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**COMPARING OF DECISION-MAKING PROCESSES OF IT
START-UP ENTREPRENEURS IN BELARUS AND ESTONIA**

Master's thesis

International Business Administration, Management

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I hereby declare that I have compiled the thesis independently and all works, important standpoints and data by other authors have been properly referenced and the same paper has not been previously presented for grading.

The document length is 15,466 words from the introduction to the end of the conclusion.

Danila Shmidt. April 7, 2023.

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ABSTRACT

Currently, due to globalization and the acceleration of all processes, entrepreneurs have to make decisions quickly. This is especially true for the start-up industry, in which each week is scheduled. This paper describes the decision-making process of IT start-up entrepreneurs in Belarus and Estonia, which takes place in certain conditions, for example, the war in Ukraine and sanctions against Belarus. It also describes entrepreneurs' perception of these conditions, namely the environment and the start-up ecosystem in the country. As a result, the study helps fill a gap in the updated description of the decision-making processes of entrepreneurs in this field as well as understand their perception of the current conditions in which they have to make decisions.

The study uses a qualitative analysis method and data is collected through semi-structured interviews. They were conducted with five Belarusian and five Estonian IT start-up entrepreneurs.

According to the results of the study, cultural characteristics do not affect the decision-making process. Also, a model was created for the decision-making process in IT start-ups, and based on the experience of entrepreneurs, recommendations were made on how to effectively build decision-making processes.

Keywords: IT start-up, entrepreneurs, decision-making process, decision-making models.

INTRODUCTION

By the beginning of 2023, thousands of scientific papers of all levels dedicated to start-ups have been published around the world. And it is not surprising, since it is considered as a crucial innovation process driver and a source of increased competitiveness on the innovation market (Spender *et al.*, 2016; Kaczam *et al.*, 2021) as well as important contribution factor to the development of the country's economy as a whole (Ressin, 2022).

From the author's point of view, start-up popularity nowadays as well as its failure rate is determined by the following factors: access to the instruments, access to information, low investments to make a prototype, successful examples, entrepreneurial intentions and desires for inventions. The key factor in this list is successful start-up companies, especially unicorns (Brown and Wiles, 2015) – companies whose market capitalization exceeds 1 billion dollars. According to CB Insights, a consulting company in tech industry which works with IBM and Microsoft, by October 2022 there are more than 1,203 unicorn companies in the world, the total market capitalization of which is approximately 3,895 billion dollars (CB Insights, list of unicorn companies). Most of the start-ups in this list are directly or indirectly connected with the IT sector, which shows how important IT start-ups are in the modern world and explains why many countries, striving for the development of national economies, create favorable conditions for the development of this sphere (*Ibid.*).

Estonia, for example, has made a considerable progress in this direction (Eisermann, 2014). According to State of European Tech 2022, a report provided by European venture fund Atomico and its partners, Estonia has the highest in Europe: venture capital raised as share of GDP, 2018 to 2022 (3.59%, second country – 1.15%); capital invested per capita, 2022 (1,056\$, European average – 140\$); number of unicorns per 1 million inhabitants (3.8, European average – 0.6) (Atomico, Estonia in the spotlight). Undoubtedly, such high figures are achieved due to a small population, about 1.3 million people, but this does not negate the merits of the Estonian government and the private sector in the incredible development of IT, tech start-up industry in the country.

For Belarus, the development of the IT start-up ecosystem did not happen intentionally, but as a side effect of the state strategy for the development of the IT sector. The state provided high-tech, IT companies with favorable taxation (only 9% - 13% compared to 20% for ordinary spheres of businesses (Zakon № 230-Z), which the start-up community also took advantage of. At the same time, the start-up ecosystem was developed mainly by private business, since most incubators, accelerators, venture funds and other organizations were organized by it, not the state (Ruliova, 2018). That is why, after the events of 2020 in connection with the presidential elections and protests and the significant migration of private IT businesses abroad, the development of the start-up ecosystem has slowed down. For example, the number of new start-ups increased only by 16% compared to a 29% increase in 2020 (CIVITTA, Startup report 2022).

In accordance with the world map and ranking by StartupBlink, in 2022 Belarus took 70th place in the global ranking (-3 positions compared to the previous year), while Estonia - 62nd place (+4) (StartupBlink, global map). This suggests that in 2021 Belarus was in 67th place, and Estonia in 66th, which indicates the close competition between two regionally closed countries and the high relevance of their comparison among themselves, despite the difference in the size of the economies. Also, there is an obvious trend that after 2020 the two countries went in different directions in the ranking, which is due to political and economic factors.

At the same time, according to study of IT-associated and digital entrepreneurship research, nowadays entrepreneurs constantly monitor a big variety of digital sources of information in order to make quick decisions about their products or business models and very often this happens in a highly uncertain situation on the market (Steininger, 2019, pp. 385-387). The existing academic research points out that there is a lack of knowledge in describing decision-making process of start-up entrepreneurs which might be valuable information for current and future entrepreneurs (*Ibid*). Therefore, on the one hand, there are two countries competing in the start-up industry that are regionally close to each other and have a common history of membership in the USSR, but at the same time have different cultures and characteristics, and are also in specific political and economic situations. On the other hand, the relevance of the topic of IT and IT start-ups, and on the third, a research gap in the field of decision-making, based on modern scientific research. Combining all the above information, the research problem of this study can be derived.

The research problem: the lack of an up-to-date understanding of the decision-making processes of IT start-up entrepreneurs in Belarus and Estonia, taking into account specific external conditions.

The aim of the research is to find out the difference between the decision-making processes of IT start-up entrepreneurs in Belarus and Estonia, compare their perception of the external conditions in which they have to make decisions, as well as formulate recommendations for the effective organization of these processes based on their experience.

The research attempts to answer the following research questions:

1. What is the entrepreneurs' perception of the start-up environment and ecosystem in the country?
2. What is the difference between decision making process of IT start-up entrepreneurs in Estonia and Belarus under the current conditions in both countries?
3. How according to entrepreneurs' opinion and experience can decision making process be more efficient?

The main value of the results of this study lies in the discovery of real working practices of entrepreneurs, which might be useful for current and future entrepreneurs from small companies and start-ups. Also, data on entrepreneurs' perceptions of the environment and ecosystem can be useful for public institutions to identify and correct shortcomings as well as continue to improve their strengths. In this research only qualitative method of analysis is used the rationale for which is written in the second chapter. The data is gathered with semi-structured interviews with the entrepreneurs or team members who are responsible for making important decisions in the start-up.

The thesis consists of three chapters. The first chapter is aimed to provide the reader with the necessary IT start-up related definitions and classifications, which will be used to choose the companies for the sample and categorize them. Also, this chapter will consider the main theories devoted to the study of the decision-making process of entrepreneurs, as well as existing studies on similar topics. The second chapter is aimed to describe the research design and sampling. It provides the reader with the information about the choice of research method and its reliability as well as data analysis method and its limitations. And the last chapter is aimed to analyse the gathered data and make conclusions about it. It will provide the reader with the recommendations for the further research and a short summary, which describes the main results of the work.

1. THEORETICAL BACKGROUND

This section is inclined to provide the reader with the necessary theoretical background in order to understand the basis for further categorization of IT start-ups that participated in the survey. Also, it gives an overview of key theoretical concepts about the decision-making process as well as scientific articles on a similar topic which provides a rationale for the structure and format of this study.

1.1. IT start-up definition and main classification

The first descriptions of small companies needed to create new job opportunities, produce innovative products and thereby stimulate the economy, fall back to 1934 under the authorship of Schumpeter and Nichol (1934). In subsequent years, the definition of a start-up, already in the modern sense, arose as a new legal entity created to conduct active economic activity and is not dependent on other companies, such as a subsidiary or branches of existing companies (Luger & Koo, 2005). Also, often in the definition of a start-up there is the word innovation, which is defined differently by different authors, for example, as something new that did not exist until now or as the use of existing technologies or business models in a new combination or new place (Skala, 2019).

In this research the start-up will be defined as how it is mentioned in the Estonian Aliens Act, but without using the name of the country because the work explores not only Estonian start-ups. A start-up is a “business entity belonging to a registered company, which is starting activity with the purpose to develop and launch such a business model with high global growth potential, innovative and replicable that shall significantly contribute to the development of the country’s business environment.” (Aliens Act, Parliament of Estonia, § 62⁴ (2)) This definition emphasizes the international focus on business development due to the ability to use the business model in different countries, which is called business scalability. This is important for both Estonia and Belarus, as both countries have small domestic markets (1.3 and 9.3 million people respectively), which makes entrepreneurs think about scalability at the start-up idea stage.

As far as the definition of IT start-up is concerned, there is no one way how to define this type of start-ups. At first glance, everything seems pretty obvious. If a company sells IT products or services, then it belongs to the type of IT start-ups. However, what if IT plays a key role in a part of the business model or building the business model as a whole? For example, e-commerce companies such as Amazon, Zalando, eBay, etc. could not exist if IT did not play the key role of a mediator that allows sellers and buyers to connect with each other, but at the same time, the products on these platforms are basic and not related to IT. Therefore, quite often situations arise when authors use different terminology to describe companies in which IT has a different function, for example, internet start-ups (Kollmann & Kuckertz, 2006), e-business ventures (Kollmann *et al.*, 2014), digital start-ups (Ghezzi, 2019) etc.

One of the clearest classifications is offered by Dennis Steininger (2019) in his review article on IT-associated and digital entrepreneurship research. In that research, based on review of 292 articles the author took three main pillars of a business model (Osterwalder *et al.*, 2005) and identified four IT roles in entrepreneurship and four types of IT start-ups, table 1.

Table 1. IT-start up classification

Business model pillars	Role of IT	IT function	Location in the pillar	Start-up definition
1. infrastructure management	facilitator	to optimize daily operations	1	IT-facilitated start-up
2. customer interface	mediator	to connect the start-up/seller with a customer	1, 2	IT-mediated start-up
3. value proposition	outcome	to be used in value creation of an IT product/service	1, 3	IT-bearing start-up
–	ubiquity	key role in the entire business model	1, 2, 3	digital start-up

Source: Steininger (2019)

Business model components or pillars allow to understand where IT is used in the model. There are many different approaches to determining the structure of a business model, but in this case, a simple Osterwalder's structure was taken, consisting of only three elements: infrastructure management, customer interface and value proposition. Infrastructure management is responsible

for all business processes related to the accumulation, organization and use of resources for the production of goods or services. Customer interface is responsible for how the company is connected with the final consumer including organization of distribution channels, marketing, customer service etc. And finally, value proposition is responsible for the product or service itself. This component shows what final value and in what form the customer will receive if he or she pays for this product or service. (*Ibid.*)

In IT-facilitated start-ups, IT contributes to a more efficient accumulation, distribution and use of company resources through the use of hardware, such as laptops, computers, servers, printers etc., or software, such as applications from Microsoft Office, 1C, SAP and others. In fact, nowadays it is quite difficult to imagine a company that would not use such technologies. These can be retail shops, hairdressers, repair shops, but most businesses use these technologies in one way or another, therefore in this paper this type of start-up will not be included during data collection.

Examples of IT-mediated start-ups have already been given earlier and are related to e-commerce. In this kind of start-ups, IT provides the end buyer and seller with the most efficient, convenient, fast or unique way to connect with each other. This also affects infrastructure management pillar, as it often enables to significantly reduce costs, for example, for product distribution, or allows to earn additional revenue that can later be invested in the development of the company. Another classic example of this start-up type is delivery and taxi services, since in both cases IT plays the role of a link for buying a physical product or providing transportation services.

In IT-bearing start-ups, the final product or services includes IT and can not be produced or provided without it, i.e. IT is embedded in the value creation of the final product. Examples of such companies can be Nvidia, Intel, Apple which produce mostly hardware; Microsoft, SAP, Oracle which produce mostly software; EPAM, Amazon Web Services, Fujitsu which provide IT services.

In digital start-ups, all three pillars of the business model include IT. It means that production, distribution, sales, marketing and all other parts of the value creation chain use IT and the final product or services is also IT-related. Examples of this start-up type are social media (Facebook, Twitter, Instagram), fintech companies (Wise, Monese), edtech companies (Coursera, Udemey Business), cloud services (Azure, Google Cloud) and others. (Steininger, 2019)

During the sampling part of this research, only those types that have more than one IT-related business model pillar will be taken and analysed, namely IT-mediated, IT-bearing and digital start-ups.

1.1.1. Other classifications

In addition to the main classification regarding the definition of an IT start-up and the role of IT in its business model, there are also many other criteria for classifying start-ups, for example, the number of employees in a team, annual turnover, sources of investments, the number of penetration markets, the number of partner companies etc. However, given the fact that not all companies agree to provide confidential information, such as annual income or sources of investments, this study will primarily use the most basic ways to classify start-ups, and then, as far as possible and necessary, secondary ones.

The main classification methods include: depending on the sector, stage of development, business model in relation to the buyer, the technology used and the year the start-up was founded. This or a similar classification is used by most databases related to start-ups, in particular the Estonian state-owned company Startup Estonia. (Startup Estonia, table startup database)

Startup Estonia in its database identifies 16 main sectors by which start-ups are classified: adtech & creative tech, advanced manufacturing & industry, agtech & foodtech, cleantech, edtech, fintech, gaming, spacetechnology, traveltech, cybertech, communication, business software & HR, consumer products and services, proptech & construction, transportation & logistics, healthtech (*Ibid*). However, it is important to note that regardless of the sector, for the sample of companies in this study, it is necessary to determine the role of IT in the start-up business model. For example, if a start-up from agtech & foodtech sector produces a high-tech physical device or tool that helps grow vegetables or fruits, then this start-up is not suitable for the sample, but if it creates a phone or computer application that allows customers to better analyze and control the growth process of vegetables, then the final the product is related to IT and the start-up will be eligible for the sample.

Some of the sectors are quite new and require further explanation. For example, advanced manufacturing & industry includes companies that create a wide range of technologies, processes and practices that allow companies from different sectors to use their resources more efficiently and optimize business processes. An example of such technologies can be 3D printing, nano-materials, the use of artificial intelligence in production, etc. Cleantech companies create

technologies that can significantly reduce environmental emissions and waste. They contribute to the development of the use of renewable energy sources and other green technologies that make it possible to do less harm to the environment. Cybertech refers to the sector dedicated to cyber security, i.e. protection of computers, databases, servers, etc. from cyber attacks, which is currently one of the most important areas in the IT field, since access to confidential user data can cause irreparable damage to the company. And proptech stands for a sector dedicated to technology for a more convenient work with real estate for both companies and individuals. For example, it can be a mobile application for searching for an apartment rental or for drawing up a secure lease agreement without involving lawyers. (*Ibid.*)

Regarding the stages of development of start-ups, the authors distinguish from four to six stages with various additions or combinations (Damodaran, 2009; Paschen, 2017; Picken, 2017; Orlando, 2022). They usually take the classic life cycle models from entrepreneurial, management theory (Steinmetz, 1969; Kroeger, 1974) and extend them with start-up specific stages. Basic four stages are initiation/introduction, growth/development/scaling, maturity, decline/exit which are complemented by the idea stage or pre-seed stage and minimum viable product (MVP)/seed stage. Also, specifically for start-ups between MVP and scale stages the product-market fit stage (Dennehy *et al.*, 2016) is distinguished, and the decline/exit stage is usually not used since start-ups are by definition new companies and have not had time to grow to this stage. Considering the fact that this study is more practice oriented, the classification which companies from this field use to work with start-up databases will be used. It consists of four main stages of development: idea/pre-seed stage, MVP/seed stage, product-market fit stage and scaling stage (Startup Estonia, table startup database).

At the idea stage, a team of like-minded people is formed, who most often have their main activity, and in their free time as a hobby they try to come up with an innovation. At this stage, a brainstorm takes place, the most interesting and feasible ideas are selected, a mission and vision are formed, and a plan is developed to put the idea into practice. However, at the same time, most often at this stage the company has not yet been officially registered, and the activity is financed from the personal funds of the team.

At the MVP stage, the most important event for a start-up is selling an idea. The team needs to convince investors that their idea is viable, provide a detailed business plan for putting the idea into practice with specific dates, figures and results by those dates, demonstrate what the product

or service is in a simplified way, and most often provide all of the above information in the form of a five-minute presentation or so-called pitching (Elsbach, 2003). (Orlando, 2022)

According to different studies, start-ups failure rate is very high, exceeding 70% in some industries (Giardino *et al.*, 2014 ; Deena & Gupta, 2021). It usually happens at the product-market fit stage of development. At this stage, start-ups enter the market with their product, which destroys all illusions and shows real demand, the real need of customers for a product or service. Very often a situation arises when the team strongly believes in the uniqueness and innovativeness of the product, and it really can be so, but this product may simply not have a market. In this case, the team either changes something in its product or business model and looks further for its niche in the market, or, due to lack of investment for further work on the project or psychological burnout, close the company. Also, at this stage, it becomes obvious whether it is worth investing in the project further and looking for larger investors to move to a higher level in the start-up category, relative to the investments made. (*Ibid*)

The scaling stage refers to that small percentage of start-ups that managed not only to create a new business model or innovative product, but also to find a market for it, and given the growth rate of annual turnover at this stage, most often start-ups aim directly at the global market, or launch a product on the most important, lucrative markets and expand as far as possible (Picken, 2017).

This study is aimed at analyzing the decision-making process, primarily of start-ups that have already entered or tried to enter the market with their product and have real sales, that is, start-ups from the last two development stages. These start-ups have already faced the realities of the market and they have had to make many important and at the same time quick decisions that directly affected their success in the market. Exactly this experience is the object of the research and is interesting and important not only for researchers, but also for real entrepreneurs now, who are facing the same problems, and in the future, who are likely to face them.

Depending on the business model in relation to the buyer, there are business to business (B2B), business to business to consumer (B2B2C), business to customer (B2C), business to government (B2G), customer to customer (C2C) (Mingione & Leoni, 2019). Relatively recently, the forms B2B2C and C2C appeared, therefore they require additional explanations. Examples for both business models are marketplaces in e-commerce sector. In case of B2B2C, businesses can sell their products through an online platform to both other companies and individuals, which happens,

for instance, on Amazon.com. In the case of C2C, consumers can sell unnecessary things to each other, setting the price for them on the trading platform on their own, for example, on Okidoki.ee. (*Ibid.*)

Depending on the technology used, there are more than a hundred different types of start-ups, but nowadays, most start-ups are working on technologies that are part of the concept of industry 4.0. It is based on the principle of automating production processes without human intervention and includes such technologies as Internet of things, cybersecurity, augmented reality, big data, cloud computing, autonomous robots, simulation and others (Lasi *et al.*, 2014; Bai *et al.*, 2020; Zheng *et al.*, 2020). Also, relatively recently, a new concept of industry 5.0 has emerged in the scientific community, which is based on a human-centric approach and concern for the environment, and not on production efficiency, as in the case of industry 4.0 (Xu *et al.*, 2021). However, this topic remains debatable, therefore, in this research, there will be no emphasis on the belonging of a start-up to a particular industry.

As far as the investment part is concerned, it is possible to categorize start-ups in terms of sources of funding and in terms of the amount of cash invested at a certain stage of the company's development. Among the sources of financing are: friends, fools/fans, family (3F); business angels; grants; bank loan; state support; bootstrapping; crowdfunding (Calopa *et al.*, 2014). In accordance with the author's experience, the least frequently encountered definition, which causes most questions among students, is the term bootstrapping. Bootstrapping means that the start-up team has decided not to attract investors to finance the company. In this case, all activities are financed from the personal funds of the team members, and are also reinvested in the company after receiving a profit from the first sales. Also, it is obvious that each of the options for funding sources has both its pros and cons, and in practice, companies usually combine different methods of financing. (*Ibid*)

And finally, depending on the amount of investments attracted, there are five rounds and, accordingly, five types of start-ups (Kostin *et al.*, 2022, p. 5):

1. Pre-seed – 0.5 million dollars;
2. Seed – 1-2 million dollars;
3. Series A – 2-15 million dollars;
4. Series B – 15-25 million dollars;
5. Series C – 50 million dollars.

1.2. Start-up ecosystem and environment

Before asking how the decision-making process takes place, it is necessary to understand in what conditions these decisions are made, because they are influenced by both the environment and the ecosystem (Gomezelj & Kusce, 2013; Igwe *et al.*, 2020). For example, in an ecosystem where the interest rate on a bank loan is 15% or more, an entrepreneur is much more likely to use other sources of funding, such as bootstrapping, than in an ecosystem with an interest rate of 1-2%. Therefore, in order to understand entrepreneurs' perception of the environment and ecosystem, it is necessary to distinguish between these concepts and describe what they consist of.

To fulfill this goal, starting from a start-up environment, classic theoretical models that were developed back in the 20th century can be used. For instance, Osborn and Hunt (1974) distinguish macro, aggregation and task environments.

The macro environment is the aggregate of all external factors of the company that it can not influence, but which have a direct impact on it. It is “the general cultural context of a specified geographical area” (*Ibid.*) which affects the activities of all economic entities in a given territory. The company accepts and analyzes these factors as an input data and, based on this analysis, which is most often the first among other analytical tools, determines its strategy. Initially, these factors were grouped into four main categories: economic, educational, legal-political and social-cultural (Farmer and Richman, 1964), however, nowadays, one of the most famous tool for macro environment analysis is PESTEL analysis (acronym for political, economic, social, technological, environmental and legal factors) and its extended modifications, for example, PESTELE (including ethical factors) or STEEPLED (including demographic factors) (Sammut-Bonnici & Galea, 2015, p. 2). The number and choice of factors for analysis is determined by the characteristics of the industry itself. For example, in industries that use animals, one of the key factors will be ethical, while for heavy industry it will be an environmental factor.

The authors refer to the aggregation environment as actors that operate in the macro environment and are its integral part, i.e. are also located in a certain territory, namely associations, interest groups and constituencies. To the task of the environment, they refer exclusively to organizations with which the company interacts during its activities and which are necessary for its survival, for example, distributors, suppliers, buyers, etc. At the same time, these organizations are not limited

to a certain territory and can be located anywhere in the world, especially if the company is international. (Osborn & Hunt, 1974, pp. 232-233)

Currently, both in the literature and in practice in management, a different approach is predominantly used, which does not include the aggregation environment, but in addition to the macro and task environments, it includes the internal environment, consisting of the structure, culture, and resources of the company (Tang, 1998, p. 301; Hine & Ryan, 1999; Maslova *et al.*, 2017). A lot of research has been devoted to the internal environment, as many researchers are looking for success factors in order to understand why some companies are better than others and what is the impact of the internal environment on this success (Zain & Kassim, 2012; Kuratko *et al.*, 2014). In turn, in the task environment in addition to the classical actors represented by the state, suppliers, customers and competitors (Mitchell *et al.*, 1997; Agle *et al.*, 1999), some authors extend this list with trade associations, special interest groups, creditors and other organizations which are working in the same industry as a company (Oliver, 1997; Huang *et al.*, 2015).

The start-up ecosystem exists mainly at the level of the task environment, however, it can be said that it exists at all levels of the environment. The authors of scientific papers distinguish the following main elements of the ecosystem: companies, incubators, educational institutions, governmental institutions, infrastructure, policy, business network, supporting associations and other supporting organizations and individuals (Mason & Brown, 2014; Roundy *et al.*, 2017; Spigel, 2017; Singh *et al.*, 2019). As can be seen from the list of elements, this approach includes not only the organizations with which the start-up interacts during its activities, but also physical and non-physical elements. An example of physical infrastructure are answers on such questions as: how well developed the road system is in the country, what is the speed of the Internet, what is the speed of the mobile or radio connection, what is the cost of electricity, how quickly can goods be delivered from one place to another, etc. Depending on the industry, each of these answers can play a key role in a start-up's success on the market.

An example of an intangible element that can not be counted is the intensity of communication and interaction between agents or, in other words, the effectiveness of the network (Breznitz & Taylor, 2014). In this case, quantitative indicators do not matter. For example, the efficiency of an ecosystem consisting of 100 incubators, 50 government support organizations and 10,000 entrepreneurs can be much lower than in an ecosystem where all indicators are two times lower, but all elements closely cooperate and interact with each other, which, from the author's point of

view, is the main success factor in the cluster model, considered in detail by Porter (1998; 2000) in the late 90s.

Therefore, a start-up ecosystem in a broad sense can be defined as an aggregate of tangible and intangible elements that form the conditions for the existence and development of a start-up and largely determine the likelihood of its success.

In practice, companies operating in this area most often use a simpler definition. For example, Startup Estonia in its White Paper for 2021-2027 period defines an ecosystem as the field and network of all participants related to start-up entrepreneurship, which in sum impacts the development performance of start-ups and start-up entrepreneurship in the country (Saluveer & Truu, 2020). In this case, despite the use of the word field at the beginning of the definition, the main focus is on the participants of the ecosystem that can be quantified. Since this study is practice-oriented, this approach to understanding the start-up ecosystem will be the main one.

As mentioned earlier, this study does not aim to compare in detail the start-up ecosystem and the start-up environment at all levels in Belarus and Estonia, because this requires a separate study. The paper will use key factors that do not require deep analysis, but strongly influence the conditions in which start-up entrepreneurs have to make a decision, for example, the consequences of the war in Ukraine or the political structure in Belarus at the moment.

1.3. Decision-making process: development of theory

The decision-making process in a company is based on the concept of decision making, the theoretical aspects of which are analyzed by such fields of science as sociology, management psychology, economics and others. Decision making is generally defined as choosing a course of action from among some alternatives, which is most often based on some factor, such as rational analysis, intuition, feelings, values etc (Shafir & Tversky, 1995). It is generally accepted that a person can not know all the existing alternatives, therefore making a decision is always associated with a certain amount of uncertainty and, accordingly, taking risks when making a decision. However, initially, economic models describing decision making were built according to other principles.

The first economic models developed at the beginning of the 20th century and described human behavior were divided into two main streams: theories of riskless and risky choice (Slovic *et al.*, 1983). The first stream, which began with the theoretical developments of Bentham and Mill, was based on rational choice, which is carried out in the presence of complete information about all alternatives and pursues the goal of maximizing a certain good, which was called utility. Further, in the following works of other authors, this theory was modified, since it was proved in practice that decisions are not always made rationally, but rather inconsistently, which is the main imperfection of this model. (Stigler, 1950; Edwards, 1954; Restle, 1961) The second stream put more emphasis on the uncertainty in which one has to make a decision. This means that a person can not have complete information about all alternatives and make the best decision, but can evaluate the significance and probability of each of the available alternatives and choose the best option from them, which means that his main goal under these conditions is to maximize the expected utility (Mongin, 1998).

Among the theories of rational decision making, a special place is occupied by the theory of bounded rationality, developed by Herbert Simon (1957). This theory is also based on the idea that a person does not have all the information, however, it is based on two main concepts: search and satisficing (Simon, 1979, p. 503). The concept of search means that in the absence of ready-made options, a person will search for them, but this search will not last forever. Search time is connected with the concept of satisficing, which says that before making a decision, a person has a certain level of satisfaction with this decision, having reached which, the search for alternative solutions stops. At the same time, this level of satisfaction is dynamic and depends on the environment. Therefore, based on this theory, a person does not strive to make the most rational decision, but strives to spend the minimum amount of effort on finding and making the decision that is minimally acceptable in terms of the level of satisfaction. (*Ibid.*)

Although rational theories and models can still be used in practice, since they allow a person to determine the best decision in a certain situation, they do not answer the question of how decisions are actually made. In practice, people constantly make mistakes by making less than optimal decisions, which depends on many different factors, including mostly psychological ones. Therefore, at the beginning of the 80s both currents merged into one large stream aimed at researching how decisions are made in practice (Slovic *et al.*, 1983, pp. 2-3).

From the 1990s to the present, there have been many different branches and hundreds of papers related to the decision-making process. Separate areas can be called studies of strategic decision making, organizational decision making, group decision making, decision making and risk management, decision making within the framework of problem solving, etc. Examples of various studies in this area can be the study of differences between the decision-making process of entrepreneurs and non-entrepreneurs (Mitchell *et al.*, 2002), between different entrepreneurs (Baron, 2006; Mitchell *et al.*, 2007), between entrepreneurs and managers in large organizations (Busenitz & Barney, 1997); the study of decision-making under the influence of various factors, for example, high risk, lack of resources, availability of certain skills, high uncertainty, time pressure and other factors related to the external and internal environments of the company (Baron, 2008; Mullins & Forlani, 2005). (Shepherd *et al.*, 2014)

In order to systematize the huge body of research, Shepherd and his colleagues in their review article identified seven main areas of research, depending on the context of decisions: opportunity assessment decisions; entrepreneurial entry decisions; decisions about exploiting opportunities; entrepreneurial exit decisions; heuristics and biases in the decision-making process; characteristics of the entrepreneurial decision maker; environment as entrepreneurial decision context (*Ibid.*).

This study, despite comparing the decision-making process of entrepreneurs from different countries in general, focuses primarily on decisions that are of key importance for the future of a start-up, for example, the decision to change the business model or change the features of a product or service. Therefore, the paper will primarily use articles from opportunity assessment and exploiting opportunities areas.

1.4. Decision-making models

Decision-making theory is inextricably linked with a certain model that allows a person to calculate or choose the best decision. From the previous point, a conclusion can be made that the theory is very developed and diverse, which means that there are a large number of different models, since scientists sometimes build several models from one theory. At the same time, the models proceed from the fact that, when making a decision, a person needs to achieve some goal or solve some problem, therefore, most often, the models end with an assessment of the decision made and the result obtained.

Examples of various models are indicated in the following list (Slovic *et al.*, 1983, pp. 37-93):

1. Single-attribute risky models: subjective expected utility model;
2. Single-attribute probabilistic choice models: Thurstone's random utility model, Coomb's random utility model, Luce's constant utility model;
3. Multi-attribute probabilistic choice models;
4. Multi-attribute value models: axiomatized models (weak order, stronger models), non-axiomatized value models (SMART, social value theory), validating value models, riskless value models;
5. Multi-attribute utility models.

Also, examples of models and theories, such as game theory (Neumann & Morgenstern, 1947), the lens model (Brunswick 1952, 1956) the garbage can model (Cohen *et al.*, 1972), the bounded rationality model mentioned in the last paragraph, which are widely known and analyzed in scientific articles, deserve special mention. Undoubtedly, most of the models use a unique approach to assessing or understanding the decision-making process and has its own advantages and disadvantages, but their analysis will take a separate study, which is not the purpose of this work.

Generally, most models use mathematical methods to calculate the decision a person should make in a given situation. And in fact, scientists have made a lot of progress, because under certain conditions, some models predict human behavior quite accurately. Despite this, in reality, all the premises or axioms on which models are built are destroyed by the absolutely illogical behavior of people who constantly make mistakes and make decisions based on personal experience, emotions, the opinions of other people and many other psychological and physical factors that impossible to calculate. Based on this, it can be concluded that certain models can be used in practice and, under certain conditions, predict human behavior quite accurately, however, an ideal model that would work regardless of whether the conditions are met can not exist.

However, this study focuses primarily on describing the decision-making process that has a significant impact on the future of a start-up, for example, such decisions as changing the business model or entering the new markets. They are most often made consciously, analyzing various alternatives and factors, which allows the use of models. At the same time, for ease of use, complex

mathematical models can be changed into a simple schemes or set of actions, which are also called models, that entrepreneurs can use to make the most optimal decisions.

An example of such a scheme or model is the DECIDE model developed by Kristina Guo (2008) for effective decision making among health care managers. This is an acronym of a set of sequential steps from defining a problem to evaluating and monitoring the results of a decision, which serves to make high-quality decisions. This model originates from the studies of Tversky and Kahneman (1974, 1984), who made a great contribution to the development of the theory in terms of psychophysical factors of choice and wrote many works on this topic. The main advantage of this model is its ease of use, as well as the ability to apply it in all areas of management, despite the initial development in the health sector.

Based on this model, but with the addition of such a factor as risk management, the RM-DM model, which is an abbreviation for risk management and decision making, was developed by Crovini, Santoro and Ossola (2021). The study in which this model was presented was devoted to the analysis of risk management in small and medium-seized enterprises (SMEs) as part of the decision-making process. As a result of the study, a model was formulated that should contribute to more efficient decision-making in this type of company, taking into account risk management, Figure 1. (Crovini *et al.*, 2021)

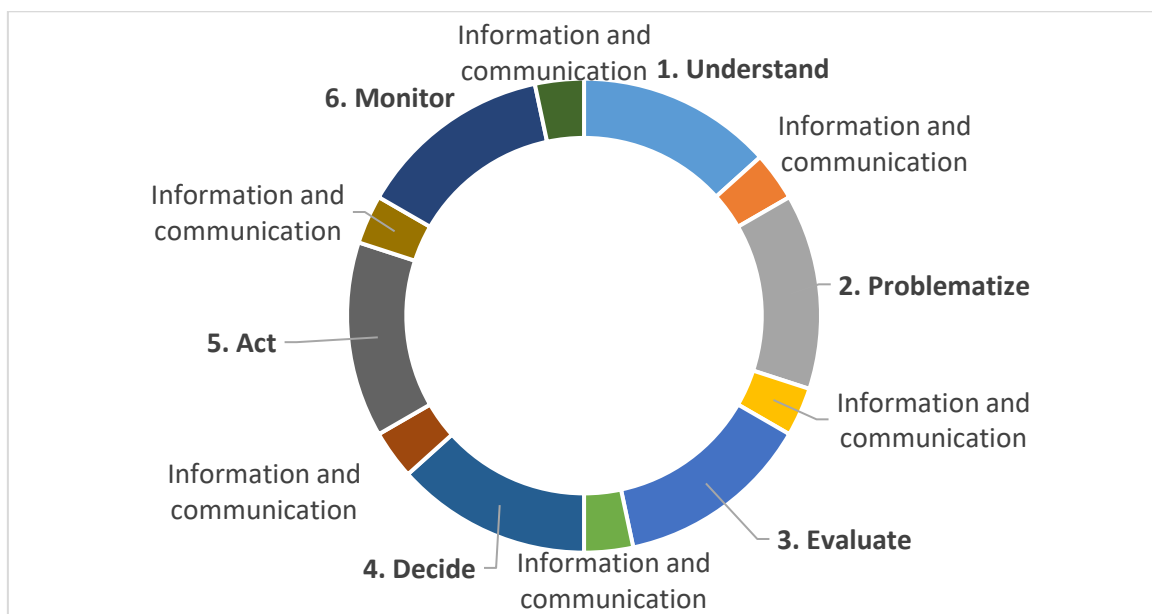


Figure 1. RM-DM model
Source: Crovini *et al.* (2021, p. 1,102)

This model is a combination of the committee of sponsoring organizations of the treadway commission (COSO) and international organization for standardization (ISO) risk management process frameworks, which aim to formalize risk management controls and reduce fraud among companies, and the DECIDE model, which is connected with effective decision-making among managers. The point is that in small companies, entrepreneurs do not need to spend large resources on organizing a formal risk control process, since they often perform this function on their own or with the involvement of several employees. However, some simplified principles from the COSO and ISO frameworks can also be used in small companies, for example, the assessment or understanding the internal and external environments before making a decision, which is the first step in the RM-DM model. This is also the main difference from the DECIDE model, which skips the environmental evaluation step and focuses on the selection of criteria for the formation and evaluation of alternatives. Also, in the RM-DM model, attention is focused on the constant exchange of information between company employees in order to form a common vision and understanding of the problem to be solved or the goal to be achieved. At the same time, both models draw attention to the importance of the last step in monitoring and evaluating the results of the decision, which contributes to further improvement of the decision-making process in the company. (*Ibid.*)

The main advantages of RM-DM model are its ease of understanding and use, relevance and novelty, a combined approach to understanding the process, the breadth of application, and practicality, since the study included communication with SMEs in the form of an interview. The main disadvantages can be considered the lack of mathematical tools for calculating the optimal choice, the limited factors taken into account, and the lack of evidence for the effective application of the model in practice.

The main reason for choosing this model is the fact that it was developed for SMEs that do not have a systematic approach to the decision-making process using protocols. In them, the human factor and the characteristics of the founder, who is often the main figure who takes responsibility for making key decisions, play a large role. This is very similar to the structure of a start-up team, in which the role of the founder and main inspirer of the idea can also be a determining factor in making important decisions. Therefore, building on the merits of this model as well as its focus on SMEs, which correlates with start-ups, it will be used as a basis for comparing decision-making process of IT start-up entrepreneurs in Belarus and Estonia.

2. RESEARCH METHODOLOGY AND DESIGN

This chapter describes the approach to conducting research, starting with its philosophy. The reader will be able to get acquainted with the chosen method for this study, methods for collecting and analyzing data, as well as with the arguments in favor of their choice. The description indicates both the advantages of the choice and its limitations. Also, based on the previously mentioned theory the chapter anonymously presents and describes the respondents who made up the size of the sample, describes the approach to sample selection.

2.1. Research philosophy

The philosophy of research can be understood as a general approach to conducting research and developing knowledge on a chosen topic (Scotland, 2012). In this study, interpretivism was selected as the philosophy approach, as the most optimal choice for solving the set goals of the study and answering research questions.

Interpretivism is opposed to positivism, because if in positivism reality is considered objective and single, then in interpretivism, on the contrary, reality is considered a social construct and can have multiple variations depending on the person (Irshaidat, 2019). The idea is that a person has a lot of unique features, for example, his experience, cultural background, family background, etc., which influence his perception of the world and make him unique and unrepeatable, so a person and especially his behavior, can not be explored as a physical object that is subject to a universal physical law. And the researcher in this case need to conduct, for example, in-depth interviews in order to understand the true motives of a person during a decision or action. Interpretivism moves away from generalization and averaging towards the study of unique differences, deviations and details that depend on many factors, and the results of the study are unique due to the time factor. (Alharahsheh & Pius, 2020, pp. 41-42)

Interpretivism is characterized by the use of qualitative methods of analysis, a small sample size, cross-sectional research, i.e. research at a specific point in time, and not for a certain period of

time, as well as the use of interviews as one of the main tools for research (Thanh & Thanh, 2015). The goal of research is most often to understand the phenomenon, and the key question is why.

This philosophical approach is fully suitable for conducting this study, since its object or phenomenon under study is the decision-making process. In small companies, which are most start-ups, decisions are made by specific people based on their experience and knowledge, unlike large companies, which most often have a structure and decision-making system. Accordingly, given the great influence of the human factor, in order to understand the decision-making process among entrepreneurs in start-ups, it is necessary to use qualitative analysis tools. In addition, this study includes a comparison of the phenomenon in different countries: Belarus and Estonia. This means that the research subjects (entrepreneurs) are culturally different, which is another argument for using interpretivism as the philosophy behind this study.

This philosophical approach is limited by the ability to generalize the data, as well as the tendency to lack the reliability and validity of the data obtained due to the high risk of bias (Williams, 2000). Therefore, further research using quantitative methods of analysis and other philosophical approaches would improve the quality of the results through the use of a pluralistic approach.

2.2. Research method

Based on the chosen philosophy – interpretivism, this study uses qualitative methods of analysis that allow the researcher to study the phenomenon in more detail and from different angles. Qualitative methods of analysis most often are based on a small sample size, focusing on specific individuals or events within a specific context, which is called the idiographic style of research (Gerring, 2017, p. 18). The use of this method allows to answer research questions, since in order to understand in detail the decision-making process of entrepreneurs from different countries, it is necessary to take into account the context or conditions in which decisions are made, as well as cultural differences that may influence the use of different approaches to the phenomenon under consideration.

More specifically, this master's thesis uses multiple case study approach with the elements of directed content analysis. The use of this method is due to all the same advantages given for the qualitative method of analysis, namely, an in-depth study of the phenomenon (Yin, 1994), which allows taking into account the context in which decisions are made, as well as the cultural

characteristics of the decision-makers. Also, similar studies have used this method to study decision-making processes or other aspects directly related to them (Crovini *et al.*, 2021; Yang & Gabrielsson, 2017; Niittymies, 2020; Ndemo & Maina, 2007). The study of five Belarusian and five Estonian IT start-ups also improves the reliability and quality of the data collected by using more sources of information than when analyzing only one or two companies.

This is especially true in the absence of the ability to use triangulation (Renz *et al.*, 2018) to increase the reliability of data and research results. The main reasons for not using triangulation are lack of time or opportunity. Ideally, it would be possible to use several independent researchers, conduct research several times at certain intervals, analyze archival records and observe how entrepreneurs make decisions at work. In reality, start-ups rarely have any archived documents, and even under conditions of confidentiality, entrepreneurs do not have wish to share their business plans with unknown student researchers. Observation is also impossible, since half of the respondents are in Belarus, and most IT start-up teams work flexible hours and remotely, which makes it difficult to observe. Conducting a longer study using, in addition to the main qualitative method, for example, a quantitative method of analysis that would confirm or refute the results of a qualitative study, or conducting the study several times, requires more time. In connection with these real conditions for the study, the choice of this method is relevant and improves the quality of the analysis.

At the same time, this study partially uses directed content analysis. Its meaning lies in the fact that the researcher takes an existing theoretical concept or model as a basis and, through research, tests it in practice, thereby seeking to expand the theory (Assarroudi *et al.*, 2018). The RM-DM model was taken as the basis for compiling and conducting interviews in this study, which allows the researcher to establish initial coding schemes (Hsieh & Shannon, 2005) associated with decision steps, which are supplemented by other codings related to the environment and the ecosystem of start-ups. At the same time, the goal is primarily to test the model in practice and for a specific group - IT start-ups, and not to expand the theory at the conceptual level. The data collection and analysis process will be described in more detail in the following paragraphs.

In general, the chain of the research approach used from the general to the particular is as follows: interpretivism, induction, qualitative method, multiple case study with the elements of directed content analysis, cross-sectional (in terms of time of the research), semi-structured interviews.

2.3. Sampling and sample size

Based on the logic and approach to the study, an appropriate approach to sample selection was chosen - purposive sampling. Its essence lies in the deliberate selection of respondents who will have the necessary knowledge to achieve the objectives of the study (Etikan *et al.*, 2016, p. 2). This approach is associated with a small sample size and focus on the study of the details of the phenomenon rather than its vastness, which allows efficient research in resource-limited conditions, which is a great advantage in student research papers (Palinkas *et al.*, 2015; Campbell *et al.*, 2020). In this paper, the respondents with special knowledge are the founders of IT start-ups, as well as those responsible for making key decisions, who can be product managers, co-founders, etc.

Using this approach, five Belarusian founders and five Estonian founders were selected, for a total of 10 respondents. This number was sufficient to achieve saturation, i.e. situation when respondents begin to repeat themselves and new ideas, thoughts and insights are not found (Saunders *et al.*, 2018). In addition, the choice of quantity was based on other studies using a similar method (Daramola, 2022). In order to preserve anonymity, each start-up will be called the first letter of the country and a serial number, for example, B1 - Belarus 1. Thanks to the classifications of start-ups considered in the theoretical part of the work, the selected sample can be described as follows, table 2.

Table 2. Belarusian sample description

Name	Idea	Type	Sector	Stage	Business model	Investment sources
B1	digital graveyard	digital	consumer products and services	product-market fit	B2C	bootstrapping
B2	discussion club	digital	communication	MVP	B2C	business angels
B3	company calls analytics	digital	business software & HR	scaling (10 years on the market)	B2B	bootstrapping (previous businesses)
B4	English speaking club	digital	edtech	product-market fit	B2C	bootstrapping
B5	automated reports for laboratories	digital	business software & HR	MVP	B2B	bootstrapping

Source: By the author

Table 1 shows that all Belarusian start-ups are digital, as their products and business models are completely related to the development of mobile applications or websites. Also, the tendency can be found that entrepreneurs prefer to use their own resources to develop a product, which can become the basis for hypotheses about distrust of state institutions that provide grants, distrust of banks that issue loans, the transfer of the start-up ecosystem abroad after the protests in 2020 and, accordingly, the lack of investment potential within the Republic of Belarus. Also, it should be noted that start-ups B2 and B5 are at the MVP stage and have not yet been registered in the Republic of Belarus, however, for this study, the key sampling factor is expert knowledge of the conditions of work in the market of Belarus or Estonia, and not the official registration of a start-up in the country or the nationality of the team members. At the same time, all Belarusian start-ups consisted of Belarusians.

The Estonian start-ups that participated in this study are described in Table 3.

Table 3. Estonian sample description

Name	Idea	Type	Sector	Stage	Business model	Investment sources
E1	blockchain data solutions	digital	fintech	scaling	B2B	bootstrapping, private companies
E2	cryptocurrency services	digital	fintech	scaling	B2B2C	bootstrapping
E3	backup storage and archive	digital	business software & HR	product-market fit	B2B	bootstrapping (previous businesses)
E4	work organization assistance	digital	business software & HR	product-market fit	B2B	bootstrapping, private companies
E5	data storage solution	digital	communication	scaling	B2B	bootstrapping, 3F, business angels, private companies

Source: By the author

All Estonian start-ups are also digital, the teams are predominantly Estonian, while start-ups have a more diverse structure of investment sources. All start-ups have already had real sales and, accordingly, product refinement based on customer feedback. Therefore, the value of real decision-making experience is higher than during the development stage, which improves the quality of the study.

2.4. Data collection

The process of collecting information can be divided into two stages that occurred simultaneously. The first stage was the search for respondents, which took place using websites of start-up incubators, communities, the organizer of start-up events, websites with lists and data about start-ups, as well as through acquaintances and the professional social network LinkedIn. Also, already interviewed respondents were asked to advise a potential respondent suitable for the requirements of the study. The second stage was the conduct of the interview, which took place in parallel with the first stage, in order not to waste time for the study. The interviews were conducted online using the Microsoft Teams application, as half of the respondents are abroad. Also, the choice of online interviewing is justified by the fact that interviews were taken from the founders of IT start-ups, who, by their profession, are very busy people and often work flexible hours and remotely, therefore, Zoom or Microsoft Teams conferences are a more convenient and familiar format for them. The choice of the application is also due to the fact that, simultaneously with the recording of the meeting, it has a transcription function, that is, automatic decoding of the text in the selected language, which greatly facilitates the work of the researcher. For the convenience of the respondents, the interviews were conducted in two languages, Russian and English, since they are citizens of different countries and Belarusians can more accurately and deeply express their thoughts in Russian.

Respondents were twice acquainted with the rules and format of the study, including the privacy policy and the ethical side of the study. The first time during the distribution of the written invitation to the interview, and the second time at the beginning of the interview. Respondents were guaranteed an anonymous reference to their speech and company data. This is a necessary requirement not only according to the rules of the study, but also for the safety of the Belarusian respondents, given the political situation in the country.

The interview technique was chosen as semi-structured. This technique is based on the fact that the interviewer may deviate from the original order of questions for the interview, and may also ask additional questions that were not originally included in the interview structure (Magaldi & Berler, 2020). This allows the conversation to flow more smoothly, logically, and naturally, making the interview more comfortable for the respondent. This leads to a greater chance of revealing the interviewee and getting useful insights from them, as well as getting unexpected or unplanned insights that would not be possible with a rigid interview structure (Adeoye-Olatunde & Olenik,

2021). In addition, the researcher has real experience in preparing, conducting and analyzing this type of interview during an internship at a Belarusian company engaged in design thinking. Upon completion of the internship, the researcher received a certificate from the company on initial competence in this type of research.

The structure of the interview consisted of three main blocks: background information, start-up environment and ecosystem, decision-making process. The basic structure of the interview consisted of 25 questions (Appendix 1), which was diluted with additional questions. Also, some questions were interchanged or skipped, which corresponds to the chosen technique. A total of 10 interviews were conducted, the average duration of which was about 40 minutes.

2.4. Data analysis

The previously mentioned analysis technique, directed content analysis, was used to analyze the collected data. It was mentioned in the point about methodology, as it was used twice: first, in order to compile a list of questions for an interview, i.e. before conducting the interviews themselves, and then to analyze the data after the interview. Also, as mentioned earlier, this technique is not used in its pure form, since codes based on the RM-DM model are supplemented with other codes related to the start-up environment and ecosystem. In total, as a result of the analysis, 13 codes were identified, united in 2 general themes (Appendix 2).

Considering the more technical side of the process, it can be described as follows. Through the automatic transcription of the Microsoft Teams application, 338 pages of material were collected for analysis (Appendix 3). Also, during the interview, for deeper understanding, immersion in the topic and memorization of key points, the researcher wrote down key phrases and words in a notebook. Further, after numerous re-reading of records and transcription, certain patterns were identified that are found in various respondents. These patterns are found by key phrases or words and were highlighted in the text in a certain color. They allow the formation of codes, which are further combined into more general themes.

This movement from the particular to the general is an inductive approach, and the next chapter on results uses an inductive reasoning (Hayes & Heit, 2017) that suggests that other start-up

entrepreneurs in the IT field act in a similar way, i.e. it allows extrapolating the experience of the respondents to other entrepreneurs.

The main advantage of this approach is its ease of use, since to identify logical patterns in the text and the reactions of respondents does not require certain scientific knowledge, except for the correct interview technique to avoid bias. In addition, this approach is relevant and suitable for this study, since the decision-making process in small companies is related to the human factor and is based on personal experience and specific context and details, patterns from which it is convenient to highlight with the chosen method.

At the same time, the main limitation is the subjectivity of the researcher's perception, which reveals patterns. This slightly reduces the reliability of the conclusions, which can be prevented by, for example, involving independent researchers or verifying the results obtained by quantitative methods of analysis, which requires the involvement of additional resources.

3. FINDINGS

3.1. Ecosystem and environment perception

The decision-making process always takes place in a certain context, that is why the first part of the research results is devoted to the perception of entrepreneurs of the external, internal environments of the company, as well as the start-up ecosystem in the country. It is important to understand that statistics and trends can be very different from the perception of specific individuals, therefore the results of the first part cannot be taken as actual market data, but they can speak of certain trends occurring in them.

The perception of the external environment by Belarusian entrepreneurs can be generally called negative or extremely negative. Entrepreneurs name a lot of negative factors and a small number of positive ones, describing it.

One of the first negative factors, which was named by all respondents, is related to the political environment in Belarus and, in fact, is the main cause of other negative factors. The first respondent reports “I got a little bit under the ice rink this year too and lost a lot of money. And I even had to close one business. That's why I moved because it's physically not safe for me to be here, because I'm in red, black, in all the lists that exist.” (B1) This suggests that it is simply physically unsafe for some entrepreneurs to be in the country, especially if he or she knows that they have been exposed and included in “black” lists. Such people can expect searches in the apartment and in the homes of relatives, fines or arrest every day. For example, respondent B2 is also in the “black” list in Belarus, that is why she also works abroad.

The next negative factor is the lack of trust in state institutions, which affects the lack of assistance, for example, project financing from the state. Companies refuse to take part in government tenders and grants, as they will then be under the scrutiny of officials and security forces. One of the most important state institutions, which is also not trusted, is the court. Entrepreneurs understand very clearly that state bodies constantly violate the legislation of the Republic of Belarus, therefore they

do not have legal security in the country and, in this regard, lay the corresponding risks. One of the respondent states “Oh, there is no real power in terms of legal protection, so yes, you can create solutions, but you can also lose them very quickly, so it's like flying right into the center of a storm and the wind.” (B5) At the same time, this respondent states that, of course, any business in any country will have its own risks, but the key point is that if, for example, in Poland one can approximately predict one's own risks, then in Belarus it is impossible to predict them. Accordingly, the inability to predict your own risks, since anything can happen to your business, can be called one of the most important motives for the relocation of entrepreneurs.

Respondents also note a general deterioration in the economic situation in the country, which, according to B1, is “heavily dependent on sanctions and is still afloat only because of the credit needle from Moscow.” The sanctions also limit the ability to receive grants and bonuses for IT products. “Amazon gives start-ups grants up to \$100,000 for servers. In Belarus, it is impossible to create an Amazon account, and accordingly, it is impossible to get a grant. To do this, you need to look for some strange workarounds, which in the future may again interfere with business.” (B4)

Another major negative factor is the reputation of Belarus among Western countries. “You cannot say that you are Belarusian.” (B3) Despite the fact that on a human level, many Western partners from the EU or the US understand the situation perfectly, they do not want to get involved with start-ups that have not moved abroad and stayed in Belarus. This, in turn, makes it very difficult to find and attract investments, enter Western markets, search for potential partners, etc. And this is also one of the key reasons for the relocation of IT start-ups, which are aimed at finding investments and scaling the business.

At the same time, respondents identify two positive factors - favorable taxation and cheap labor. Belarus still maintains low tax rates for the IT sector relative to other sectors and other countries. However, the taxation system is unstable and may change despite the legislation. “Instability, that's what I'm talking about. You tune in to one taxation system, and you don't know what will happen tomorrow.” (B1) “The legislation says that 9% if I'm not mistaken until 2029 everything is fixed and cannot be changed, but it does change.” (B3) As far as cheap labor is concerned, it happened due to the deteriorating economic situation in the country, as well as the departure of a large number of expensive specialists abroad after 2020.

Thereby, Belarusian entrepreneurs face such difficulties as transferring funds, team division into those who left and those who stayed, finding partners and investments in the EU and the USA, obtaining grants, access to bonuses from private companies, increased and unpredictable risks, physical presence in the country (in some cases), etc. As a result, there is a tendency for high independence of Belarusian start-ups that are trying to make an MVP at their own expense (bootstrapping), “just don't touch us, we'll figure it out ourselves“ (B1), as well as a tendency to move and register start-ups in Poland, Lithuania and other countries. These trends can be verified in additional studies using quantitative methods of analysis.

Regarding the internal environment of a start-up, entrepreneurs identify various factors that contribute to the success of the project: a common vision of the goal and attitude towards the idea, clear communication and trust, a business-oriented founder and a technical specialist who, in case of an unforeseen situation, can single-handedly support the project etc. As far as the start-up ecosystem in Belarus is concerned, all respondents unequivocally state that the most famous and largest private organizations associated with venture business and start-ups, for example, Imaguru, Zubr, U-hub, business angels band, etc. left Belarus mainly for Lithuania and Poland. As a result, the number of lectures, seminars, educational programs, trainings, competitions and other start-up related events has decreased significantly. The so-called start-up community is operating abroad and trying to support each other remotely.

As for the perception of the external environment by entrepreneurs with Estonian start-ups, it can be generally characterized as positive. An interesting insight is that entrepreneurs practically do not talk about the economic, political, cultural, social and other factors of the country, regardless of the start-up markets (global or local). The first thing respondents mention is the convenience and ease of doing business. “You can open a company in 15 minutes.” (E4) “Absolutely transparent and convenient taxation, and bookkeeping is very simple.” (E3) Also, respondent E2 from a start-up in which a co-founder is from Portugal and received e-residency notes that it is very easy to run a business and it can be done remotely. After receiving the e-residence, an entrepreneur can remotely open a company, sign documents with a digital signature, submit reports, etc., but the only need to visit Estonia is for opening a bank account. Respondent E4 also highlights the fact that people in Estonia are open to innovation, which makes it possible to constantly test new ideas. However, this also has a negative side, since there are a lot of start-up founders in the country and it is difficult to surprise them in order to attract investments, therefore start-ups sometimes have to look for riskier, more extreme innovations that are more likely to fail. Respondent E5 notes that

the popularity and reputation of Estonia as a country with a developed IT and start-up environment also has a contribution, as it is easier to find partners, clients and investments abroad.

The only serious negative factor of the external environment is connected with the war in Ukraine. Estonian entrepreneurs with Russian passports are afraid of additional risks, there are difficulties with payments, hiring employees and purchasing components, some partners refuse to cooperate with the company, since the servers with customer data are located in Estonia, which is close to Russia etc. “We cannot hire employees from this region, and also we cannot buy hardware in Russia or even transport the product through this territory, and also we have lost potential customers.” (E3) It should also be noted that two out of five respondents have start-ups related to cryptocurrency and blockchain technologies. For them, the main external factor is the global cryptocurrency market, as well as, to a lesser extent, legislation regarding the regulation of cryptocurrencies. They note that despite the increasing control by the state, this is still a poorly regulated area, and the main drawback in Estonia is the lack of highly qualified specialists in this field.

In the internal environment of the company, entrepreneurs in Estonia are more unequivocal than in Belarus, as all respondents spoke primarily about clear and honest communication in the team, which is the key to the success of a start-up. But most of the praise goes to the start-up ecosystem in Estonia. “Having IT start-up in Estonia is just a heavenly cloud, as the support is unreal.” (E3) “Startup Estonia, their website and services are very user friendly. I also constantly contact Enterprise Estonia.” (E3) Entrepreneurs appreciate the high state support, developed and convenient infrastructure, active participation of private organizations, many different conferences, trainings, seminars, etc., as well as an open and close-knit community where you can ask each other a question or discuss some idea. “We have like different groups, for example, in Slack and also in Facebook where we have direct access to the different founders and where we communicate with each other. And founders also facilitate different events like evening drinks or dinner.” (E5)

Respondent E4 highlights the special role of training in start-up incubators. “We passed through two programs, one being Prototron and the other one start-up incubator by Technopol. And I don't think we would have gotten this far without those programs. We got a lot of knowledge from there.” (E4) The respondent emphasizes that there are many different programs where a team can get, if not investments, then a lot of knowledge and experience from specialists and other founders,

from whom it can always get free advice. The only drawback in the ecosystem is the low potential volume of attracted investments in the domestic market, which is also a disadvantage in the start-up ecosystem of Belarus.

Summing up the perception of the conditions in which entrepreneurs have to make decisions, which affects the type of decisions made, the following table can be created, table 4.

Table 4. Perception of start-up environment and ecosystem

	Belarussian start-ups	Estonian start-ups
External environment	<ul style="list-style-type: none"> - not safe if you are against the regime - no trust in government institutions - no protection by law - declining economic situation - less number of specialists - unpredictable risks - negative reputation of the country - sanctions - problems with payments, western partners and investments - cheap labor - low taxes 	<ul style="list-style-type: none"> - ease and convenience of doing business - positive reputation of the country - low taxes - developed infrastructure - safety of doing business - war in Ukraine and geographical proximity with Russia - lack of specialists in the field of cryptocurrency - open to innovation society
Internal environment	<ul style="list-style-type: none"> - clear communication - business-oriented founder - developer who can solely handle the project - common values and idea 	<ul style="list-style-type: none"> - clear and honest communication
Ecosystem	<ul style="list-style-type: none"> - mass emigration of community - distrust of organizations who remained in the country - more knowledge than investments - open and friendly community where people support each other remotely 	<ul style="list-style-type: none"> - highly supportive community - huge government support - an active private sector represented by incubators, accelerators, investors, etc. - a large number of educational, investment, business events, trainings, etc. - a large number of founders - more knowledge than investments

Source: By the author

As can be seen from the table, both countries have their advantages and disadvantages and in general, the start-up ecosystems of Belarus and Estonia have many similarities, however, a key break occurred due to political events and the war in Ukraine, which led to the movement of countries in different directions. This data on entrepreneurs' perceptions of the environment and the ecosystem can be very useful for government institutions, which, based on this data, can

correlate statistics with real perceptions and understand what can be improved. Also, this data can be useful for new entrepreneurs who are going to open their own start-up, as it is easier to make better decisions based on the experience of others. Finally, for existing entrepreneurs, this information can be useful for better risk analysis in decision-making.

3.2. Decision-making process

If the previous paragraph affects what decisions are made by entrepreneurs, then this paragraph answers the question of how this happens.

Before describing the decision-making process, the question of responsibility for making a decision is raised. Basically, both in Belarusian and Estonian start-ups, global decisions are made with the participation of all team members. As far as important decisions are concerned, for example, changing product features, then these decisions are made either by the founder based on advice from the product manager and other opinions (including from outside the start-up), or by two to four people, which include all the founders, chief operating officer (COO) and product manager. In none of the start-ups, decisions are made individually, without discussion with other team members. “It was never a one-person decision because otherwise it would have been difficult to continue as a team.” (E4) “On some issues, the decision-making process takes place with a preponderance to the side of the person who has more competence in this. In other issues, there is a direct lively discussion in order to understand that perhaps someone is mistaken and it is necessary to discuss any task, any problem as much as possible in order not to miss important details.” (B5)

At the same time, the majority of respondents emphasize the need for delegation of responsibility, that is, to allow team members to make decisions on smaller issues in their specialty on their own, without wasting time on a general discussion. This shows the team's trust and respect for the decision maker, and also allows team to save time for discussion, which can drag on for several weeks, which is a long time in a start-up environment. The team member will also feel more valued as a team member and will be more motivated to work harder and make high-quality decisions. Unfortunately, the majority of respondents see this as their weakness, which needs to be worked on, and not as an already existing implemented practice.

In addition, respondents talk about the great importance of a common understanding of what is happening. “It is important that everyone in the team at the informational level has the same information. Everyone understood what was happening at the moment. If suddenly by the end of the week there are some omissions, no matter how hard it is, you should come and say that some moments bother you. We need to talk as openly as possible.” (B5) Accordingly, it can be concluded that it is necessary to hold, for example, weekly meetings and discuss all the worrying moments in order to be on the same information level and go towards the same goal with one understanding of the process. Start-ups that do not regularly hold such meetings face certain difficulties. “Often the decision is made during breaks, because between work cases it is very difficult to find a moment when all three of us have a minute to make a decision, but I would like not a minute, but like an hour. Therefore, the decision is made on the go and often there is no brainstorming and time to think about it carefully. I would like to have some systematic meetings at the same time a couple of days a week when we sit down and make a decision.” (E3)

As far as the process of making an important decision is concerned, then it begins with research and collection of the necessary information, as indicated in the RM-DM model. Many respondents call this step the key step in the whole process, since without it, it is difficult to make a high-quality effective decision. “Everything should be data driven.” (B2) “The most important is the research in relation to making the best decision in the interest of the company and the team.” (E2) At the same time, the three main sources of information for the research step are: specialized websites in the required field, news and opinions from familiar experts, feedback from a narrow circle of users who have access to the product during the MVP stage and customers’ feedback at the next stages of development. Also in this step, respondents note the importance of time constraints. “Everyone would like to make the most effective decision at any given time, but very often, this is not possible. Therefore, you should try to concentrate on time. How much time do I need to collect and analyze some data in order to make a decision. That is, you shouldn’t try to find all the data in the world.” (B3) In general, respondents say that to make an important decision, it is necessary to spend no more than one to two weeks on research. In the case of E4, their start-up team, after a year of working with the finished product, decided to completely change the concept, product, business model, target audience, etc. and to make such a global decision, it took them one month to conduct the research. Also, it should be noted that in addition to conducting research for a specific task or problem, the product manager and founders of a start-up are most often in a constant process of research, i.e. they constantly monitor the situation on the market, new features

and updates from competitors, user feedback, etc., in order to respond to the situation in time and make the right decision.

The next step in the decision-making process is a discussion that combines steps three and four in the RM-DM model (evaluate and decide), and step two to identify the problem (problematize) occurs before or after the research step. The team member who conducted the research presents the analysis to his colleagues, most often key people in the company who make important decisions: the founders and co-founders, the product manager and the COO. The discussion can take place both remotely using Zoom or other applications, or face-to-face in the office. The discussion takes place on the basis of arguments in favor of one of the solutions, taking into account the competencies and experience of team members in their areas. Therefore, if the decision concerns the technical sphere, then the opinion of the product manager will have a greater influence.

However, in the course of the discussion, disputes also arise. “They absolutely always have different opinions, they constantly swear, but this is useful. When one convinces the other with arguments, his decision is made.” (E3) All respondents state that all important decisions in a team should be based on consensus. In case of protracted disputes, one or more additional rounds of negotiations are held, for each of which additional research is carried out to collect maximum information for arguments. However, in none of the start-ups in the case of heavy disputes, decisions were made on the basis of nominal power in the form of quantity of shares. “It doesn't make sense to have that kind of ego show that it is my power.” (E5) Respondents argue that if one side of the dispute remains unhappy, then the team will not last long, therefore it is necessary to always maintain open and honest communication and discuss all issues of concern, even if this requires additional time. Also, in the event of a dispute, it is desirable to have an independent third party that can tilt the decision in favor of one of the opponents. ”They are lucky that there is a third person, me, because I am inclined to one of the opinions.” (E3) At the same time, the participants in the dispute should make sure that there are no dissatisfied members so as not to worsen the atmosphere within the team.

Respondent B5 shared his insight on this topic. “We sit down and calmly discuss current problems. We understand that we initially have the same values. I'd rather live two years happily developing a product. And even if we do nothing, we will have a very good relationship, and we really enjoyed it for two years. I am sure that we will more likely earn money with this approach, but if not, well,

we will come up with a new idea.” (B5) In this philosophy, the founders prioritize relationships and enjoyment of the process, rather than profits and speed, and it would be interesting to conduct a quantitative study of how much this approach affects the lifespan of a start-up.

The next step in the decision-making process is setting deadlines for completing the task and delegating responsibility. To successfully complete the task, each team member should know what he or she should do and for what period. This step is not included in the RM-DM model, however, in the case of IT start-ups, this step is essential, so it can be singled out separately. And the final step is the execution of the task, after which the results of the work can be discussed (step six in the RM-DM model), however, monitoring the results of the decision is not of great importance and it is not mandatory, since at the meeting most likely new tasks will be discussed. Therefore, it can be said that one cycle of the decision-making process ends here, and then everything starts all over again with the research or discover step.

It is important to note that the step of discovering an idea, problem or task can be either in the first place before the research or in the second place after it, as it depends on the specific situation. In one case, an entrepreneur can conduct research, see a new feature from competitors and set the task to do the same, and in the other, he or she can have an idea about entering a new market, and then start the process of research and data collection.

Considering all the above information, the model of the decision-making process for IT start-ups is as follows, Figure 2.

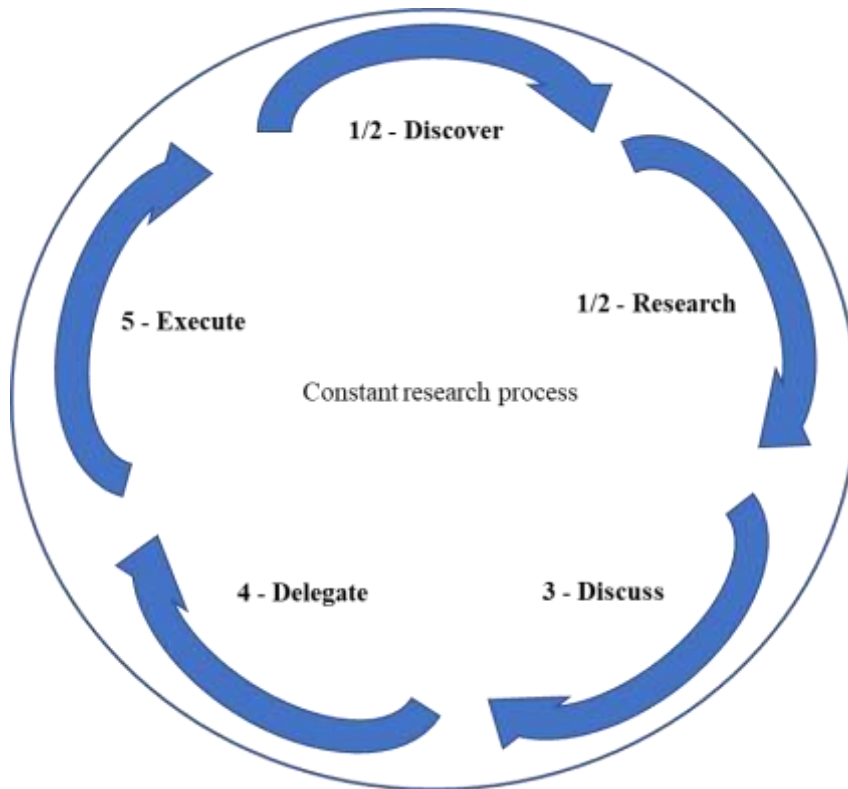


Figure 2. IT start-up DM model
Source: By the author

It turned out that cultural characteristics do not affect the decision-making process of entrepreneurs in IT start-ups in Belarus and Estonia, since the processes are essentially the same. There may be slight differences from start-up to start-up, such as holding weekly meetings, putting tasks on paper after meetings, the number of opinions taken into account, etc., but the global sequence of actions remains the same. Based on this, it can be assumed that either Belarusians and Estonians have similar cultural values, or the IT industry dictates its own rules and, in striving for the efficient operation of a start-up, all teams come to similar conclusions and try to create certain conditions for work.

This model shows the decision-making process in general, therefore, it can be applied to both start-ups and SMEs. Based on the experience of the reviewed companies and this model, existing and future entrepreneurs will be able to analyze the decision-making process in their team and improve it through a deeper understanding and use of best practices.

This model is suitable for all key decisions in general, however, it can also be detailed for technical tasks, such as important changes in product features, Figure 3.

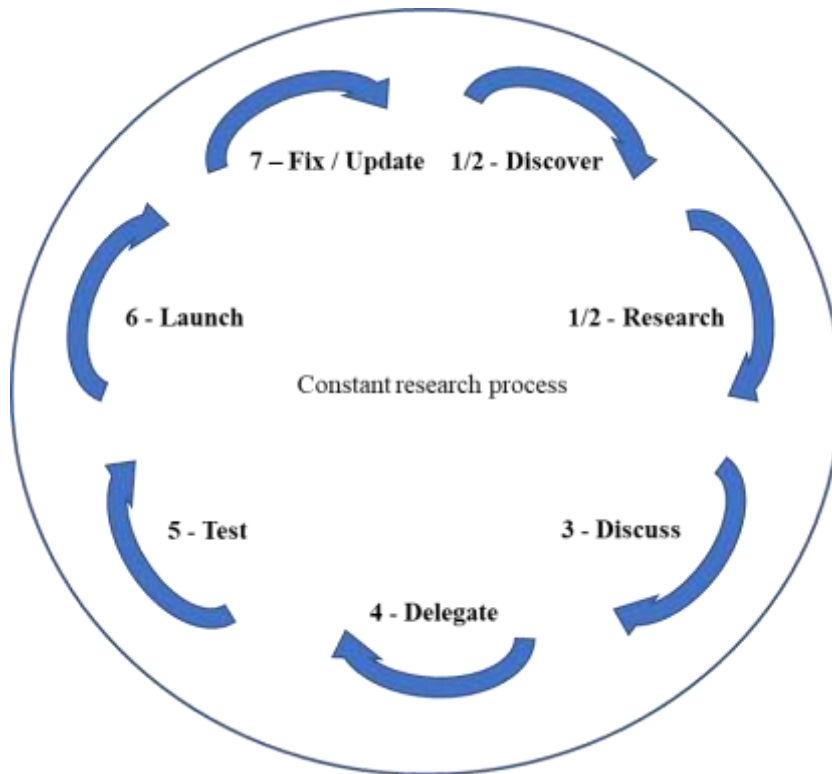


Figure 3. IT start-up DM model for technical tasks
Source: By the author

Technical tasks require more steps in the decision-making process, but are also limited in time. That is why respondents with a deep knowledge of the technical part (B2, B4, E1) argue that in order to test an idea in practice, it is better to use simpler technologies and not think about design, as this will quickly determine whether this feature is needed by the consumer. If the feature really turned out to be necessary, then developers can spend time on its refinement and design.

According to all respondents, the most important steps in the decision-making process are research and discussion, as the first helps to understand what the market wants, and the second - to come to a common understanding within the team and distribute tasks. The most insignificant ones are documenting the results of meetings on paper, a protracted choice of technology on which the feature will be based, a long discussion of design and other small details, and discussion of minor specialized issues (shows a lack of trust).

Delegation of responsibility and the ability to independently make decisions on small specialized issues is an important aspect that some start-ups miss. Using this aspect can lead to more effective and faster decision making by increasing the team member's sense of value and contribution to the

project. In particular, this advantage is enhanced in comparison with large companies. Respondent E5 has worked in large companies such as IBM and Telia, and is currently working in a start-up. He argues that in large companies, to make a decision, it is necessary to obtain confirmation from three to four departments, as well as all the managers, which can drag out the process for months. Obviously, a start-up is much faster and more flexible in this regard, and even though more mistakes are made in a start-up, they can also be corrected faster. Therefore, in order to use this advantage to the maximum, start-ups need to identify issues for which a team member can make a decision on his own and bear responsibility for it.

In addition, respondents answered the question about what step they would like to automate using both current technologies and technologies of the future. The answer was: recording and distributing the results of meetings, collecting data for the research, collecting anonymous opinions of team members about the problem or goal, and analytics of the collected data, however, in this case, the results of the research will depend on the mathematical model for analysis, which is embedded in artificial intelligence, therefore, the results might be irrelevant.

Summing up this paragraph, based on the experience of IT start-up entrepreneurs and the insights obtained, a number of recommendations can be derived for more efficient and high-quality decision-making:

1. Research.

In addition to research for specific tasks, a start-up should have an ongoing research process that will help an entrepreneur notice a new market trend or a new improvement in a competitor's product in time, which will allow a team to remain competitive and not go bankrupt. Research for a specific task should have a deadline that should not exceed 1-2 weeks, since there is no need to try to collect all existing data. In the case of a complete change in the concept, product, business model, etc., the research may take longer period of time. Research is essential for data-driven decision making which is considered more effective than intuition-based.

2. Communication.

The team needs to maintain open, honest and clear communication so that all team members have the same understanding of what is happening and there is no serious dissatisfaction with any decisions. In this regard, regular, for example, weekly meetings should be held, at which all issues of concern would be discussed. If disputes arise during the discussion, team members should argue their positions based on data analysis and, in some cases, conduct additional rounds with preliminary preparation, and then jointly choose the best option.

3. Responsibility

As mentioned earlier, the team should identify areas where members can make decisions on their own, without the approval of all other team members. This will speed up the decision-making process, and also likely increase its effectiveness due to a greater sense of the value and contribution of each team member.

4. Idea testing

In order to test the viability of an idea, a team should use simple technologies and design, and after successful testing, refine and improve it to the required level.

5. Team members

To increase the chances of a startup's survival, the team should have a business-oriented, experienced CEO and a professional developer who can single-handedly maintain the product in a critical situation. It is also desirable to choose team members with similar values before the start-up is founded, so that there are fewer communication problems during work.

6. Time management

The team should set clear deadlines for the research, discussion, and execution steps to accelerate the development of the start-up.

7. Networking and education

Using and adopting the experience of experts can greatly affect the survival of a start-up. Instead of making mistakes that other people have already made, it is better to pay for their time and avoid the critical situations that may arise. Therefore, passing through start-up incubators, participation in events, competitions, educational programs, etc., as well as constant communication with experts will dispel false ideas about the path to success and allow to get a lot of new information and insights that can greatly affect the results of a start-up.

CONCLUSION

This research was devoted to comparing the decision-making processes of IT start-up entrepreneurs from Belarus and Estonia, as well as to the study of their perception of the environment. The analysis was based on important decisions that need to be made quickly in the current realities, for example, entering new markets, changing the business model, changing the main features of the product, etc.

The perception of a country's environment and start-up ecosystem influences the decisions entrepreneurs make. It turned out that the political situation that developed in Belarus after 2020 and intensified by the war in Ukraine greatly influenced the number of decisions to relocate by Belarusian IT start-ups and the start-up community as a whole. Estonia, in turn, is perceived as an easy-to-do business country with a developed IT infrastructure and a developed start-up ecosystem, which affects the country's reputation and the growth of its economy due to successful start-ups. In Estonia, the special role of the state in the development of the start-up ecosystem is emphasized, while in Belarus the private sector plays a key role, which, despite all the difficulties, works against the regime for the good of the country. The results obtained are useful primarily for government agencies that are responsible for the development of this area and the economy as a whole, so they can get a feedback or assessment of their work, analyze it, draw appropriate conclusions and continue development taking into account the information received.

Further research in this area can be devoted to the analysis of the economic losses that Belarus has suffered in the form of an outflow of human capital, a decrease in GDP, taxes, budget, exports to the EU and the USA, foreign direct investment, as well as potential profits. Regarding Estonia, one can further explore under what worst-case economic conditions, assessing such macro indicators as GDP growth, GDP per capita, inflation rate, etc., IT entrepreneurs will still rate the country as favorable for doing business. Because despite the high inflation rate in Estonia in 2022, none of the entrepreneurs mentioned this as a negative factor during the survey.

The study of the decision-making process answers the question of how this happens. As a result of the research, it turned out that the decision-making processes of Belarusian and Estonian IT start-up entrepreneurs differ only in small details, but globally the sequence of steps is the same. Based on these results, it is possible to deduce a hypothesis about the similar cultural values of the two countries or globalization trends in the IT industry, which influence the fact that teams strive to create the most favorable conditions for the development of a start-up and come to the same practices. As a result of the work, a decision-making model for IT start-ups was derived with an additional model for technical tasks.

The model is suitable for both start-ups and SMEs, in which the number of employees does not greatly exceed the number of employees in a start-up. This model can be used by both current and future entrepreneurs to analyze and build the most effective decision-making process. In addition, the study identified the most important and least important steps in the decision-making process and steps that entrepreneurs would like to automate. As a result of the information and insights received, based on the experience of entrepreneurs, seven recommendations were derived for building an effective decision-making process and successful start-up growth, which complements the model with practical knowledge and experience.

Further research can test whether this model works on a large scale and in different countries, which can be done using quantitative research methods. Also, using them, the practical effectiveness of the advice received as a result of this research can be tested.

As a result of the research, all the goals set were achieved, and the answers to the research questions were received. The main limitations of the results are related to the choice of research method and are described in the second chapter.

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APPENDICES

Appendix 1. Interview structure

Background information (if not available on the Internet):

1. Please, describe what your start-up does? What is your product or service? What is your business model?
2. How much time does your start-up exist? (from official registration) How much time does your product/service exist on the market?
3. What are your sources of investments? How much investments have you already attracted?
4. What is your occupation in the team?
5. How much time do you work in this start-up?

Block 1. Environment and ecosystem

1. Could you, please, describe external environment of your start-up (macro + task)? (if necessary, mention that it includes PESTEL + all agents in your sphere of business)
2. What factors hinder the development of your start-up the most? Why?
3. What factors contribute to the development of your start-up the most? Why?
4. Could you, please, describe internal environment of your start-up (if necessary, mention that it includes companies' culture, structure, resources)
5. What factors hinder the development of your startup the most? Why?
6. What factors contribute to the development of your startup the most? Why?
7. Could you, please, describe start-up ecosystem in which you are working? (if necessary, mention that it includes incubators, educational institutions, governmental institutions, infrastructure, policy, business network, supporting associations and other supporting organizations and individuals)
8. What are its main strengths? Why?
9. What are its main weaknesses? Why?

Block 2. Decision-making process (based on RM-DM model)

1. Who is responsible for decision making in your start-up? (you, a few people, all team?)

Appendix 1 continued

2. Please, describe decision making process step by step (your or all people who are involved) as detailed as possible regarding significant decisions like changes in your product/service, changes in your business model etc.
3. Why do you make decisions in that way?
4. What are the main strengths of making decision in that way?
5. What would you change in your decision making process? Why?
6. (If he/she missed a step from RM-DM model) Why don't you (for example) do a risk analysis before making a decision? (Why do you miss this step?)
7. What do you think is the most important part of decision-making process? Why?
8. What do you think is the least important part of decision-making process? Why?
9. What is the most optimal balance between speed and quality of making decisions? What is the reality? (How it happens in practice?)
10. What steps in the decision-making process would you like to automate with AI?
11. Please, describe your ideal decision-making process.

Additional questions during the main story (Block 2, question 2)

1. What tools do you use to gather, analyse the data for making a decision?
2. How do you monitor results of the decisions, what tools do you use?

Appendix 2. Coding for directed content analysis

Code	General themes	Description
External environment	start-up ecosystem and environment	the codes allow to describe the perception of IT start-up entrepreneurs in Belarus and Estonia of the general theme
Internal environment		
Start-up ecosystem		
Responsibility	decision-making process	the codes allow to consistently describe the decision-making process, identify the strengths and weaknesses of the chosen approach, draw conclusions about best practices and the potential future in the form of automation of some processes
Discovery		
Research		
Discussion		
Delegation		
Execution		
Automatization		
Conflict-solving		
Values		
Ideal process		

Source: By the author

Appendix 3. Interview recordings and transcriptions

Recordings and transcriptions can be opened and viewed by clicking on the hyperlink. Access is limited to the researcher, supervisor, and university committee.

B1 [recording](#), B1 [transcription](#)

B2 [recording](#), B2 [transcription](#)

B3 [recording](#), B3 [transcription](#)

B4 [recording](#), B4 [transcription](#)

B5 [recording](#), B5 [transcription](#)

E1 [recording](#), E1 [transcription](#)

E2 [recording](#), E2 [transcription](#)

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E4 [recording](#), E4 [transcription](#)

E5 [recording](#), E5 [transcription](#)

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