds to the overall discussion on organisational strategy by providing practical insights for companies seeking to stay competitive in a constantly changing environment.

Keywords: Organisational agility; organisational and management structure; cross-cultural analysis; management resilience; strategic corporate adaptation


JEL Classifications: L22, L25, M14, P51

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1. Introduction

Businesses must adjust to keep up with the ever-shifting nature of the global economy and remain positioned to compete. Companies worldwide, but particularly in the Czech Republic and the Netherlands, have been undergoing significant organisational and management structure shifts over the past few years. According to a study by Michna and Vaková (2020), the Czech Republic has transitioned away from traditional hierarchical structures and toward more adaptable and forward-thinking systems, such as flat structures and network structures. On the other hand, there has been a rise in the use of hybrid construction in the Netherlands. These structures blend aspects of both classic and contemporary architecture (Van Wijngaarden et al., 2019). This change in organisational and management systems has enormous repercussions for companies, their employees, and society. For instance, Pencak and Zolnierczyk-Zreda (2018) discovered that businesses with more flexible structures have greater employee happiness and productivity levels. These findings were based on an analysis of a total of 450 companies. In addition, as businesses become more adaptable and innovative, they can better adjust to shifting market conditions, ultimately leading to increased success and economic growth. Within today's modern corporate environment, the discussion of shifts in organisational and management structures is of the utmost importance. Businesses need to comprehend and implement efficient organisational and management structures to continue to succeed in the face of rising demand, remain competitive, and adapt to shifting market conditions. To inform and direct businesses in their strategic decisions, the purpose of this article is to provide insightful information regarding the changes that have taken place in the organisational and management structures of companies in the Czech Republic and the Netherlands. In addition, it is essential to investigate how these shifts show themselves in various industries and the sizes of companies and how the architecture of these businesses can be optimised to produce the best possible outcomes.

This article aims to help businesses understand and implement effective organisational and management structures that will allow them to remain competitive and thrive in the face of rising demand and shifting market conditions in the Czech Republic and the Netherlands. The article's findings could have a few consequences, including a greater propensity for businesses in the Czech Republic to adopt flexible structures like flat structures and network structures and a greater propensity for firms in the Netherlands to implement hybrid structures to reap the benefits of both traditional and modern architecture (De Waal, Hermkens, 2017; Halk, Viturka, 2019). In addition to fostering a more agile and adaptable work environment, the article may encourage businesses to investigate the benefits of flexible structures in employee happiness, productivity, and innovation.

Furthermore, the article may be helpful for businesses across industries and sizes by shedding light on optimising their organisational and managerial structures through a comparison of the changes in organisational and management structures of companies in the Czech Republic and the Netherlands. Moreover, by contrasting these shifts with those in other countries and regions, businesses can gain insight into the global economy's broader evolution of organisational and management structures and adapt accordingly.

This study aims to investigate and contrast the shifts that have taken place in the organisational and management structures of businesses in these two nations. In sum, this study can be a helpful reference for companies enhancing their management and organisational structures to remain competitive in today's swiftly evolving global economy. Companies in the Czech Republic and the Netherlands can learn from each other's experiences by sharing their successes and failures in these areas.

This issue leads to the formulation of the following hypotheses:

H1: The organisational and management structures of companies in the Czech Republic differ significantly from those in the Netherlands.

The Netherlands emphasises education and manager training to increase service quality and reduce research and innovation costs. Placek, Ochrana, and Pucek (2017) attribute this to a lack of trust in strategic governance and management and a low competence of Czech governments for strategic governance.
H2: The size of a company affects the speed and flexibility of its decision-making processes, which in turn affects its organisational and management structures.

To maximise the effectiveness of assessment groups and, by extension, the organisation's competitiveness, Korshunov, Kabanov, and Cehlar (2020) state that managerial decisions might serve as the foundation of an occupational risk management system.

H3: Differences in cultural and business practices between the Czech Republic and the Netherlands affect the management and organisational structures of companies operating in these countries.

Interdependence among social cultures, economics, and policies is a hallmark of globalisation. However, it can affect a nation or community positively or negatively (Antalova, 2020; Andronic, 2021). Skare and Soriano (2021) state that people have more trade options and more significant connections with foreign business partners because globalisation positively improves technology transfers.

2. Literature Review

According to Cardinale and Scazzieri (2019), theories of structural change determine the extent of transformations that can be made within given economic structures. However, for these theories to occur and be applicable, they must contain explicit or implicit assumptions about the activities within the structures. According to van Neuss (2019), four factors determine structural change. These factors include changes in sectoral prices, changes in income, changes in the interrelationships between inputs and outputs, and comparative advantage. For a developing and transforming market, great care must be taken with technological innovation and structural changes leading to economic growth (Zhou et al., 2021). According to Lee (2021), incomes play an essential role in economic growth due to rapid structural changes and export demands that have grown faster than import demands, while exports have also changed from primary products to more technology-intensive products. Dobrzanski (2019) concluded that technological change and structural labour productivity, i.e., the shift of labour from low productivity to higher productivity sectors, improved both productivity outcomes examined and thus contributed to modernisation and economic growth based on research on structural change in the Czech Republic. Structural change is directly linked to the Fourth Industrial Revolution, which was associated with substituting new technology and capital for labour. From a financial point of view, the automotive industry may be dominant in the Czech Republic, as it is successful in economic growth. Still, in terms of performance indicators, the growth of this sector may only be temporary, as the world market is crowded with cars, and the pressure to reduce emissions is enormous. Therefore, due to the economy's cyclical nature, even the less critical sectors in the Czech Republic may be important and relevant to the Czech economy in the future (Hedvicakova and Kral, 2019). Structural transformation based on research has shown that if the long-run self-sufficiency of a country's interest rate is higher than its interest rates, the share of employment and value-added in the tradable sector is higher; otherwise, these shares decrease. Since each country's interest rate increases with technological progress, the patterns of structural change can vary significantly (Sinicakova and Gavurova, 2017; Kim, Oh and Song, 2019; Robescu et al., 2021). Niisanke (2019) defines how to approach fiscal, monetary, and financial policy debates to facilitate structural transformation, avoid the limitations of the standard macroeconomic literature, and use this agenda as a reference point. Differences in technological progress among the three sectors (agriculture, industry, and services) are the dominant force behind structural transformation. Still, differences observed in other technologies are not as important (Herrendorf, Harrington, and Valentini, 2015). The criteria for successful structural transformation of exports are increasing the share of exports of high-technology products, reducing export concentration, expanding export complexity, and, finally, increasing the proportion of exports of capital products (Gnidchenko, 2021; Hamulczuk and Pawlak, 2022).

We can look at expansion differently nowadays, but business expansion is becoming faster and more intense. In 2023, technologies such as artificial intelligence, blockchain, and machine learning will have a significant impact on businesses (Moravec et al., 2024; Bartosik-Purgat and Jankowska, 2020; Lăzăroiu et al., 2022; 2023; Andronie et al., 2023). Another opportunity for businesses to expand is that as the market and technology evolve, businesses have more and more opportunities to increase their competitiveness and expand their operations.
Among these activities that will help companies grow in a competitive environment can include online marketing, social media, and online trading, so-called online trading (Hoi, 2020; Turek et al., 2023). This is also confirmed by Xu (2019), but he also adds that trading through online marketplaces has its downsides, namely the fact that they can be expropriated or attacked by hackers. Businesses may find it profitable in the future to educate their employees; there is a need to invest money and time in human resources because they are the ones who bring profits, performance, and, ultimately, market positioning (Duminica, 2019). According to Ismail et al. (2019), employee communication and training significantly impact the achievement of set goals and the well-being of all employees. Investments in research and development are significant for a company's growth, and it primarily depends on strategic decision-making on what and how much money will be invested to grow (Innocenti and Zampi, 2019). According to Korshunov, Kabanov, and Cehler (2020), managerial decisions can form the basis of an occupational risk management system to optimise the use of assessment groups and thus help to make the organisation more competitive. According to Mastrostefano et al. (2020), companies can use funds to expand through investment funds and funds that support start-ups, i.e., emerging businesses that have a good idea and can develop. Not only can start-ups grow, but it is also one way to combat unemployment and create wealth, i.e., a stake in the start-up company. Companies today increasingly focus on personalised products and, more than ever, on the customer because the customer is the central aspect that can expand a business (Olah et al., 2021; Jiang, 2022).

Globalisation is a process where cultures, economies, and policies are intertwined, while social cultures are also intertwined. However, it can positively and negatively impact a country or society (Sinicakova et al. 2017; Antalova, 2020; Lv et al., 2023). According to Skare and Soriano (2021), globalisation positively affects technology transfers, so people have more opportunities in trade and can better connect with business partners from abroad. These processes of globalisation increase the efficiency of activities, but there is a need to continuously create an environment for institutional support and regulate rules in the information market. Like everything, globalisation has adverse effects. First, social inequalities in income between countries cause social tensions (Shopina, Oliinyk, and Finaheiev, 2017). According to Kassai (2017), globalisation has both positive and negative impacts on the country; foreign investment positively affects economic development; the negative consequences are mainly from an ecological point of view, but these can be prevented or at least eliminated through global cooperation and a focus on ecology through guidelines. Ultimately, globalisation can be beneficial if it is appropriately regulated. According to Tomljanovic, Cvecic, and Franc (2022), the SDGs must be followed. Still, it is also necessary to remember that each region and each country is based on different dynamics, so each country and region needs to be approached differently to meet the SDGs. Globalisation has also facilitated global networking, which means that all communication technologies have become interconnected and work together to enable the fast and efficient transfer of information worldwide, which can help companies grow (Grant and Jung, 2021). According to Schuh et al. (2020), the global network facilitates communication, saves time, and facilitates communication within a company if the communication medium is appropriate, which is essential for modern society to expand continuously. The global network is also reflected in business, whereby buyers and suppliers can communicate with each other and share information; however, according to Sterev et al. (2020), small businesses are not as shareable and have less trust due to the surrounding environment, mainly due to their more minor role in the market environment.

Companies use hierarchy management to organise and manage their employees at work. A hierarchical structure is integral to any company that wants to be competitive in a changing environment. Hierarchical power needs to be set up within the company so that it does not weaken the company's performance but strengthens it (Ji et al., 2019; Gavurova et al., 2022a,b). However, this finding contradicts the perspectives of De Waal and Hermkens (2017) and Halk and Viturka (2019), who suggest that Czech companies are more inclined to adopt flexible structures like flat and network structures, while Dutch companies tend to adopt hybrid structures combining traditional and modern elements. Bimpikis and Markakis (2019) say that a well-organised management hierarchy helps with staff management, communication, and follow-up. This is because all employees know their roles and responsibilities, and everyone knows who to contact for any questions or problems. Therefore, in managing innovative projects, group dynamics, conflict resolution, leader knowledge, and team-building processes are essential activities within the hierarchy of the organisation and the proper functioning of groups within the organisation (Soltes and Gavurova, 2015; Malec and Stańczak, 2022; Olah et al., 2021). Hierarchy can also bring weaknesses in that some employees of the company may feel marginalised.
compared to others, and there may also be situations where people with more power within the hierarchy abuse their position, a situation that does not help the company or workplace relationships (Rubineau, Lim, and Neblo, 2019). According to Li et al. (2020), organisational cohesion and good workplace relationships positively impact the firm's performance. This is also confirmed by Mikalsen et al. (2019), who state that in more extensive and complex organisations, there is a need to align with experts and other groups to create effective autonomous teams. According to Sickelov et al. (2020), revenue management involves good workplace relationships, a well-chosen product portfolio, and monitoring past weaknesses. According to Weerheim, Van Rossum, and Ten Have (2019), these are the factors of a successful team.

This field of study started in the 20th century. It looks at how to lead an organisation, manage and motivate employees, and use the enterprise's resources to reach its goals. It is used across all industries, and one of its main exponents is Henry Fayol, who focused on employee motivation (Hatchuel and Segrestin, 2019). According to Muldoon et al. (2021), Elton Mayo was also one of the leading exponents, but his theories are no longer essential to modern management theory. However, by far the most significant impact was the theory of Frederick Taylor, who contributed his theory to the organisation of work and thus higher efficiency, where each employee is given an activity and their performance is analysed (Paris, 2019). However, management theory nowadays includes modern approaches to help a company achieve its goals and be competitive. This also involves strategic management, which aims to plan, manage in the long term, and respond to crises that arise during the company's life cycle to minimise the impact on the company (Ansell and Boin, 2019).

Businesses that want to implement their decisions in the enterprise use business strategies which pair the objectives they want to achieve with the methods and actions they will use to reach them, according to Zapletalov (2021). The enterprise can achieve business success if the model is also set correctly. For emerging businesses needing more resources, choosing a business strategy that will effectively utilise the business's potential and resources is necessary. Strategies with differentiated products and minimal costs are the most effective. Other effective strategies include improving technology and product design (Kim et al., 2021). Financial planning is an essential business strategy that brings success to the business. With the financial plan, the company can anticipate and prepare for future problems, determine the situation of the business, and thus create a strategic plan for future development that will lead to the success of the organisational unit. According to Yeniaras, Kaya, and Dayan (2020), a business strategy should be responsive to change and flexible, as a flexible strategy positively affects business linkages and financial and non-financial performance. Companies should focus on the wants and needs of customers and on retaining existing customers or establishing relationships with customers in international markets (Tuominen et al., 2022).

The Netherlands is a developed country with an excellent legal and economic system. It can adapt to changes in the business environment, especially since there is a constantly growing number of entrepreneurs offering their services here (Jansen, 2020). The Netherlands is also good at strategic management, organisation, and planning. This is because business in the Netherlands comprises many different sectors and organisations. Managers tend to be consultants and try to create better systems and processes to make the company competitive in a dynamic environment (Filippov, Mooi, and van der Weg, 2010). In the Netherlands, there is a strong emphasis on education and a training system that helps managers, which allows companies to improve service quality as much as possible and minimises the cost of research and the innovation process. Allen and Belfi (2020), who claim that companies in the Netherlands are highly competitive due to educated employees, support this by stating that education in the Netherlands has expanded rapidly in recent decades, despite widespread concern, with no direct negative consequences.

The Czech Republic is less advanced than the Netherlands in terms of management and strategic management. According to Placek, Ochrana, and Pucek (2017), this is due to a need for more trust in strategic governance and management and the low capacity of governments in the Czech Republic for strategic governance. Even though the management level has yet to reach the level of world leaders, there has still been a lot of progress. In the Czech Republic, more and more companies are trying to evaluate quality and follow the trends already common in developed economies (Ondra, 2021). The number of students at universities is decreasing yearly, which can significantly impact the management of businesses and their ability to remain competitive. Managers should continuously educate themselves and manage the company based on practical and theoretical knowledge.
(Chladkova, Skypalova, and Blaskova, 2021). According to Caha (2017), managers’ education is essential for the company’s performance. It has been confirmed that in the Czech Republic, managers’ education is related to the size of the company, i.e., the larger the company is, the more widespread the education is, and the more they focus on market trends, which affect the overall efficiency and performance of the company (Tothova et al., 2022).

3. Methods and Data

Chi-squared
The chi-square method is applied in situations where two variables are examined, and we examine whether there is frequency and statistical significance between the two scenarios. We derive the chi-square statistic using the formula below by comparing the observed and expected frequencies.

Where: \( \chi^2 \) is the value of the test statistic; \( O_i \) is the observed frequency in the \( i \)-th category; \( E_i \) is the expected frequency in the \( i \)-th category.

ANOVA one-way
One-way ANOVA (Analysis of Variance One-way) is a statistical method used to compare means between three or more groups. The method tests whether there is a statistically significant difference between groups based on the variance in the data. According to Heiberger and Neuwirth (2009), it generalises the two-sample t-test to three or more samples. The formula for One-way ANOVA is:

\[
F = \frac{SSB / (k - 1)}{SSW / (N - k)},
\]

Where: \( F \) is the value of the test statistic, \( SSB \) is the sum of squares between groups, \( SSW \) is the sum of squares within groups, \( k \) is the number of groups, and \( N \) is the total number of observations.

ANOVA multi-way
According to Langenberg, Helm, and Mayer (2022), ANOVA Multi-way (Analysis of Variance Multi-way) is a widely used statistical method for data analysis that allows the examination of the effect of more than one factor on the dependent variable. This method tests whether there is a statistically significant difference between groups based on the variance in the data and determines whether there is an interaction between the factors. The formula for the Multi-way ANOVA includes the sum of squares (Sum of Squares) and the mean squares (Mean Squares) for each factor and the interaction between the factors. The exact formulas vary depending on the number of factors and their levels.

Dimensional analysis - scale reliable
Dimensional analysis - scale reliability is a statistical method used to assess the reliability of measurements in psychometric testing. This method is often used to assess the consistency and reliability of individual items or dimensions in questionnaires or scales. This analysis is used as a classical tool that has proven successful in converting difficult technical problems into more manageable ones (Mahoney and Yeralan, 2019).

We have individual functional units that are key to the smooth division of labour and, above all, to the creation of corporate value, whether in the form of a product or a service, within the corporate organisational decomposition. In this regard, we have identified a total of 12 groups that are mostly found in corporate practice. The research focuses on gaining knowledge, awareness, and type of organisational structure based on its characteristics, as well as its most appropriate structure depending on these differentiating parameters:

- Size of the company,
- Focus of the company, by sector,
- Focus of the company by nation,
- Number of organisational structure levels.
3. Results

To investigate the inter-departmental linkages, a correlation analysis will be conducted as part of this study. The analysis will be specified to examine the correlations in the dataset collected in the Czech Republic and the Netherlands. Table 1 illustrates the results by examining correlation analysis and decoding the abbreviations. The results will offer a deeper understanding of the data samples from the Czech Republic and the Netherlands.

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<td>1.00</td>
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<td>0.13</td>
<td>0.52</td>
<td>0.26</td>
<td>0.51</td>
<td>0.27</td>
<td>0.54</td>
<td>0.48</td>
<td>0.48</td>
<td>0.50</td>
<td>0.54</td>
<td>1.00</td>
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</table>

Legend

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<th>A7</th>
<th>Technical</th>
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<td></td>
<td>Quality</td>
</tr>
<tr>
<td>A3</td>
<td>Economic</td>
<td></td>
<td>A9</td>
</tr>
<tr>
<td>A4</td>
<td>Business</td>
<td></td>
<td>A10</td>
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<tr>
<td>A5</td>
<td>HR</td>
<td></td>
<td>A11</td>
</tr>
<tr>
<td>A6</td>
<td>Investment</td>
<td></td>
<td>A12</td>
</tr>
</tbody>
</table>

Source: Authors

Using the correlation coefficient, they are accepted as statistically significant, i.e., that two parameters are correlated with each other if the correlation coefficient is greater than 0.5. The first category that will be analysed in the results section are companies from the Czech Republic. Here, the area of control is correlated with the areas of HR, investment, quality, and research and development. This implies that companies with control are highly likely to have other departments. The results are also consistent with the fact that controlling work takes place not just at the investment level (0.550), in the quality area (0.593), but also in the development area, where development is one of the most expensive investment returns of companies and one of the riskiest areas. However, companies voluntarily take this risk, believing they will maintain or create a competitive advantage (development 0.575). Finally, there is the area of HR, where it is desirable to have the right people in the right jobs (0.571). The following correlations have been identified as accompanying statistically significant relationships: Quality in cooperation with logistics, which reflects the fact that both inbound and outbound logistics (0.512) are key elements for the company and are also a necessary means for a positively received input but at the same time a safely dispatched output. At the same time, quality correlates with production (0.528), indicating that the production process is also a necessary element that requires control during its transformation process. Last, it is entirely alone in the correlation between HR and economics (0.517). This
result is related to the fact that businesses pay considerable economic units to their employees, so companies should evaluate the efficiency of their employees.

The results obtained in the Netherlands show that some correlations between departments were obtained. Examples are investment with quality (0.66), then quality with purchasing (0.62), manufacturing with logistics, and finally HR with marketing (0.53). The difference with the results from the Czech Republic is the measurement of negative reliability coefficients ($R^2$), which indicates an inverse relationship, e.g., technical with manufacturing (-0.12) or (-0.1) economic with controlling. The results are strongly influenced by the representation of the respondents in the territorial units of the Czech Republic and the Netherlands. The following graph demonstrates the percentage representation of the size categories of companies for both countries, which are determined by the number of departments in which each company operates within its organisational grouping.

It can be observed that the distribution of data is relatively normative, but in the case of the Netherlands, smaller departments (more departments) predominate, so the assumption of decentralised organisation of work is confirmed. On the other hand, the Czech Republic is represented by companies that centralise their organisational structures more and thus use larger departments (a smaller number of departments). The average among the countries we compare is a medium number of departments, where 20% of the companies surveyed are located (see Figure 1).

![Figure 1. Organisational structure distribution by department size in the Czech Republic and the Netherlands](Image)

Source: Authors

To better understand the context of what has a clear impact on the choice of organisational structure, the choice of departments, or the number of departments, the statistical method of chi-square and the Pearson test were used to test the "legend of the structures" by the dependent variable within each differentiation, which can be seen in the following table. Table 2 shows the results for the Czech Republic.

| Table 2. Pearson test results of the Czech Republic- Chi-square: testing for differentiation |
|---------------------------------|-----------------|-----------------|-----------------
| **Focus of the company**         | 24.38           | 8               | 0.001979        |
| **Size of the company**          | 64.156          | 12              | 0.3904E-08      |
| **Financial balance of the company** | 11.772          | 8               | 0.1617          |
| **Type of organisational structure** | 28.644          | 36              | 0.8035          |
| **Number of levels/scopes of management** | 50.748          | 12              | 0.1032E-05      |

Source: Authors
Using the Chi-square test, it was confirmed that the created parameter legend structure is significant with differentiation by focus, with a value of 0.001979. Furthermore, with size categorisation, where the value of the Pearson coefficient is 0.39 E-08, this result also determines the dependence on the parameter of number or range of degree of organisational management structure. The direct relationship of the parameter "legend structure" was confirmed, which is classified into 5 basic areas: [small, medium, large, gigantic]. This method was subsequently applied to the results from the Netherlands (see Table 3).

Table 3. Pearson test results of the Netherlands - Chi-square: testing for differentiation

<table>
<thead>
<tr>
<th>test file</th>
<th>X-squared</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
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<td>Focus of the company</td>
<td>7,8732</td>
<td>6</td>
<td>0.2475</td>
</tr>
<tr>
<td>Size of the company</td>
<td>38,682</td>
<td>9</td>
<td>0.00001315</td>
</tr>
<tr>
<td>Financial balance of the company</td>
<td>5,5597</td>
<td>6</td>
<td>0.4743</td>
</tr>
<tr>
<td>Type of organisational structure</td>
<td>25,327</td>
<td>9</td>
<td>0.00263</td>
</tr>
<tr>
<td>Number of levels/scopes of management</td>
<td>27,282</td>
<td>9</td>
<td>0.001256</td>
</tr>
</tbody>
</table>

Source: Authors

When comparing the data from the Czech Republic and the Netherlands, there is a substantial difference in the significance of the size of structures and sectoral differentiation. This difference was not confirmed in the Netherlands (0.2475). The idea that the size of structures or the number of departments is directly linked to the type of organisational structure is indeed validated. These results prompt an examination of potential connections in philosophy among organisational groupings in the Czech Republic and the Netherlands. A link was verified in the Czech Republic between the size of companies (1.315E-5) and the number of management levels (0.001256).

The framework will consider the aspects determining whether the company is manufacturing or service-oriented. The sectoral distinction will be evaluated based on the various departments within the organisational structure. The results will be determined through dimensional analysis utilising the Scale reliable sensitivity analysis tool, presented in Table 4.

Table 4. Results of dimensional analysis Scale reliable - manufacturing sector CZ

<table>
<thead>
<tr>
<th>MANUFACTURING SECTOR: 71 CZ</th>
<th>Alpha</th>
<th>Std.Alph</th>
<th>r(item,total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling</td>
<td>0.8602</td>
<td>0.8576</td>
<td>0.6821</td>
</tr>
<tr>
<td>Economic</td>
<td>0.8699</td>
<td>0.8676</td>
<td>0.5209</td>
</tr>
<tr>
<td>Investment</td>
<td>0.8718</td>
<td>0.8701</td>
<td>0.4856</td>
</tr>
<tr>
<td>Quality</td>
<td>0.8555</td>
<td>0.8534</td>
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<td>Logistics</td>
<td>0.8723</td>
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<td>Marketing</td>
<td>0.8639</td>
<td>0.8612</td>
<td>0.6246</td>
</tr>
<tr>
<td>Purchasing and supply</td>
<td>0.8666</td>
<td>0.8645</td>
<td>0.5772</td>
</tr>
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<td>Business</td>
<td>0.8797</td>
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<td>Technology</td>
<td>0.8618</td>
<td>0.8594</td>
<td>0.6517</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.8779</td>
<td>0.878</td>
<td>0.3455</td>
</tr>
<tr>
<td>Development and research</td>
<td>0.8673</td>
<td>0.865</td>
<td>0.5647</td>
</tr>
</tbody>
</table>

Source: Authors

The results indicate that a collection of departmental organisational groups may be identified, which likely suggests that it is a manufacturing company. The quality department comes in second with a correlation value of 0.7465, and controlling comes in third with a correlation value of 0.6821. The human resources area has the highest correlation value of 0.7612. The technological area has a value of 0.6517, and the marketing area has a value of 0.6246, both being significant parameters. Here, the production unit reaches a minimum value of 0.3455. This could be attributed to manufacturing companies engaging in value-added production processes using their exclusive expertise, such as a distinctive or intricate technological production method. This analysis was conducted on service sector companies; the results are shown in Table 5 for comparison.
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Table 5. Result of the dimensional analysis: Scale reliable - service sector CZ

<table>
<thead>
<tr>
<th>SERVICES (N): 57 CZ</th>
<th>Alpha</th>
<th>Std.Alph</th>
<th>r(item,total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling</td>
<td>0.7225</td>
<td>0.7331</td>
<td>0.7469 **</td>
</tr>
<tr>
<td>Economic</td>
<td>0.7759</td>
<td>0.7878</td>
<td>0.2392</td>
</tr>
<tr>
<td>Investment</td>
<td>0.7449</td>
<td>0.7602</td>
<td>0.4973</td>
</tr>
<tr>
<td>Quality</td>
<td>0.7505</td>
<td>0.7614</td>
<td>0.4707</td>
</tr>
<tr>
<td>Logistics</td>
<td>0.7666</td>
<td>0.7811</td>
<td>0.2915</td>
</tr>
<tr>
<td>Marketing</td>
<td>0.7337</td>
<td>0.7518</td>
<td>0.5699 *</td>
</tr>
<tr>
<td>Purchasing and supply</td>
<td>0.7546</td>
<td>0.7713</td>
<td>0.4075</td>
</tr>
<tr>
<td>Business</td>
<td>0.7697</td>
<td>0.7807</td>
<td>0.2905</td>
</tr>
<tr>
<td>HR</td>
<td>0.7419</td>
<td>0.7623</td>
<td>0.5041 *</td>
</tr>
<tr>
<td>Technology</td>
<td>0.7435</td>
<td>0.7611</td>
<td>0.4951</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.7822</td>
<td>0.8033</td>
<td>0.0741</td>
</tr>
<tr>
<td>Development and research</td>
<td>0.7523</td>
<td>0.7622</td>
<td>0.4866</td>
</tr>
</tbody>
</table>

Source: Authors

With a smaller sample size of 57 service companies, the significance level of acceptance was lowered to >0.5. Like the prior scenario, the controlling, marketing, and people area criteria are the ones that achieve substantial values. The lowest-rated sectors are production and economics. A similar approach was used to analyse the data from the Netherlands. The tables below (Table 6 and Table 7) display the results for the manufacturing sector, followed by the service sector.

Table 6. Results of dimensional analysis Scale reliable - manufacturing sector NL

<table>
<thead>
<tr>
<th>MANUFACTURING SECTOR: NL</th>
<th>Alpha</th>
<th>Std.Alph</th>
<th>r(item,total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling</td>
<td>0.708</td>
<td>0.7394</td>
<td>0.3115</td>
</tr>
<tr>
<td>Economic</td>
<td>0.7462</td>
<td>0.7758</td>
<td>0.0122</td>
</tr>
<tr>
<td>Investment</td>
<td>0.7015</td>
<td>0.7261</td>
<td>0.4025</td>
</tr>
<tr>
<td>Quality</td>
<td>0.6776</td>
<td>0.7039</td>
<td>0.5998 *</td>
</tr>
<tr>
<td>Logistics</td>
<td>0.6931</td>
<td>0.7192</td>
<td>0.4408</td>
</tr>
<tr>
<td>Marketing</td>
<td>0.6778</td>
<td>0.7204</td>
<td>0.5082 *</td>
</tr>
<tr>
<td>Purchasing and supply</td>
<td>0.7072</td>
<td>0.7387</td>
<td>0.3226</td>
</tr>
<tr>
<td>Business</td>
<td>0.7304</td>
<td>0.7594</td>
<td>0.1769</td>
</tr>
<tr>
<td>HR</td>
<td>0.6733</td>
<td>0.7198</td>
<td>0.5352 *</td>
</tr>
<tr>
<td>Technology</td>
<td>0.6902</td>
<td>0.7329</td>
<td>0.4327</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.6975</td>
<td>0.7136</td>
<td>0.502 *</td>
</tr>
<tr>
<td>Development and research</td>
<td>0.7131</td>
<td>0.7456</td>
<td>0.2849</td>
</tr>
</tbody>
</table>

Source: Own study

We implemented a similar methodology to that used in the Czech Republic to identify the specific departments characteristic of manufacturing companies within this sector. Using the scale reliability approach, we identified four statistically significant outcomes with values exceeding 0.5 based on the data's sample distribution. HR (0.5352), marketing (0.5082), and manufacturing (0.502) came in order of quality, with this ranking highest (0.5998). Next, we transition to the service sector, with the outcomes displayed in the subsequent table.

Table 7. Result of the dimensional analysis: Scale reliable - service sector NL

<table>
<thead>
<tr>
<th>SERVICES (N): NL</th>
<th>Alpha</th>
<th>Std.Alph</th>
<th>r(item,total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling</td>
<td>0.7509</td>
<td>0.7436</td>
<td>-0.0304</td>
</tr>
<tr>
<td>Economic</td>
<td>0.7206</td>
<td>0.7042</td>
<td>0.2601</td>
</tr>
<tr>
<td>Investment</td>
<td>0.6558</td>
<td>0.6439</td>
<td>0.7145 **</td>
</tr>
<tr>
<td>Quality</td>
<td>0.6643</td>
<td>0.6521</td>
<td>0.6632 *</td>
</tr>
<tr>
<td>Logistics</td>
<td>0.7345</td>
<td>0.7208</td>
<td>0.1487</td>
</tr>
<tr>
<td>Marketing</td>
<td>0.6871</td>
<td>0.6765</td>
<td>0.5089</td>
</tr>
<tr>
<td>Purchasing and supply</td>
<td>0.6722</td>
<td>0.661</td>
<td>0.609 *</td>
</tr>
</tbody>
</table>
Data with a correlation coefficient greater than or equal to 0.6 is considered significant. In this instance, the investment variable has a correlation coefficient of 0.7145, which is higher than quality's (0.6632), HR's (0.6487), and purchase's (0.609). Below is Figure 2 comparing the results obtained, showing data for different countries and specifying whether it pertains to the manufacturing or service sector.

A visual comparison between the Czech Republic (CZ) and the Netherlands (NL) demonstrates the sectoral focus within the manufacturing and service industries. Both countries emphasise human resources and control in many areas, highlighting their essential significance in organisational and management structures. The CZ manufacturing sector prioritises technical and quality departments, emphasising production standards and innovation. In contrast, NL focuses on the manufacturing department, heavily emphasising production methods. NL puts a distinct stress on investment in services, reflecting a financial or growth-oriented approach, whereas CZ does not, suggesting potential variations in service sector dynamics or economic models. This comparison visualisation highlights the variations in organisational and management focus across regions and sectors, possibly indicating each country's distinct economic plans and industrial capabilities.

Discussion

This study focused on research on organisational and management structures in the Czech Republic and the Netherlands. The authors assume that differences in organisational and management structures may be due to the company's geographical location. These claims have been put forward in several studies, such as those by Allen and Belfi (2020) and Placek, Protection, and Pucek (2017). Based on these studies, the hypotheses in this research were proposed: H1: "The organisational and management structures of companies in the Czech Republic differ significantly from those in the Netherlands." This hypothesis was confirmed using various statistical methods. It has been shown that corporate governance in the Czech Republic is more centralised than in the Netherlands. Companies in the Czech Republic have a division into a smaller number of larger departments, whereas companies in the Netherlands focus on a more significant number of smaller departments. Both have advantages and disadvantages, but the Netherlands’ organisational and management structures seem more appropriate, as confirmed by the studies of Halk, Viturka (2019) and De Waal, Hermkens (2017).

When researching organisational and management structures, it is necessary to include the relationship between the size of a company and the organisational structure. For this reason, the following hypothesis was developed:
H2: "The size of a company affects the speed and flexibility of its decision-making processes, which in turn affects its organisational and management structures." This hypothesis was tested using the chi-square test, which showed the company's size dependence on the number of organisational structures. This result confirms that to manage larger companies effectively; it is necessary to divide the company into several departments and thus decentralise its management. A rise in the number of departments can increase the linkages between departments and, therefore, simultaneously increase the speed and flexibility of the company's management. The research of van Wijngaarden et al. (2019) and Pencak and Zolnierczyk-Zreda (2018) can support the confirmation of this hypothesis.

The next stage of this research was to determine the difference between the relationships between the different parts of the companies in the Czech Republic and the Netherlands, which corresponds to the following hypothesis: H3: "Differences in cultural and business practices between the Czech Republic and the Netherlands affect the management and organisational structures of companies operating in these countries." Using chi-square test statistical methods and dimensional analysis, some similarities but significant differences between the relationships of the companies' departments were identified. In the Czech Republic, a focus on the controlling area can be observed, which correlates with other departments. In the case of the Netherlands, it can be noted that the quality department showed the highest degree of correlation. However, it should be mentioned that the Netherlands also showed negative correlations. This finding and various correlations support H2's assertion that the interconnection in the different company departments depends on each nation's customs and business practices. The confirmation of this hypothesis is in line with the research of Jansen (2020).

Conclusions

The findings of the research that was conducted to compare the organisational and managerial structures of the Czech Republic and the Netherlands revealed valuable insights that characterise the contrasts between these two countries. In the sample that was examined, it was discovered that businesses in the Czech Republic have a higher degree of centralisation in relation to the larger size of the individual departments of the companies, which comes at the expense of the number of departments. On the other hand, business organisations in the Netherlands tend to decentralise certain aspects of their operations by separating the organisation into a greater number of smaller divisions. Subsequently, the variations in the organisational structures of the Czech and Dutch businesses were validated using additional statistical techniques to investigate the interdependencies between the various departments. It has been demonstrated that enterprises in the Czech Republic with a well-developed controlling system also have very mature human resources, investment, quality, and research and development departments. Based on these data, control plays a significant role in establishing a connection between strategic management and the investment plans and operational regions utilised by the corporation inside the Czech Republic domain. The negative association seen in the instance of the Netherlands was another factor that characterised differences during this study. After that, the research of businesses in both countries concentrated on conducting an in-depth investigation of the manufacturing and service sectors, during which particular connections of sectors were discovered. Based on the findings, the manufacturing and service sectors have very different concentration areas. A subsequent dimensional study proved a direct relationship between the company's size, the kind of organisational structure, and the number of management levels in the Czech Republic and the Netherlands. This research verified that countries have diverse organisational and managerial structures and gave new, previously unknown insights. This work provides a solid foundation for further research on organisational structures and the general functioning of companies, which also serves as a foundation for additional research.
References


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