

Family businesses in the Czech republic and their involvement in digitization

Hana Hlaváčková¹, Jaroslava Pražáková², Jarmila Rybová³, Marie Vejsadová Dryjová⁴

Abstract: Our article deals with family businesses according to Czech legal regulations. It summarizes their specifics and typical features, including their involvement in digitization and the use of artificial intelligence. Family businesses have been emerging in the Czech Republic for the past thirty years. The term family business is appearing more and more in the names of already existing companies. The number of these companies is also growing in the Register of Family Businesses. That is why we are thinking about what advantages such a designation can bring to the company and at the same time what it can bring to our Czech society. According to expert estimates, family businesses create more than half of the gross domestic product. They are usually local patriots, invest and plan their development for future generations. The influence of the family business on the education of the next generations, the intergenerational transfer of experience is essentially essential. On the other hand, such a company designation represents new obligations and different expectations of state and other institutions, business partners and customers. Automation and digitization belong to the current and future functioning of family businesses. Research shows that family businesses are not afraid of these challenges, increasing their performance, effectiveness and resilience.

Keywords: small and medium-sized companies, family business, digitization, Register of family business in the Czech Republic

JEL Classification: D22, J21, J49, M20

1 Introduction

The definition of a family business is anchored in the form of a non-legislative regulation, namely Government Resolution No. 899 of October 18, 2021. A family business is a family business corporation or a family trade. A family business corporation is a business corporation in which members of one family directly or indirectly exercise the majority of voting rights and at least one member of this family is a member of the statutory body of this business corporation; the characteristics of a family business corporation are also met if its sole shareholder is a member of one family who is also a member of the statutory body, and at least one other member of the same family is a member of its statutory body, its employee, its proxy or a member of its supervisory board. A family trade is a business in which at least two members of one family participate with their work or property and at least one of the members of this family holds a trade or other similar license or is authorized to do business for another reason.

When starting a family business, it can be considered very important to plan future activities, that is, to create a detailed business plan. For example, determine the scope of activities, the number of family members involved and the division of individual activities between individual members. The reason is primarily the fact that the success of the business falls on several members of one family. This exacerbates the problems and negative effects of lack of funds or other unsuccessful steps. The period before the company starts operating in such a way as to adequately provide for the involved members, not only with current income but also for the future, can also be challenging. It can be assumed that the goal of a family business may be to increase the assets and income of the family, save expenses for employees, and avoid complications with the employment of employees according to the Labor Code.

¹ University of South Bohemia, Faculty of Economics, Department of Accounting and Finance, Studentská 13, České Budějovice, Czech Republic, hlavacko@ef.jcu.cz

² University of South Bohemia, Faculty of Economics, Department of Accounting and Finance, Studentská 13, České Budějovice, Czech Republic, smolaj@ef.jcu.cz

³ University of South Bohemia, Faculty of Economics, Department of Accounting and Finance, Studentská 13, České Budějovice, Czech Republic, jrybova@ef.jcu.cz

⁴ University of South Bohemia, Faculty of Economics, Department of Accounting and Finance, Studentská 13, České Budějovice, Czech Republic, vejsadova@ef.jcu.cz

2 Methods

2.1 The process of identifying Czech family businesses

Family business corporations and family self-employed persons have begun to register in Register of Family Businesses maintained by the Association of Small and Medium Enterprises and Entrepreneurs from March 1, 2020. They entered the register of family business corporations and family businesses that correspond to the government's definition of a family business. The Ministry of Industry and Trade publishes an overview of companies in the Register of Family Businesses on its portal. Registered companies have the following advantages: use the programs of the National Development Bank (NRB) intended for family businesses from April 1, 2020, namely GEN-Guarantee, Expansion-loans and Expansion-guarantees; have the right to use the official "Family Business Czech Republic" logo. Companies are interested in registering in this Register.

2.2 The digitization and automation process – an important prerequisite for the future development of family businesses

The process of digital transformation involves the use of digital technologies to create new or modify existing business and company processes, company culture and customer experience. Modern and rapidly changing trends in information technology must be met, while business and market conditions must be respected. Velte (2011) wrote that the process of digitization and automation in family businesses takes place in the following areas:

- Basic administrative tasks
- Data storage on the cloud
- Big data
- Chatbots
- Use of artificial intelligence for prediction or decision-making (AI)
- Digital supply chain management
- Enterprise resource planning system (ERP system)
- Use of virtual or augmented reality
- Automation and robotization of production
- Use of applications that provide a quick solution to a specific task

The Association of Family Businesses evaluates family businesses in its research. Here we present some of their findings regarding digitization, automation and robotization in family businesses. For Example, in most family businesses (70%), basic administrative tasks are automated. As a rule, these activities are: preparing and filling in various reports and forms, confirming one's own activities, maintaining various data or information records and tables, and preparing documents for negotiations and meetings.

53 % of family businesses in the Czech Republic use data storage in the cloud (according to a research report).

The use of cloud data storage brings mainly the following advantages to family businesses:

- data in the cloud can be browsed from any device
- minimization of costs associated with the purchase of own servers, thereby minimizing the demands on IT workers
- the user (family business) pays only for the funds actually used
- the system is updated by the cloud provider
- the use of the cloud is reliable and the service is constantly available (the service is located on many physically independent machines, this almost guarantees operation without outages on the hardware side, the usual guarantee of availability over 99.5% of the time)
- backup of company data is located in parallel on several servers.

Family businesses can use these basic models of cloud systems:

IAAS — "Infrastructure as a Service", the lowest possible level, the provider offers virtual hardware

PAAS — "Platform as a Service", the provider provides the entire platform on top of which the entire product is subsequently built (Google App Engine - supports popular development languages with a number of development tools)

SAAS — "Software as a Service", the customer is provided with the entire SW solution and he only uses it, requiring only a minimum of development on the part of the customer (Google Docs - creation of online documents)

DAAS — "Data as a Service", the customer is only provided with access to the data storage (iCloud)

Big data is used by 19 % of family businesses.

About 13% of family businesses use a **chatbot**. These computer programs are mainly used in customer support, where they replace operators. The most common type is the classic chat, where an artificial intelligence answers instead of an operator. Chatbots can also be used by companies to recruit employees. With the help of an automatic test, the chatbot can find out, for example, basic data about the applicant, starting time options, previous experience, knowledge and skills, it can test basic language skills, it may want to work out a task (e.g. creating a graph).

Artificial intelligence (AI) can have a big impact on business in all its areas. This is mainly the automation of processes and tasks in companies, streamlining the management of internal company processes, and using AI to analyze the market and the development of the company, which helps to adjust the offer of companies and better meet the needs of customers. The predictive capabilities of companies today are often still very limited. However, Kodůusková (2023) adds that, with the development of AI, they can, for example, plan supplies and make a number of strategic decisions better. Even today, family businesses automate their business processes and use a number of tools and applications for this. The ability to sell cheaper, faster, more efficiently and more is one of the goals of artificial intelligence.

Artificial intelligence can also be used in the company's financial management, human resources, for predicting the development of shares, setting appropriate price levels, sorting mail (recognizing spam), predicting machine breakdowns, digitizing company documents, etc.

Artificial intelligence is used by approximately 6 % of family businesses.

Digital supply chain management (SCM system) is used by 8% of family businesses. SCM is a closely coordinated and responsive system that includes all activities from changing raw materials to finished products to selling to customers. Improved SCM practices can transform family businesses, which can thus become more competitive, e.g. by minimizing waste and surpluses while reducing costs and increasing efficiency. They can increase customer loyalty by offering personalized logistics that meet individual preferences.

Enterprise Resource Planning System (ERP System)

15 % of family businesses use ERP (Enterprise Resource Planning) systems, which manage and integrate all or most areas of the company's activities with the help of a computer. ERP systems ensure the flow of data between company processes. By collecting shared data about an organization's transactions from various sources, ERP systems eliminate data duplication and ensure data integrity with a single source of reliable information.

For example, the family company EMCO uses an ERP system in the cloud. The ERP system works on a network of remote servers instead of inside the company. The cloud provider patches, maintains and updates the software several times a year.

The use of virtual or augmented reality is 5% in the case of family businesses.

Augmented Reality (AR), i.e. extended reality, is a revolutionary technology that connects the virtual world with the real environment. It is a digital superstructure of the real world that enriches mobile and web applications with interactive elements through computer-generated text, images or video. It is therefore necessary to determine in advance what point or object the iPhone (or other devices) will respond to. In other words, determine the stimulus based on which the virtual object appears. This point can be a face, a QR code or a specific thing - for example a building.

An example of AR is an application that allows you to explore the interior of Porsche cars in detail and at the same time try driving them on real streets, or try how the car will look in the garage (Porsche AR Visualiser). Family businesses can use Vuforia Chalk – this is a customer support application with augmented reality that visualizes the individual steps of various procedures through interactive elements. Vuforia Chalk combines advanced AR collaboration tools with real-time video communication. It allows connecting a technician in the field with an expert, so both see a certain situation that they can solve together. Technicians and experts can draw digital annotations on a mobile screen or desktop that closely adhere to 3D physical objects in the real world, allowing an expert to guide the technician through the process step-by-step.

Unlike AR projects, Virtual Reality creates a completely new digital environment, and to watch it requires the use of a special headset - VR glasses.

7 % of family businesses use **automation and robotization of production**. In these processes, errors caused by the human factor are reduced. Thanks to the precisely determined and repeatable production process of the automated line, there is no risk of a reduction in product quality.

The robotic workplace brings high precision when handling products from place to place at high speeds. Robots most often perform repetitive activities in the so-called "pick and place" mode or with the help of industrial cameras in the so-called "trace, pick and place" mode. This includes, for example, turning, moving to other positions, loading into machines, possibly stacking into boxes, palletizing and packaging. Robots are also used, which meet the demanding criteria of operational safety and machine operation and can also work in close proximity to humans.

25% of family businesses use **applications that provide a quick solution to a specific task**. This is the use of hybrid, native or web applications.

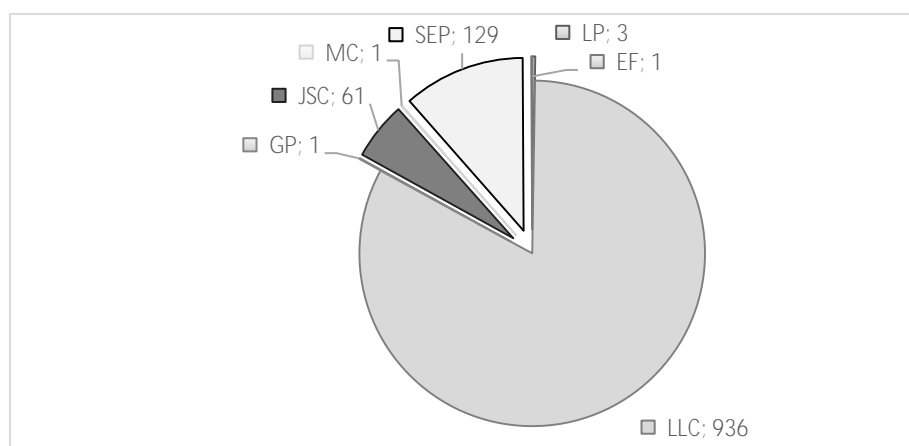
3 Research results

The aim of this part is to identify the representation of legal forms of family businesses in the Register of Family Businesses and to define the aspects that influence family businesses in their activities. Family businesses are the backbone of the Czech business environment. There is great interest in registering these businesses in the mentioned Register. Probably not all businesses that meet the definition of family businesses are registered in the Register. Some family businesses have not yet entered the Register of Family Businesses or are still considering registration. The second part presents aspects that influence the functioning of family businesses.

3.1 Family Firms in Register of Family Business

The Register of Family Businesses accepted 1,132 businesses from the beginning of registration until the end of September 2023. Of the total number of the registered family businesses, 88.6% were family business corporations (i.e., 1003 business corporations) and 11.4% were family self-employed persons (i.e., 129 self-employed persons). The spectrum of the registered family businesses, including the number of individual forms of businesses shows the Figure 1.

Figure 1 Number of registered family businesses by the end of September 2023



Source: Register of Family Business, own processing

Self-employed persons represent 129 registered family businesses. Registered family business corporations represent exist legal forms of the business in the Czech Republic, including the manufacturing cooperatives, where the largest share is held by the form of the limited liability company (abb. LLC) with the number of 936 registered companies. This is followed by 61 registered joint-stock companies (abb. JSC), 3 registered limited partnerships (abb. LP) and one registered general partnership (abb. GP), manufacturing cooperative (abb. MC) and endowment fund (abb. EF). A specific position in the spectrum of the registered family businesses is occupied by the endowment fund with serial registration number No. 555, which, based on proven compliance with the requirements of the definition of the family business according to Government Resolution No. 899, can also be registered. Act No. 89/2012 Coll., Civil Code designates an endowment fund and a foundation as a foundation that serves a socially or economically useful purpose. The purpose of the given registered endowment fund and the objective of its activity is to find, mediate and provide affordable housing to homeless persons with no or minimal financial resource, and to assist these persons in their involvement in a normal, fulfilling life. The registration process takes a maximum of a week when all necessary documents are submitted.

The most common reasons to register:

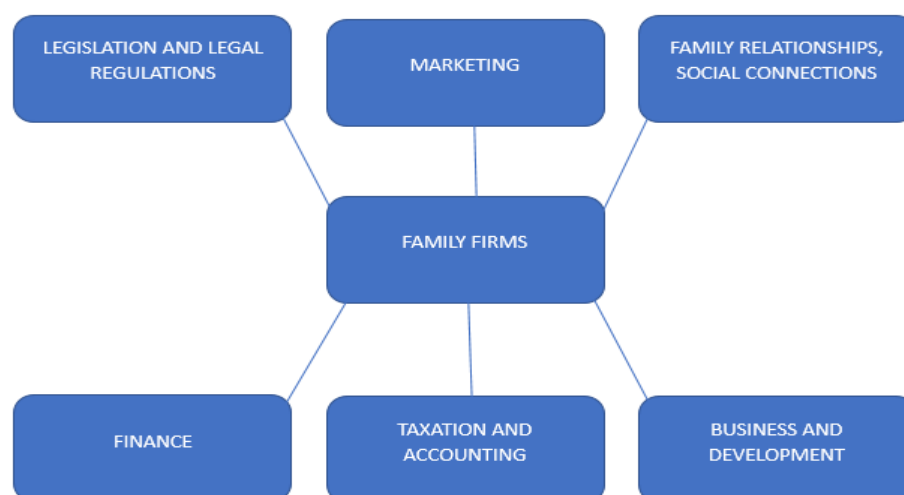
- the desire to belong to some whole;
- the possibility of supporting and developing the business of the family business in the next generations;
- more favorable conditions for the products of the National Development Bank.

From April 1, 2020, registered companies have the opportunity to use programs of the National Development Bank (NRB) intended for family businesses, namely GEN-Guarantee, Expansion-loans and Expansion-guarantees, and on the other hand, they have the right to use the official "Family Business Czech Republic" logo. In this way, family businesses most often financed the acquisition of new machines, technologies, construction, modernization or expansion of production areas, warehouses or administrative buildings.

3.2 Aspects affecting the functioning of family businesses

Creating a detailed business plan and planning future activities is important when starting a family business. The authors tried to define the areas that directly affect the activities of family businesses. Figure 2 graphically illustrates these areas. Below this picture, the authors have added specific aspects that can affect family businesses.

Figure 2 Aspects affecting the activity of family businesses



Source: Own processing

Aspects affecting the functioning of family businesses:

1. **Legislation and legal regulations** – In 2020, the Ministry of Industry and Trade presented a definition of family business corporations and family businesses. The Czech Republic is one of the very few countries in the European Union where family business is legally enshrined in the definition of family business and family trade. The business conditions of family businesses are essentially the same as for other businesses. The National Development Bank in the Czech Republic offers preferential financing to family businesses by directly providing loans or by guaranteeing them.
2. **Marketing** - Businesses use the term "family business" or "family business" in their name. Customers and business partners perceive this supplement positively. This term has become part of the marketing tools. This can lead to, for example, higher trust in honest work, lower costs or better access to customers, etc.

We can assume that the family of the business owner, or entrepreneur, will have a greater interest in quality and long-term sustainable positive results of the business. It follows that the term family business is attractive to the customer, and that is why entrepreneurs and business owners are also interested in this addition to the name.

How family businesses are able to grant the ideas and wishes of their customers is a question. Further customer interest in the future will also develop accordingly. The name "family business" or "family business" can hide a lot of potential, but at the same time, this name may not mean anything to customers.

In practice, you can also meet companies where they prefer to operate without employees outside the family, the so-called "strangers". They assume that "foreign" employees will not perform the relevant work precisely enough and will lack the necessary motivation to maintain the quality of the products or services offered. We can apply this more to micro-enterprises and small companies. Furthermore, we can add the issue of taxation and the amount of tax impact on the company without and with "foreign" employees.

3. **Family relationships and social connections** - the situation of the company is usually also reflected in the social relations in the family. The operation of a family business, where several family members are involved, can help the mutual understanding of family members, their cooperation, communication and understanding. On the other

hand, it is necessary to resolve conflict situations that would not have arisen without the existence of a family business. It is natural that even people who are close to each other can have very different opinions on dealing with work matters. Here we can assume that the family should feel a strong sense of belonging and motivation to achieve a jointly set goal. One of the main goals of a family business is probably long-term gainful activity and the related effort to involve the younger generation, including children, in the company's activities.

We can consider the presence of children as an educational effect and the formation of the children's bond with the family's business activities. Children perceive the functioning of the business and its changes, learn to solve various situations and help their parents who are entrepreneurs. It is an exaggeration to say that children will learn the value of money and the difficulties in obtaining it. In addition, the family business can provide them with additional financial income. They will acquire practical skills applicable to both business and employment. Descendants get to know how to solve different situations, acquire communication skills and knowledge in the field of financial literacy. In this way, an entrepreneurial family can raise a new generation that will continue the entrepreneurial activity that has started. In this way, the company is de facto building its new tradition. Otherwise, the new generation will have a better chance of doing business successfully in another company of their own. Of course, there may be a situation where the descendants are not interested in continuing the business and liquidate or sell the business. In this way, they can obtain funds for other own activities. We can consider it beneficial in this situation. This is also a valuable experience for the new generation.

4. **Finance** – the scope of business activities determines how many people will be involved in the business and whether it will only be family members. From a long-term perspective, the company should generate a profit sufficient to maintain the business and provide for the family members involved. Their involvement brings a higher risk of financial problems for the family, if the business activity is not sufficiently profitable or there is a loss. In the case of family firms, we can assume a greater effort to maintain the company's activity even in the event of a short-term loss. It is therefore possible to recommend diversification of these risks, for example as follows:
 - Expanding business activities according to the abilities, interests and experience or education of family members,
 - Partial involvement of family members, i.e. family members have their own jobs and cooperate in business activities in their free time,
 - Involving only family members who are not employed for any reason
 - Involvement of family members temporarily,
 - Prepare a solution to a situation where one of the family members decides to leave the family's entrepreneurial activity. This also applies to financial compensation.
5. **Taxation and accounting** - in the area of recording the company's activities, it is necessary to comply with legal regulations in the area of accounting and taxation. The legal form of the family business affects the obligations in the area of accounting and taxation and the registration of activities. The same applies when guaranteeing the obligations of a family business.

In addition, problems may arise with the separation of private and business property. Accounting segregation of assets may seem straightforward, but an entrepreneur can actually use business assets for private activities as well. This is difficult for the financial administration to prove. She may not be able to find out during the tax audit.

The entrepreneur must be able to prove the involvement of specific family members in the activities of the family business, for example by means of an employment contract, an agreement on the performance of work, the registration of these persons in the trade or commercial register. If family members are cooperating persons according to § 13 of Act No. 586/1992 Coll., on income taxes as amended, these persons must report themselves to the authorities as cooperating persons. Collaborators are essentially self-employed persons, so they are subject to the same obligations as entrepreneurs.

From the point of view of taxation, family businesses are subject to the same taxes as other businesses. This applies to income tax, value added tax, real estate tax, road tax or consumption and energy tax. However, taxation may affect family businesses differently than other businesses. On the other hand, a family business can benefit from various tax benefits in the area of income taxation in the form of benefits for cooperating persons according to § 13, non-taxable amounts according to § 15 of the Act on Income Taxes, deductible items according to § 34, tax discounts according to § 35, § 35 ba, § 35c or others. One business affects the social situation of several

members of one family. Several members of one family are dependent on the functioning of one business. Family businesses are more sensitive to taxation in this regard.

In the area of tax burden, the social and health insurance of family members involved in the family business cannot be forgotten either. The form of involvement of family members matters here. Thus, the entrepreneur must distinguish whether other family members are employees or cooperating persons according to § 13 of the Act on Income Taxes as amended, etc. Obligations in relation to social security and health insurance arise from these facts.

6. **Business and development** – management in a family business affects the functioning and financial situation of several family members. The company should consider the ability to obtain a bank loan or other loan. The form of business affects this situation quite a lot. In the case where members of one family own joint property, the family has a very limited possibility of obtaining a loan.

Another thing that can be quite specific to family businesses is the development of the business. On the one hand, they may not have such a strong tendency to grow or develop the company or increase the number of branches. A family business may not be interested in expanding further or creating additional branches, establishments, divisions, etc., even if it is doing well and would be able to expand. We encounter this mainly in smaller family businesses. A family business may not be interested in expanding further or creating additional branches, establishments, divisions, etc., even if it is doing well and would be able to expand. We encounter this mainly in smaller family businesses. We encounter these situations, for example, when processing diploma theses, when family businesses often reject the recommendations of the authors of final theses aimed at the development or growth of the company, building other branches, etc. On the other hand, there are family businesses that develop very quickly, have experience with automation, robotization and artificial intelligence. Owners of family businesses correctly assess that the future of their companies is linked to the process of automation and digitization. They are forced to focus on automating routine administrative tasks and speeding up and making approval processes more transparent. The use of mobile devices has been skyrocketing for several years. Their use for everyday business processes and administration is not sufficiently developed in family businesses in the Czech Republic. There are several reasons for this: among the most frequently cited ones are concerns about the security of sensitive company data on devices outside of strict company control, low priority of common administrative or back office processes, fear of introducing new technologies, ignorance, and lack of information. Where they already use trendy digital management tools, they have maximized the efficiency of employees' time spent, speeded up the necessary administration, reduced the error rate and thus increased the resilience of the family business.

4 Conclusions

Family businesses have been creating a new tradition for the past thirty years. The period of socialism broke the tradition of family businesses. The Czech Republic is one of the few countries in the European Union where family business is legally enshrined in the definition of family business and family trade from 2021. The Association of Small and Medium Enterprises and Entrepreneurs ranks family businesses as follows:

- the largest source of jobs in the private sector;
- an important element of regional development;
- they are local patriots;
- it accounts for more than half of the gross domestic product;
- they plan their development for the next generations;
- they are durable;
- they invest;
- the proceeds from their business stay in our state.

The official portal of the Quality Council of the Czech Republic (2023) states that a family business connects family members as family members and those same family members as co-workers and employees of the business. The basic principles of their success include wisdom passed on from generation to generation, pride, trust, flexibility, a stable corporate culture, speed of decision-making, loyalty, honesty, ethics, responsibility towards future generations, the ability to motivate people around them, support the development of the region, etc. Family farms contribute to the prevention of rural depopulation. These characteristic features gradually become an important generator of values, emotional or social,

i.e. non-economic wealth of the family business. In the family business, respect and humility remain for what the founder has achieved. Tradition and family know-how is a guarantee of reliability.

The processes of digitization, automation and robotization also affect family businesses. Owners of family businesses correctly assess that the future of their companies is linked to the process of automation and digitization. Family businesses must also focus on automating routine administrative tasks and speeding up and making approval processes more transparent. The use of mobile devices has been skyrocketing for several years. Their use for everyday business processes and administration is not sufficiently developed in family businesses in the Czech Republic. There are several reasons for this: among the most frequently cited ones are concerns about the security of sensitive company data on devices outside of strict company control, low priority of common administrative or back office processes, fear of introducing new technologies, ignorance, lack of information. Where they already use trendy digital management tools, they have maximized the efficiency of employees' time spent, speeded up the necessary administration, reduced the error rate and thus increased the resilience of the family business.

References

- Act No. 89/2012 Coll., občanský zákoník (Civil Code), as amended
- Association of Small and Medium-sized Enterprises and Entrepreneurs of the Czech Republic (2023). [online]. Available at: <https://amsp.cz/>.
- Association of Family Businesses (2022). *Odolná rodinná firma 2022*. Survey of the Association of Family Businesses - STUDY of family business resilience, final research report. [online]. Available at: <https://www.asociacerf.cz/wp-content/uploads/vyzkumna-zprava-Odolna-rodinna-firma.pdf>
- Company SAP (2023). *Co je řízení dodavatelského řetězce (SCM)?* [online]. Available at: <https://www.sap.com/cz/products/scm/what-is-supply-chain-management.html>
- Kodůusková, B. (2023). *Umělá intelligence (AI): Teorie a trendy pro rok 2023*. [online]. Available at: <https://www.rascasone.com/cs/blog/umela-intelligence-ai-trendy>
- Kodůusková, B. (2023). *Rozšířená realita v marketing: Jak využít AR aplikace?* [online]. Available at: <https://www.rascasone.com/cs/blog/rozsirena-realita-ar-vyuziti-firmy-aplikace>
- Marková, H. (2023). *Daňové zákony. Úplná znění platná k 1. 1. 2023*. 34th edition. Prague: Grada.
- Mladý podnikatel.cz (2023). *Umělá intelligence v podnikání*. [online]. Available at: <https://mladypodnikatel.cz/budoucnost/umela-intelligence>
- Quality Council of the Czech Republic (2023). National award of the Czech Republic for quality in family business. [online]. Available at: <https://www.narodniportal.cz/narodni-a-krajske-ceny/narodni-cena-kvality-cr/narodni-cena-cr-za-kvalitu-v-rodinnem-podnikani/>
- Register of Family Businesses. (2020). [online]. Available at: <https://www.businessinfo.cz/clanky/registr-rodinnych-podniku/>
- Resolution of the Government of the Czech Republic dated 18 October 2021 No. 899 on the definition of a family business in the Czech Republic. (2021). [online]. Available at: https://www.mpo.cz/assets/cz/podnikani/rodinne-podnikani/definice/2022/1/899_18_10_2021.pdf
- Velte, Anthony T. (2011). *Cloud computing: praktický průvodce*. 1st edition. Brno: Computer Press.