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MASTER THESIS

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World experience of venture entrepreneurship, problems of formation and development in Ukraine

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INTRODUCTION

Relevance of the research. According to a new tracker, such as Global innovation Index 2021, showed that governments and companies throughout the world have scaled up their investments in innovation despite huge losses in economic and human life after the COVID-19 pandemic took place. This reflects that being aware of the importance of innovation and new ideas is becoming the primary goal for all countries, as it is important to ensure the economic growth after it. World experience demonstrates that in a knowledge-based market economy, venture business is considered a priority direction of state policy aimed at stimulating innovative activity, creating a financial mechanism adequate to the needs of the current formation of companies based on innovative technologies. Studying the European experience, in our opinion, is a priority way to find solutions to the development of the startup ecosystem in Ukraine. This task is impossible without a parity level of development of economic opportunities, including sufficient and promising conditions for the creation, cultivation and scaling of startups in Ukraine. The study of best practices will allow to systematize and strengthen this process.

The goal of the master thesis is to study the global experience of venture financing in order to benchmark best practices, develop an algorithm for creating startups, systematize available data ,implementing the author's proposals, analyze the current state of the Ukrainian startup ecosystem, identify ecosystem shortcomings and develop recommendations that would be helpful in boosting Ukrainian startup scene to a new level.

The objectives of the research. In order to achieve the goal of the research, the following assignments are to be performed:

- explore the importance of stimulating innovative activity in new generations;
- analyze the experience of individual countries that have succeeded in developing the ecosystem of startups;

- identify the main components of effective functioning of ecosystems of startups of leading countries in Europe, North America and Asia;
- consider in detail the experience of Germany in venture investment as the fourth largest economy in the world, to study the existing problems and to identify solutions;
- define venture capital forms of participation;
- systematize information on approaches to choosing business models;
- create guidelines and a logical sequence of steps to the approach to creating a startup
- develop recommendations for the enhancement of the ecosystem of startups in Ukraine based on the analyzed experience of leading counties;

The object of research is international experience of venture financing, Ukrainian startup ecosystem and the forecast for further development.

The subject of the research is the state and existing problems of the Ukrainian startup ecosystem

Methodological apparatus. The methods used in this study is a theoretical method that includes a theoretical analysis of literary and electronic sources. Thanks to this research method, a methodological basis for practical activity is being developed. A comparison method is also used, which allows one to evaluate the peculiarities and characteristics of venture capital markets in different countries according to certain parameters. The dialectical method, also the principles of structural, systemic and functional approaches, the unity of the subjective and objective, as well as methods of statistical analysis, synthesis and generalization at the theoretical and empirical level for processing such sources: GTAI German: Trade and invest, Incentives in Germany; IFO Institute: Joint Economic Forecast Autumn 2021; Startup Blink: Global Startup Ecosystem Index 2021; Statista infographics; KfW research: Venture Capital Study 2020; GEM: Global entrepreneurship monitor 2020/2021 Global report;

In the master's work, an algorithm was developed that allows effectively and successfully develop startups and an example of the algorithm application was given. The study considered the concepts of venture capital, venture financing, start-up ecosystems, national initiatives, innovative projects.

The information base of the study includes statistical data and reviews of foreign analysts on the support of the venture capital investment market from open sources and publicly shared information collections, access to statistical data from the Statista source database due to the university access. It should be emphasized that the peculiarity in attracting statistical data is the presence of discrepancies in the number and nature of venture capital transactions, due to different channels for collecting, analyzing and recording statistics on this topic, as well as the closed nature of many data on transactions of venture funds. That is why this study rarely uses direct statistical comparisons of indicators of the dynamics of the development of the foreign venture industry in relation to the Ukrainian one. With regard to the analytics of Ukrainian venture capital activities, collecting information was extremely difficult due to insufficient methodological knowledge of the new concept as a startup ecosystem. The available data was mainly collected from foreign sources, and market opinion leaders were studied.

The theoretical and practical significance of the masters` thesis consists in the study of the main concepts used in the international experience of venture capital financing, in the analysis of international leaders in the field, the designation and main advantages and disadvantages, summarization and bringing such complex concepts as forms of venture capital involvement to a single framework, the importance of business model innovation is considered , the Ukrainian experience of startup ecosystems is analyzed, recommendations are developed based on existing problems, recommendations for the consistent creation of startups are created.

The structure of the masters` thesis is built consistently. After the introduction, the first theoretical section begins, it reveals the most necessary concepts for further perception of the work, the second section is analytical reveals the global market environment of venture capital with a breakdown of different countries. The second

section is followed by the third, which contains the practical significance of the work. In the last section, the conclusions briefly summarize the essence of the work.

CHAPTER 1. VENTURE CAPITAL AS THE FORM OF FINANCING INNOVATION

1.1. World overview on venture enterprise experience

The main question, even before suggesting creating a business, is answering to this question, asking yourself why this is the best way to establish a career. The main point that would be brought up is financial independency, taking full responsibility, creating new products and services. The BCG 2015 report states that the company we may work in now, may not be around when our generation (generation Z) reaches retirement age, this means the tendency began to unfold far away in time from nowadays[1]. The so-called stability is no longer a constant, the average life expectancy of a person began to exceed the average life expectancy of a company.

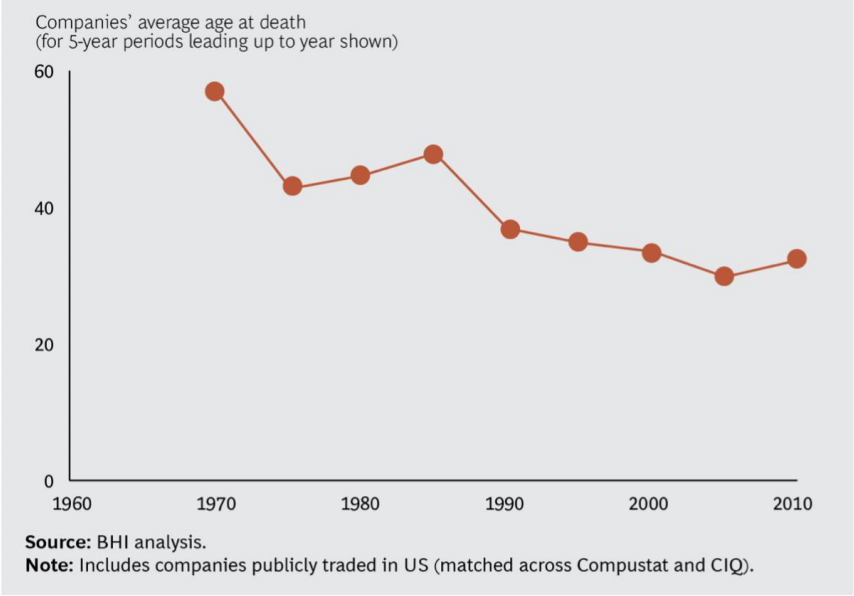

Figure 1.1- Display of the average life of companies in the US and the moment when they collapse in years

The main causes for the companies included in the graph are bankruptcy/ liquidation, also the reasons for that may be mergers/acquisitions etc.

In general, it makes sense to consider the life of companies from the moment they first did an IPO. Businesses does not make it to be around a person for a

significant part of his life and this trend must be taken into account. On average in the United States in 2010, the average human life expectancy was 80 years, this is already 10 years more than 50 years ago. And public companies are around for two times less than this number . There are almost no areas that would not be affected by this trend. At best, it is 10 or 20 years more[1].

There is a correlation between the type of industry and the numbers presented at the top, for example high tech companies die earlier, while stable industries such as gas and oil last longer. If you look at the big picture, this applies to all industries.

By the end of the 90`s, there was a boom in venture funding, there were a lot of initial public offerings.

Several reasons influenced the fact that these companies were under threat more than established ones. Few facts influenced that these companies were more threatened than established in the market. The reasons were fewer barriers to the entry into the market, poor product quality at the initial stage, companies constantly lacked resources, and because of this, there was huge competition in the industry.

Those new companies that survived and went through all these trials became serious competitors for medium-sized companies, which, in turn, reacted too slowly to such serious changes.

These large companies that nevertheless managed to draw the correct conclusion from the market situation, in turn, solved the problem by buying up medium-sized companies, this was reflected in the statistics by an increased level of exits and an increase in turnover for the incumbents.

The output to these paragraphs for the newbie entrepreneurs, individuals in fear of ditching the opportunity of starting businesses in in favor of so-called secured permanent work for corporations, is that there is no more secure way of building the career. The time to be around for companies is constantly decreasing and chances of building a career in one company are unrealistic and unlikely to happen.

As disruptive innovation is not typically driven by incumbents in the sphere, and innovative business gets a good chance of becoming the next “new thing” by

designing new approach to business modelling and not working for a corporation[4].

For the better understanding of the vocabulary and terms used through the research, it is necessary to point out the main terms and definitions.

Venture capital (VC) is a form of private equity and the type of financing that investors present to companies in which they see potential for development in a long period of time. Venture capital can be collected obviously from wealthy investors, investment banks, financial institutions of all kinds[2]. It is not always about money, it can be provided in a form of intellectual property or just needed expert thoughts of professionals. So typical forms of allocation of Venture Capital is startups and other organizations which tend to grow quickly and are showing the potential to continue doing it. For venture capitalists who put their funds in high-growth ventures the risk is worthy as the potential above-average payoff is attractive for them.

Startup can be defined as a company only starting its operational activity[3].

There is always a demand factor, also closing needs, this is even called closing the pains of the consumer, which is why often the creators of ideas that fit the market very well at the time of creation are people who themselves had such a need to close the problem or their nearest relatives, such startups are usually in the field of medicine. The answer to the question why startups are in need of capital is that implementation or development may require large investments, especially if there is only an idea, there are such organizations as startup incubators - for the very initial stages, and also startup accelerators - for startups with MVP, but all organizational structures have their weaknesses, so the mere search for venture capital never fades into the background.

The best was to understanding startups is to define them as companies or ventures, which are firstly funded fully by their founder, focused on one highly innovative product or service, in search of a new way to combine existing business models, a startup has mission, vision and goals and a strong business plan and in need of finding perfect product/market fit.

Who are incumbents in startup language? Incumbents are existing companies in their industries who regularly follow their defined way of learning and fail to seize the next wave of innovation in their own industries.

To fully complete this neat in-depth explanation, it is necessary to define stages of development of a startup and sources of its financing as this understanding would be reassuring the practical benefits from the research.

Every startup should be considered as a project that has certain stages of its development. The division into stages is approximate and depends on the purpose and direction of the startup, the scope of its activities and other criteria that will affect the speed of development, and the number and level of investment in the startup.

Therefore, there is no universal approach to describing the development of startups. The most frequently mentioned abbreviated classification of stages of development of startups, according to which the startup goes through 5 stages in its development[5]:

1. Seed stage

This is the stage of the idea. Sometimes this stage is divided into two: pre-seed and seed. This is the stage of origin of the idea, which is based on an innovative product, service, technology that can improve or facilitate life, change existing products, enhance the effect of the product or service, and so on, depending on the field of activity. At this stage, a team of like-minded people, helpers who believe in their activities is formed, an approximate plan for the development of the idea is developed, options for finding investors are considered, and a prototype product, service, technology, if it is already created, is tested.

Funding is needed at this stage, even minimal. At this stage, use their own savings, or funds of friends, family or partners. Funding rule is used: 3F (Family, Friends, Fools). Also, for the startup developers at this stage it makes sense to contact the accelerator, business incubator or participate in competitions that support innovative entrepreneurship. It is very difficult to find an investor at this stage, as the project does not yet have any achievements or indicators by which to

judge its effectiveness. Although there are some business angels or investment companies that specialize in investing in the early stages of startup development.

2. Startup stage

The task of startups at this stage is to set up a product promotion system and look for sources of funding.

At this stage of the startup's development, there is already a working model, a well-coordinated team with clearly defined functions of each member, a detailed strategy for promoting the project on the market, a legal entity, the first steps in advertising and finding investors. It is important that the team improves its product and receives the first revenue from its customers, so it will be easier to attract investors. Finding funding for activities at this stage is important, as you need to pay for the work of team members, rent and maintain the office, if necessary, overhead. Finding an investor at this stage is not an easy task either. Investments are needed more than at the initial stage, and there is no profit yet or it does not cover current costs. The ideal option is to find a business angel, a person who calculates the prospects of the project and wants to invest in it a certain part of their own funds, experience and contacts. Another source of funding at this time is crowdfunding - the receipt of funds from the community of people willing to raise money to help, in this case, to develop a promising startup project.

3. Growth stage

The task of startups at this stage is the final formation of the product, service, technology, correction of identified defects i.e., bringing it to perfect condition. The growth stage is characterized by the presence of an existing company that makes a profit, occupies a prominent place in the market and is popular among users of the product. At the same time, continues the promotion of goods on the market, funds are invested in advertising to increase revenue or expand the range of users. At this stage, the need for additional funding still remains, as the costs of maintaining the company and implementing marketing plans are growing, and the profit, although there is, but does not cover all costs. To attract investors, the

growth stage is a golden age: they find startups at this stage. This is understandable, because the effectiveness of the idea can already be detected, and the profitability of the company, and other characteristics that indicate the prospects for further cooperation.

4. Expansion stage

Expansion is the stage when a company has a complete functional product that brings a steady profit. The marketing strategy at this stage is worked out to the smallest detail, and the company is ready to scale i.e., increase sales, distribution in related fields or attract a mass of consumers. At the stage of expansion, contracts are concluded for the sale of goods, services, technologies, new stores are opened, the number and quality of advertising to attract users on the Internet increases.

An important task at this time, experts believe the correct construction of the company itself and its relations with investors. The owners of the company must decide on its future. If the company is to be sold or the project can function perfectly without the direct participation of the founder, the work should be aimed at finding a suitable investor who wants to buy a controlling stake at a similar price. Retaining a small share, the startup gets the opportunity to do other projects. At this stage, if necessary, investments from venture or investment companies can be attracted.

5. Exit stage.

Most often at this stage, the company begins to issue shares that bring income to its founders. In other cases, the company is sold as a ready business. In principle, the stage of the exit suggests that the startup project has become a business, when the company is a market leader or holds a place close to it, has a high payback, the company's staff is a team of highly qualified professionals, and their work is well established. At this stage, investors who invested in the early stages decide to sell their shares or receive income in the form of dividends.

Extended classification includes: Pre-startup stage: Pre-seed stage; Seed stage; Prototype; Working prototype;

Project launch: launching a project or product into production, work with the first clients.

Post-startup stage includes growth stage, expansion stage, exit stage, IPO stage (when exiting through an IPO).

Looking far into the future, after passing all stages of a startup organization and a successful IPO the first public sale of shares of a joint stock company, it may be the time to start thinking about international expansion as an operating enterprise. There is quite a lot options of how to go international. International, or so-called cross-border business, refers to any business activities that cross national boundaries. These activities can be categorized into four basic types: importing and exporting, licensing, strategic alliance and joint venture and direct investment, the one chosen by the company is dependent on their activity and business model.

When the scale of entry is known, expanding the business abroad is the next challenge. This can be a subject for serious thought. Different market entry methods are available[6].

Today, export is the export of goods, services, works, intellectual property from the territory of the state and exclusive rights to it without the obligation to re-import into the country. The fact of export is registered when the cargo crosses the customs border of the state, when the rights to the results of activities are transferred and when services are provided.

Licensing is a tool for ensuring state control over certain types of activities. The state sets the criteria and requirements that must be met by enterprises and entrepreneurs carrying out this or that activity.

Franchising is a way of organizing a business when an entrepreneur works under someone else's brand and according to other business processes, for which the franchise owner pays a lump-sum fee (a one-time payment for entering the business) and royalties (periodic payments in the form of interest from turnover or margin).

A joint venture (JV) is understood as a type of firm created by our individuals or companies, our joint domestic efforts to extract income from it for a long time. A JV can be a corporation or some other form. The creation of a joint venture is

formalized by an agreement. This document formulates the mutual rights and obligations of the participants, relations with third parties. It is allowed to create a joint venture, all participants of which are domestic enterprises, they can also be exclusively foreign.

The main forms of foreign direct investment are the creation of additional companies or the opening of branches, the creation of a controlling stake in enterprises of the donor country, etc.

A wholly owned subsidiary is when the foreign business is purchased fully. How much the order changes after such an operation depends on the goals of the buyout of the company.

Piggybacking is when two companies sell each other`s products each in their own countries. This method is quite rarely implemented as requires substantial amount of trust between two unrelated companies.

These are known as the most popular, and factually working ones. For startups and new businesses intending to go international, the joint venture is a sought after choice. Since startups are built on scalable business models, world expansion should not be in the distant plans on milestones slide of a pitch to the investors.

Also, with the technologization of all spheres of human activity, it became much easier to go cross-border, being physically present in one country, entering online the countries nearby and later on, establishing a subsidiary there. Moreover, if the specifics of the business imply, international business can be completely online.

The main approach internationally is creating an idea, do steps to realize the created product/service is actually in demand, do a desired market screening and choosing the best option possible.

Concluding the information stated above, it is important to point the attention on the corporate tendencies, The BCG 2015 report is stated to underline the main points regarding the life span of a company now in comparison with how Generation X perception was about it before. Startups, young inspired nation and any kind of entrepreneurship in general is the driving force for countries` economic prosperity

and growth, that`s why this research is intended to convey this idea to the new generations who are taking the leading positions in businesses across all countries, as this will help to unravel new opportunities for all citizens.

In order to give a tool for unraveling this experience, a holistic overview on the terms operated in venture capital environment is given.

1.2 Modern business models of venture capital enterprises

Concluding the previous sub-chapter can lead the seeker to a thought that making their professional choice can change their life for better. And it can be achieved by creating a new business or even a startup. There is a variety of options of how to create an international business. From the most radical, requiring huge investments in research and development to taking a few of existing business models, combining them a coming up with a brand new one. It is desirable to avoid taking an existing business model and implementing it to an existing market, of course it is possible, but it excludes scalability as for sure, there is a lot of big and stable players (incumbents) in the sphere.

The most comprehensive way to do it is to take a variation of a business model, have a bright idea and try to change the selected market or niche to penetrate, for better. When the business is ready to go international - this is time to search for cross-border business opportunities.

Business model navigator is a tool to create innovative business model and it is based on 55 business model patterns.

Before the theoretical outline for existing business models used by startups it is necessary to designate the concepts of a company and a startup.

A company is a business organization which sells a product or a service in exchange for revenue and profit.

“A startup is a temporary organization designed to search for a repeatable and scalable business model”[7]. That`s why when an innovative idea comes, a startup creation is the next logical step.

A business model fulfils such functions:

- how to find and keep your customers
- how to sell your product or services
- how to deliver your product or services
- how to organize your organization

Business model innovation is the primary source of competitive advantage according to the IBM`s global CEO report 2006: Business model innovation matters (Figure1.2)[8].

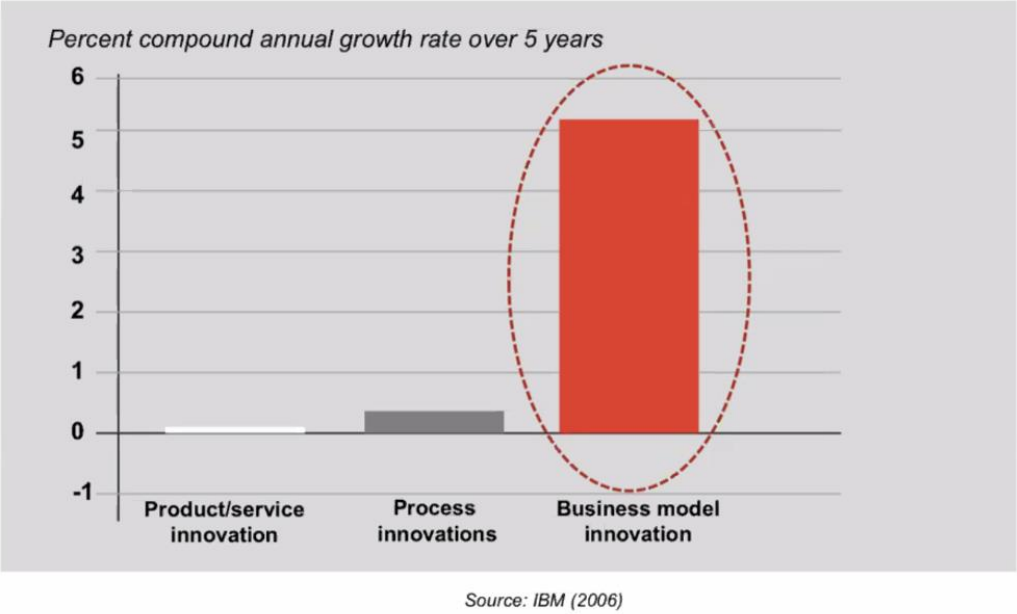

Figure 1.2- IBM's global CEO report 2006: Business model innovation matters[8].

On the Figure 1.3 it is demonstrated how total shareholder return (TSR) premium is defined as the percentage by which innovator`s average total shareholder return exceeded that of their industry peers[9]. The competitive advantage of business model innovation is more sustainable as compared to other forms of innovation.

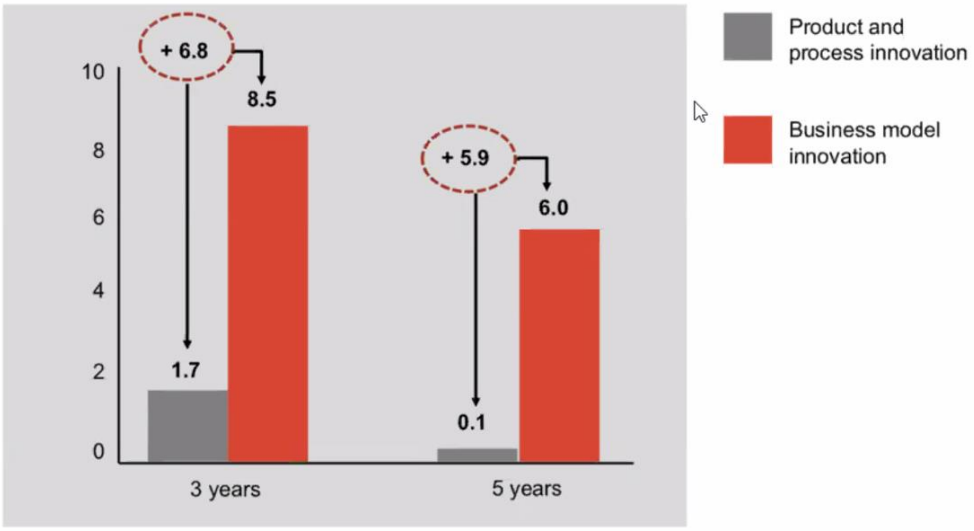

Figure 1.3- Source: Business Week / BCG Innovation Survey, 2008; BCG Value Science analysis[9].

In fact, the big success stories are based on innovative business models, not innovative products or technologies. Among such companies are: Amazon, Pixar, Uber, Netflix, Starbucks, Airbnb.

The challenge of today is how to create an innovative and marketable business model from an idea or already existing business model.

Business model innovation is a source of competitive advantage. To develop an efficient and effective business model from an idea or existing business model, there are some solutions:

-observing and interviewing customers (design thinking)

-brainstorming

-waiting until creativity hits

-Business Model Navigator

The Business model navigator is a tool to create an innovative business model and it is based on 55 business model patterns[10]. This is a tool that can be used to innovate ideas or existing business models. It`s a previously creative process turned by scientific knowledge into a tool that anyone can use.

90% of all new business models are based on 55 existing patterns, so this is clearly the answer to the question about how to develop an efficient and effective business model[10].

Returning into the recent past, the question arises, how strong market incumbents like Newsweek or Polaroid failed. They definitely had all the resources for the development of new technologies, the workforce for this, the staff and best employees. The business model which was irrevocably outdated relative to the market was a problem.

A well-known quote is that “today`s success is the enemy of tomorrow`s success”.

The innovation cycle is a lightning-fast process that only accelerates. This is because any innovation generates either a reduction in production costs or increases the value of the product for the consumer. A good and well-known example of a technologically advanced company that creates high value for the customer and many of its customers are no longer just ones, but real brand promoters, this company is Apple.

Successful innovators do not invent, they are busy recombining business models.

Answering on a question about what exactly is business model innovation would require providing answers to four bullet points:

- Customer: the target segment of the business;
- Value proposition: the offering of the company;
- Value chain: the creation of the value proposition;
- Profit Mechanism: the way revenue is generated (Figure 1.4);

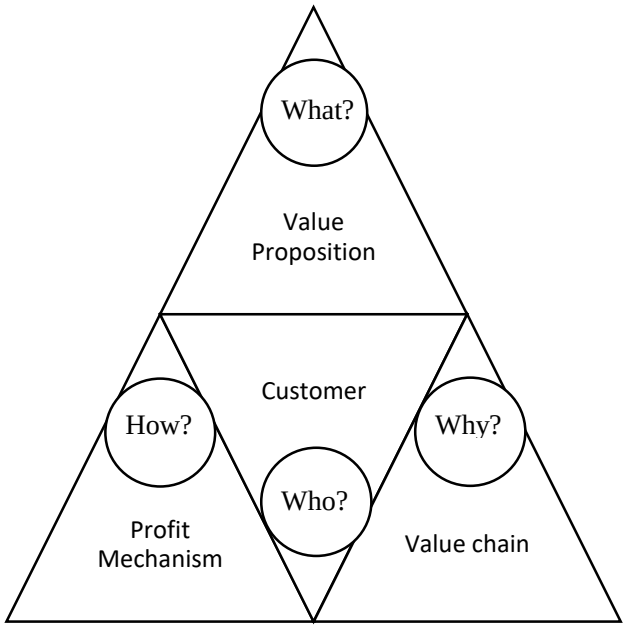

Figure 1.4-. Business Model Triangle.

Business model innovation is at the top of the management agenda. More than 50% of executives believe that in future competition is not between products or services, but between business models[11].

Business model innovation is important and it is a top priority of the runners of corporations[12].

More than 60 % of executives believe that their business model will undergo fundamental changes in the next 5 years[12].

Now 5 of the 55 business models from Business Model Navigator are to be demonstrated[13].

1) Freemium.

The bright examples are: Hotmail, Skype, Spotify, Dropbox.

The offer is simple, but premium versions are also available. It is believed that those customers who will first use the free version, will understand that they like the product strongly enough to switch to the premium version later, we can assume that such a business model is supported by those buyers who prefer to buy the premium version right away.

2) Razor And Blade.

Examples: Gillette, Hewlett-Packard, Amazon.

There is a product that essentially consists of several parts. One part of the product is sold at a very low price, but the second one, which is necessary for adequate use of the product, is already at a much higher price.

3)Peer-to-Peer

Examples: eBay, Twitter, Airbnb.

P2P is the abbreviation. The company provides a platform for interaction between customers and makes a profit from technical support and consulting services.

4)Robin Hood

Examples: One Laptop per Child , Warby Parker.

Price discrimination per se. the rich pay more for the same services. serving the poor in itself does not bring much profit, but it is a good moral step and levels up the brand image.

5) Open Source

Examples: Wikipedia, IBM, Mozilla.

Advice and support are also the main part of the profit as in P2P. The code of the software product itself is not exclusive, therefore customers can use this software product for free or purchase a commercial version.

These are the 5 comprehensive business models, there are 50 and more to explore. Choosing , ideating, diving into the business model, exploring how exactly they do it, applying this pattern to own business and creating the next innovative business model is the ultimate goal for modern innovators.

To sum up , in this subchapter are defined the ways create a successful business , the reader is introduced into business model navigator - a tool to develop a new creative business model with the method of benchmarking and this tool is based on the 55 business model patterns methodology . The importance of business competitive advantage is highlighted and discussed on an example of companies that no longer exist due to the negligence to business model innovation.

1.3 Venture capital forms of participation

Primarily innovative and digital start-ups are the ones of high economic relevance. Many of these founders are dependent on high levels of external capital, especially in the initial phase. However, the high risk of default has made it almost impossible for these companies to obtain a loan through the bank, especially ever since the financial crisis in 2008[16].

Venture capital is used to finance innovative, growth-oriented companies that are in the situation described in the first subchapter among main definitions. Since VC-financed companies grow faster than comparable companies and create more jobs on average, VC has a direct influence on a country's economic strength.

Venture Capital and Private Equity. The term Venture Capital comes from the English-speaking world and translates as equity, venture or venture capital. VC donors participate for a limited time, directly and with fully liable equity in young, pre-IPO companies with growth potential. The aim of the investment is in most cases a return, which is to be realized through an increase in the value of the investment when the shares are sold, the so-called exit.

The term private equity (PE) is closely related to the term VC. PE is also understood to mean an over-the-counter participation, but in medium-sized companies that already have a stable cash flow and are about to expand. There is no precise demarcation between VC and PE. A distinction is usually made in the literature on the basis of the development phase in which the company is at the time of investment. These limits differ, however, sometimes drastically. The most common definition is presented in the following data.

Participation phases and delimitation carried out[17]. In the course of the life cycle of a young company, various financing occasions arise. In the seed phase, the foundation is planned, the company concept and a product idea are developed, a

prototype is created and the existing market is analyzed. The start-up phase is the actual formal company formation. The production is prepared, the marketing concept is created and the product launch is getting ready. The seed and start-up phases are collectively referred to as the early stage. The following phase is called the later stage (or expansion phase), which in turn is divided into four sections. The product is launched on the market during the first stage. In the second and third stage, the market will be penetrated further through an expansion of the sales and production system, and during the fourth stage (bridge), preparations will be made for the company's IPO.

Typically, the entire early stage and the first stage of the expansion phase are financed by VC. Normally, the company's break-even point is reached at the end of the first stage. The rest of the expansion financing is covered by PE. In some cases, however, other parts of the later stage are also financed by VC. In this work, the VC financing is also delimited according to this conventional principle.

In addition to the company phases already mentioned, there are also other specific financing reasons that can be covered by VC. Typical for this are MBO - a management buyout, a management buy-in - MBI and turnaround situations. In the case of an MBO, the internal managers take over the company by buying up the company's shares; in the case of an MBI, on the other hand, external managers. An insolvent company is reorganized with turnaround capital.

Characteristics of a venture capital participation[15]. The VC giver generally provides the company with funds in the form of fully liable equity capital, without the provision of a pledge. This is partly supplemented by mezzanine capital, which is a mixed form of equity and debt capital. Examples of this are subordinated loans, silent partnerships or convertible bonds. Furthermore, the financing is a direct minority stake, which usually amounts to between 20% and 35% of the share capital. The capital is provided on a long-term basis, usually over a period of between 3 and 7 years. In order to ensure that the companies act in their favor, the VC donors grant themselves extensive control and say in terms of strategic decisions and the use of

capital. In return, the VC donors actively support and supervise the management of the young company.

The primary investment focus of the VC donors is on innovative, growth-oriented companies from the high-tech sector. The scope of management support depends on the type of VC giver and the needs of the VC recipient. Basically, a distinction can be made between active and passive support. Active supporters are available to management as advisors, provide important contacts and coach management. Passive supporters, on the other hand, only care about the correct use of their capital. The management performance of the VC provider is usually seen as just as valuable as the capital provided, since company founders from the high-tech sector in particular have no experience or knowledge in the areas of corporate management and market behavior.

The VC asset class is one of the alternative investments. This form of investment is characterized by poor transparency and low correlation with the results of public financial markets. Incidentally, the VC asset class is characterized by above-average returns. Over a period of 20 years, funds from the early stage area generate 23.2%, from the later stage area 15.5% and from mixed portfolios 14.8%.

Basically, there are different exogenous and endogenous risks that the VC donor must consider when participating. The innovative character of many investments makes it difficult to predict the amount of future income. This depends primarily on the skills of the founders, which creates a large risk factor. Through the wrong use of financial resources, the VC taker can work against the interests of the VC giver, for example, without the latter noticing. Further risks arise from the conflict of interest between VC giver and recipient and the prevailing asymmetrical distribution of information between both parties. This is shown above all by the information advantage of the founder with regard to the technical feasibility of the innovation. By drafting the participation agreement in favor of the VC donors, these risks can be partially eliminated.

Types of Venture Capital Donors[14]. In principle, a distinction can be made between formal and informal VC donors. In informal VC, one or more private

individuals participate directly in a company. In the case of formal VC, however, the investors do not participate directly in the company, but rather indirectly through a financial intermediary. If the financial intermediary only invests in a single company, it is a project-oriented approach. However, if the capital of different investors is bundled in a fund in order to subsequently invest it in different companies, then it is a fund-oriented approach. The most common types of VC encoders are briefly presented in this section. A trend advancing in the course of digitization is the financing of the founders via so-called crowdfunding platforms, which are not dealt with in this work.

The first ones are Business angels. Business angels (BA) are high net worth individuals who have entrepreneurial experience and who invest directly in young companies. Normally, you already invest in the seed phase of a company and therefore mostly before other VC donors. In addition to their capital (usually between € 50,000 and € 250,000), BA provide companies with their know-how (contacts, entrepreneurial experience, etc.) and in return demand a say. More and more family offices are also acting as BA. In addition to monetary intentions, BA are also looking for a challenge and want to pass on their wealth of experience.

Second type of donor are independent venture capital companies. Venture capital companies (VCC) act as financial intermediaries and usually bundle the capital of their investors in funds in order to participate in various companies, so-called portfolio companies (PC). Investors include funds of funds or institutional investors such as banks. Successful exits are intended to generate an extraordinary return at the end of the temporary fund, which does justice to the high risk of default of the type of investment. The profit generated is usually only paid out when the fund is closed. VCCs can be differentiated according to various criteria, such as the fund term, the investment phase, the financing volume or the investment sector.

Corporate Venture Capital Companies are the third type. Corporate venture capital companies (CVCC) are subsidiaries of large industrial companies. You reinvest shares of the group's sales in order to acquire stakes in young, innovative companies. Since no capital is used by investors, CVCCs are less regulated than

other VC donors. CVCC primarily do not pursue financial, but rather strategic corporate goals. The investments are intended to integrate new, mostly technological innovations into the company. Often times, CVCC act in concert with an institutional investor to create a combination of capital and technological expertise.

The fourth type are public venture capital funds. Public VC funds are medium-sized investment companies or state funding institutions that invest in young companies in order to stimulate the economy. Most public VC funds only act as silent partners or co-investors, alongside a private lead investor such as a VCC.

The participation process from a perspective of a VCC.

1)Fundraising. Fundraising is the process of acquiring funds for a fund. In the first step, a fund concept is created in which the investment focus, target volume, term and management fees are defined. After using various marketing measures, the first meetings with potential investors are held. If an investor decides in favor of the fund, this is sealed with a partnership agreement. When the planned target volume is reached, the fund will be closed.

2)Investment phase. The investment phase begins with the search for young companies with high growth potential. The business plans and concepts of the various investment options are checked for quality in the course of a screening process, an initial rough test, and compared with the fund criteria.

When a potential investment company has successfully passed the screening phase, the VCC usually sends a letter of intent, also known as a letter of intent (Lol) or term sheet. With the Lol, the first negotiation results and basic parameters of the participation are recorded in writing. Although the Lol does not necessarily express a will to be legally bound, it serves as a cornerstone for later negotiations and thus offers transaction security for the parties involved. Furthermore, in addition to the obligation to keep the intended transaction confidential, the Lol usually contains a legally binding exclusivity agreement. If this is signed by the founders, they undertake not to negotiate with any further investors until a certain point in time. Then the potential investment company is then examined in detail by means of a due diligence (DD).

3)Participation. So far as VCC continues to be interested in the company with the conclusion of the DD, the participation negotiation will take place. On the basis of the parameters set in the Lol, the parties agree on a fair valuation of the company and thus also on the amount of the shares in VCC. The participation agreement only contains the conditions of the investment and becomes meaningless with the acquisition of the participation. As a rule, participation takes place via a capital increase, in which the founders waive their subscription rights. The legal relationships between VCC and PC are made in a separate partnership agreement, which regulates, for example, what the VCC's control and speak. With the investment, the company will be included in the portfolio of the VC Fund.

4) Operational business and exit. With the conclusion of the participation agreement, the operative business and with it the phase of management support begins. This primarily serves the purpose of continuously increasing the value of the PC and minimizing the risk of total failure. In addition to the consulting service, this should be achieved through the control of business activities, the so-called monitoring.

In the disinvestment phase, a VCC has five different exit channels. In the course of a buy-back, the company's shares are bought back by the internal management team. A so-called trade sale is a sale of the shares to an industrial investor who is pursuing strategic goals. The sale to another financial investor (e.g., another VCC or PC company) is called a secondary purchase. If the exit takes place via the IPO of the PC, it is going public. This exit form is seen as the most profitable. The end of a participation can, however, also result from a total failure. This is done by liquidating the PC.

The conclusion for the sub-chapter is arranged this way: extensive analysis was performed on venture capital forms of participation. Relatability of terms in the topic was depicted. Venture capital forms of participation is researched and structured by the stages , types of venture donors , also the perspective of a capitalist is explored and structured from fundraising to possible exit channels. The presented structure is assembled for the in-depth understanding of this complex process.

CHAPTER 2. GLOBAL VENTURE CAPITAL MARKET ENVIRONMENT

2.1 World segmentation of venture capital

According to Crunchbase, global venture capital investments were estimated at the level of $300 billion in 2020 year, which was 4% higher than the previous year. The increase was due to the fact that industries that suffered from Covid-19 pandemic have turned to online services. That growth was broken down by industries: work, education, finance, healthcare, entertainment and shopping. The shift into the online space disrupted these spheres. It resulted in a boom for tech infrastructure and cloud services. From the graph below (Figure 2.1) we can conclude that the deal volume still hasn`t reached the pre-pandemic indicators, the recuperation from the global pandemic is still in process[18].

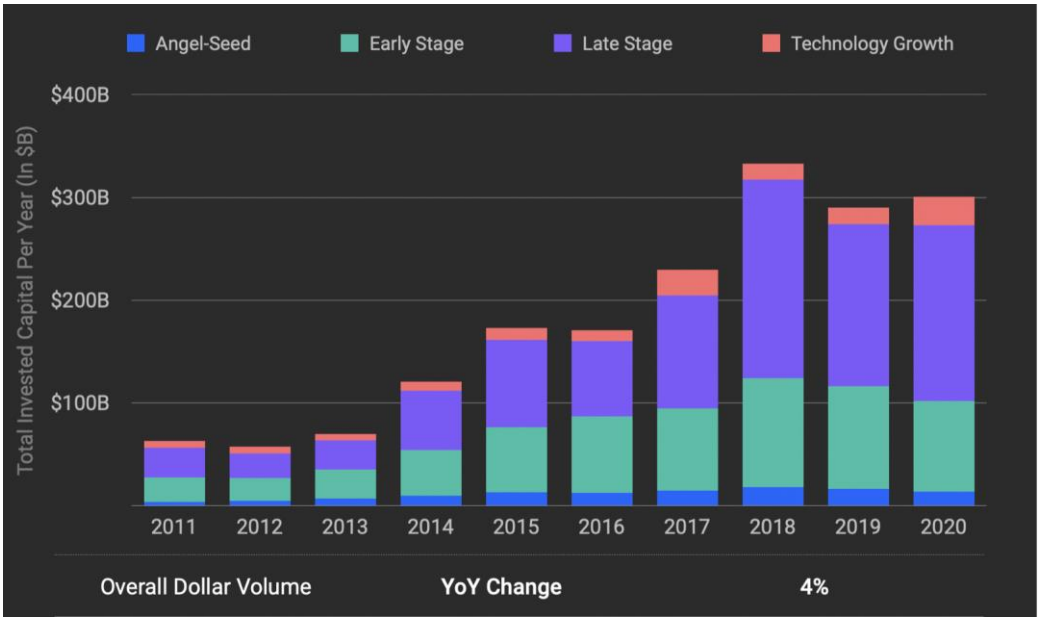

Figure 2.1. Global Venture Deal Volume 2011-2020 by Crunchbase[18]

Having underlined the deal volume of global venture investments, it can be stated that the deal volume has grown significantly within the last decade.

The amount of the venture deals from seed through to late-stage mega rounds has increased drastically from 2011 to 2020 years, from just over 10,000 rounds to 22,000 rounds[18].

In compliance with PwC: CB Insights, the highest number of venture capital deals in 2020 we can observe in North-America with the quantity of 6,454, which is 39% of the whole number of deals made worldwide. Asia took the second position almost catching up with North America with quantity of deals- 6,042. Asia had the share of 36%. Following the pattern of deals closed, the third leading region is Europe with approximately 3,600 deals (Figure 2.2.). The value of venture capital financed by North-America region amounted to almost $133 billion, which makes it the dominant region in the VC financing scene. The next regions by the venture capital investments are Asia and Europe with the value of $87 billion and $34 billion respectively[19].

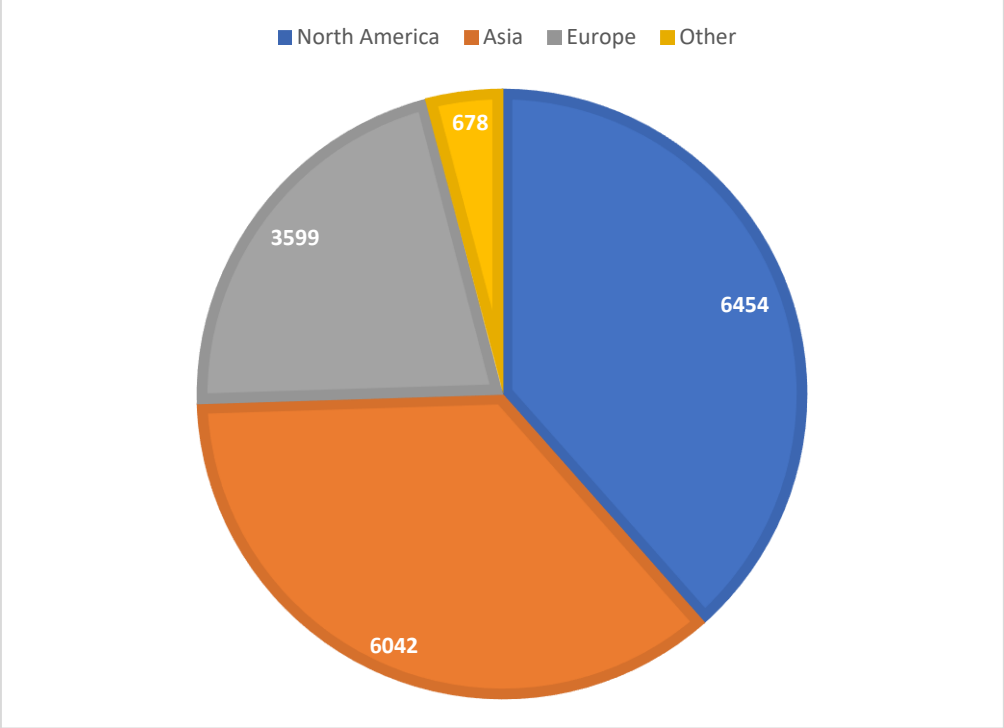

Figure 2.2- Number of venture capital deals in 2020 by region[19].

In North America region, the most active venture capital investors can be considered USA and Canada. Let`s concentrate on USA. USA has invested $159 billion, which is 0,76% of GDP of USA (20,94 trillion) in 2020 year.

An example by Statista database shows that software was the biggest receiver of VC funds in the USA in 2020 at $ 51,6 billion. The biotech industry is behind at $ 28,3 billion. Closely on third place is the healthcare services and systems sector at $ 11,6 billion. Technology is a substantial part of the whole pie that crowns the largest single market segment. Investors are active on the segment as it the most active and promising at the moment[20].

USA is the home up to 23,444 startups, among them:

Better.com – financial services. The important point is that as quite a few other economies, US economy felt the recession after the pandemic took place, but the housing sector was directed upwards due to the reasons of falling interest rates (thanks to the Federal Reserve) and a growing desire for space (thanks to work-from-home policies).

DoorDash – delivery. Bright representative of the delivery boom. The company is already expanding its delivery on pharmacy and groceries.

RobinHood – financial services. With an aim of democratizing stock market investment while making trade affordable and clear[21].

The USA, a state created on the principles of free enterprise, undoubtedly drives and develops the country. Therefore, government business support programs in the United States are very diverse. Within the framework of special initiatives in the programs:

-concessional financing, subsidies and lending

-providing various infrastructures for the promotion and development of products and services

-reduction of the tax base

-purchase of equipment, real estate, land.

But not only governmental initiatives are helpful, but also venture capitalists such as: Baselin Ventures, among the smallest most successful investment firms; Benchmark: focuses on early- stage funding, among their famous investment projects are such companies as Snapchat, Instagram, Uber, Dropbox; Canvas ventures: invests in tech companies.

The US has a well-established crowdfunding system. Main crowdfunding platforms: Kickstarter, Product Hunt, Indiegogo.

In Asia region the most prominent venture capital investor is China[19]. The 2020 year has outlined itself for China on $ 30,5 billion, which is 0,2% of GDP of China ($14,72 trillion) in 2020 year.

Statista infographics lets us conclude the top-3 positions in investments of venture capital in China: $ 7,61 billion for biotechnology/ pharmaceutical sector. $ 5,53 billion is invested by China in IT sphere and $ 4,87 billion for Internet[21].

As of November 16, 2021 there are 22,468 startups in China. Here we will mention the 3 most exciting ones[23].

Ant Financial - digital payment solutions for consumers & businesses it enables businesses to accept online payments from customers via credit/debit cards or bank transfers. Funding USD 30.50 billion.

WM Motor – makes different models of electric cars with high-tech features and artificial intelligence in charge. Funding USD 4.77 billion.

Yuanfudao - provider of online school-based test preparation platform. Funding USD 4.04 Billion.

China is expected to become the world's largest economy in 2027 in terms of nominal GDP. China has switched its economy from manufacturing to high-tech innovations: now has 150 unicorns in the field of AI, robotics and computer vision.

Essential pillars of success for China are[24]:

1) Innovation-friendly policies, but not only that, there are Special Economic Zones in four different regions, including Shenzhen, which makes them attractive to foreign business, now we can perceive these cities as attractive start-up hubs of our century.

2) Collaboration of greatest minds and innovation. There is a district been known as "Electronics Avenue"(north-west Beijing) ,the Zhongguancun Science and Technology Zone. There are near 20 thousand start-ups and innovative organizations performing their activity. The Chinese government has launched a very useful initiative called "Mass entrepreneurship and innovation program" in

2015 and the government provided financial support, concentrated on entrepreneurship accessibility, building technology infrastructure, also on revision of laws and regulations. In a year after the initiative more than 11,700 companies were born in China every day.

3) Market size, speed and culture. Due to the size of domestic market, there is no necessity for start-up to think about immediate expansion on foreign markets, the drawback here is the insane amounts of competition.

In Europe Region, the most active venture investors by countries in 2020 were United Kingdom $ 15,28 billion (13,5 billion euros), Germany with $7,13 billion (6,3 billion euros) and France with $6,34 billion (5,6 billion euros), the difference with 2021 is astonishing[26].

By Statista report on Total value of venture capital investments in Europe in 2019, by sector (in billion U.S. dollars), we can underline the European venture capital investments by sector. FinTech has the biggest share of venture capital investment with 9,07 billion U.S. dollars, the next share is owned by enterprise software sector, health sector in invested in the amount of 3,62 billion U.S. dollars, energy sector- 3,08 billion U.S. dollars, transportation sector closes the top-5 with 2,31 billion U.S. dollars investment[25].

An extensive inspection on Germany market state and startup overview will be given in the chapter 2.2, for that reason, it is appropriate to highlight the situation for France.

For United Kingdom, the country has venture investment value in the amount $ 15,28 billion in 2020 year, which is 0,6% of the UK GDP 2020 year ($2.708 trillion).

Currently UK is represented in a startup scene by 5356 startups.

€17.2 billion have raised UK startups from VC funds – it is an absolute record, more than the €14 billion in all of 2020[27].

The bright names are: Hopin – all-in-one live events platform. In a very short amount of time - only 8 months after launch has gained a strong name among European Unicorns.

Zego – insurtech for business. Has gained its own insurance license in 2019. And then made a series of strategic movements resulting in buying a telematics company to revolutionize commercial motor insurance. Now covers all escooters in a region.

Cera - is a homecare provider for elderly people, launched in November 2016 that uses digital and artificial intelligence to transform social care. Through its matching algorithm and automated scheduling systems, Cera is able to arrange home care within 24 hours, while fully taking into consideration a patient`s needs and preferences.

For France, the number defining the venture investment value in the amount is $6,34 billion in 2020 year, which is 0,3% of the France GDP 2020 year.($2.30 trillion).

France is represented in a startup scene by 1481 startups[28].

Top- 3 French startups which glorify the country on the startup scene will be described[29].

OVH logo Industry. Their total funding is $650M. Cloud solutions for private and corporate needs they also provide shared hosting and can register your domain name. Main services: Bare Metal Cloud, Hosted Private Cloud, Public Cloud and Web Cloud.

October. Total funding: $611.9M . They help companies to make their finances simpler and more democratized. They provide SMEs in Europe the possibility to take loans without intermediaries from any type of lenders.

Blablacar. Total funding: $563.5M. The peer-to-peer business model. Connecting car owners to the passengers to share the price of a trip with reduced costs for both parties. Their services are available in more than 20 countries now and it`s hard to find a person who have never heard of them.

It is necessary to underline, that the influence of the abovementioned countries on the global innovation landscape will only get stronger with their economic growth. Various indicators for the majority of countries haven`t reached their initial level yet. The economies are to be recuperated. However, as the world is still in the

middle of the pandemic and the possibility that the new virus variants will require more deterrent measures. Also, the solvency of companies will be a question mark as the full financial consequences are still uncertain. It is possible that the economic indicators will not return to their pre-2019 ranks for an ambiguous amount of time.

To sum up, the main highlights of the research performed on the world dissemination of venture capital:

- global venture capital investments were estimated at the level of $300 billion in 2020 year, 4% higher than the year before: global markets are slowly awakening from the pandemic;
- to benchmark it in necessary to evaluate the world`s experience;
- online space became a disruptive impulse for new business models;
- North America is a dominant in VC scene with a share of 1/3 of venture capital deals;
- North America concentrates its venture capital in USA and Canada;
- FinTech , Software development and Biotech industries are dominating VC global investment;

2.2 Venture experience in Germany

The German economy continues to feel the effects of the coronavirus. It will take a long time to turn back to activities involving in-person contact. Till the end of 2022, the German economy is projected to return to the normal indicators[32].

In compliance with the IFO Institute`s forecast, GDP will rise up to 2.4 percent and 4.8 percent in 2021-2022 years accordingly. Germany has a significant size of the overall economy. Germany is the 4th biggest economy in the world by gross domestic product (GDP) in 2020 , see Figure 2.3. In 2020, Germany's share in the global gross domestic product adjusted for Purchasing Power Parity amounted to approximately 3.44 percent. By this defining itself as a significant market to do

business in. It is a large, diversified economy, supported by a well-developed, reliable infrastructure, a highly-skilled workforce, a positive social climate, a stable legal environment, and a long list of record of world-class research and development[33].

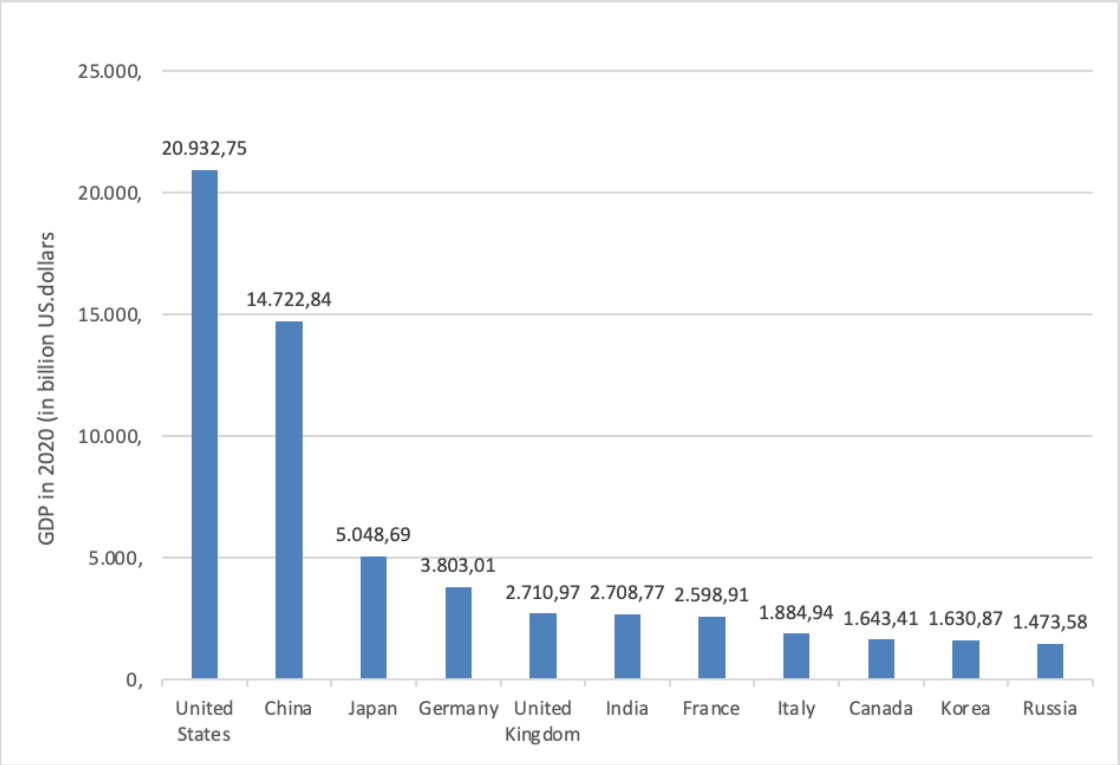

Figure 2.3. The 20 countries with the largest gross domestic product (GDP) in 2020 (in billion U.S. dollars)[31].

Like in most developed countries, the largest sector is service sector in terms of GDP contribution. What is particular to the German economy, is that 23 percent comes from industry sector. Construction is stable during the years versus the constantly increasing contribution of the service sector. Concerning this question, Germany takes the same route as most developed economies. Nevertheless, the supply chain resilience discussions may result in the reattribution of production currently happening in China by the government back to Germany[33].

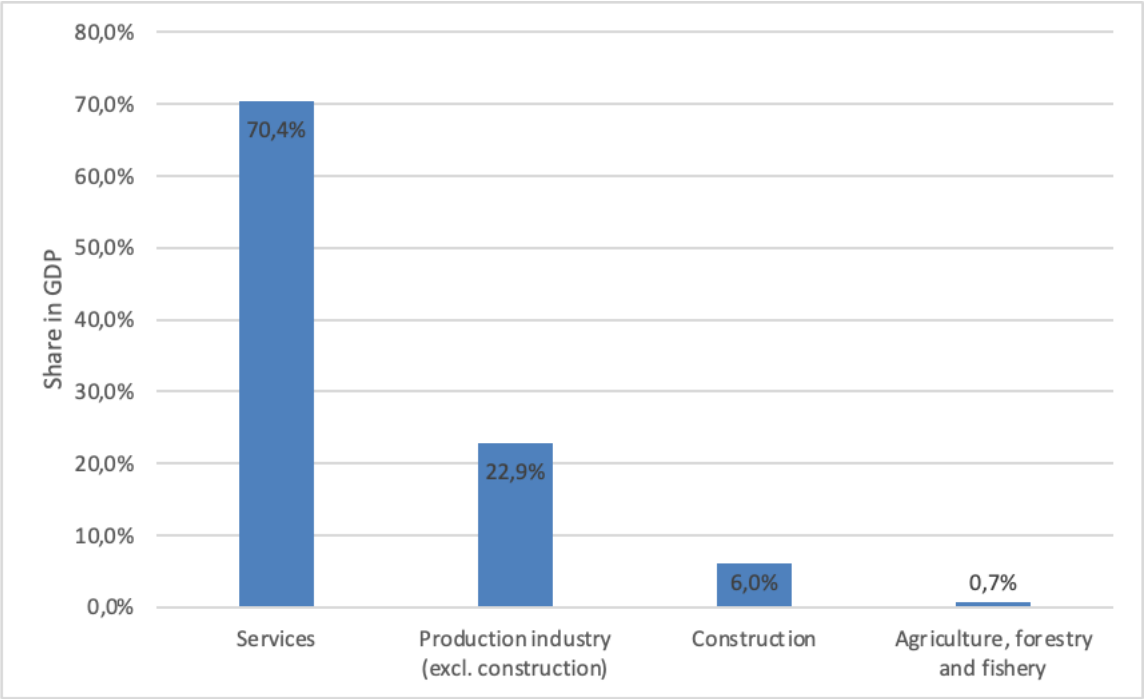

Figure 2.4. Germany: Share of economic sectors in gross domestic product (GDP) in 2020[34].

Among biggest industrial sectors, 4 sectors dominate: automotive, chemical and electrical, mechanical engineering industries. Volkswagen, BMW, Daimler are covering automotive industry. BASF is the leading company in chemical industry. Siemens is heading electrical sector. These are the most prominent players on the global arena. As a rule, mechanical engineering is covered under medium to small enterprises[36].

Industry's export ratio equals to 48.4 percent. This is due to the fact that German car producers manufacture for export two times in foreign countries than for domestic market.

The corona-induced trends of accelerated growth of markets in Germany is a necessary point to illustrate.

1) E-Commerce 2020 in Germany +15% to EUR 83 bn is an outperforming category[36].

2) We are observing an existing groceries growth momentum of organic products further accelerating due to Corona health concerns (+ 20% in 2020)[37].

3) Online groceries startup market is booming: "Gorillas" founded mid 2020 raised 245 million euro[41]. Flink is a grocery delivery that works on instant basis –

their time of delivery is up to 10 minutes. City where it was founded – Berlin. This system works through small stores with limited assortment located around the city. They have already raised $240 million for further expansion into more regions[38].

4) €41,8 billion is the amount invested into real estate in Germany in the first part of 2020. As of the first part of 2019, the number increased by 34%, while in the second part of 2020, the percentage fell drastically 52% down. Because of the lockdown-related restrictions, this result can still be considered positive referring to the social turbulence[39].

5) Healthcare revolution has gone digital. The Germany is one of the most active countries hopping on this trend. The annual digital healthcare expenditure may increase to $40 billion by 2030 and the share of it may approximate to 8% of national healthcare spending in general, this is based on the information from Spitzenverband Digitale Versorgung. For medical digital healthcare, the global pandemic is an opportunity, not a threat[39].

6) Pharmaceutical industry. 300 million euro is the amount invested in the pharmaceutical sector to tackle the coronavirus pandemic by the German authorities. That`s why it`s becoming lucrative and gains more attraction from investors.

7) Technical industry explosion. Given the disruption of the normal way of using technology in people`s lives, after the pandemic fully unraveled, the technological transformation has become the main tendency. The meetings gone virtual as well as shopping, home office supply has become a hot topic. Zoom revenues have skyrocketed. BuyShares stated that Zoom reached a record high quarterly revenue of $882.5 million in Q4 Financial Year 2021, it is almost a 370% increase year-over-year[40].

Continuing to discuss the trends of the German market, trade shows are in high demand right now. Trade show industry: 60% of the world’s most important physical professional trade shows are hosted in Germany – however virtually no tradeshows happening right now.

In order to discuss venture capital experience in Germany it is necessary to demonstrate the numbers of venture capital investments.

In the period 2017–2019, around EUR 4.7 billion was invested in VC in Germany (Figure 2.5). The lion's share of this went to information and communication technologies (45%). The areas biotech / healthcare (18%) as well as consumer goods / services and finance / insurance (9% each) were also in demand. The business products / services and energy / environment sectors each were 4% of VC investments[32].

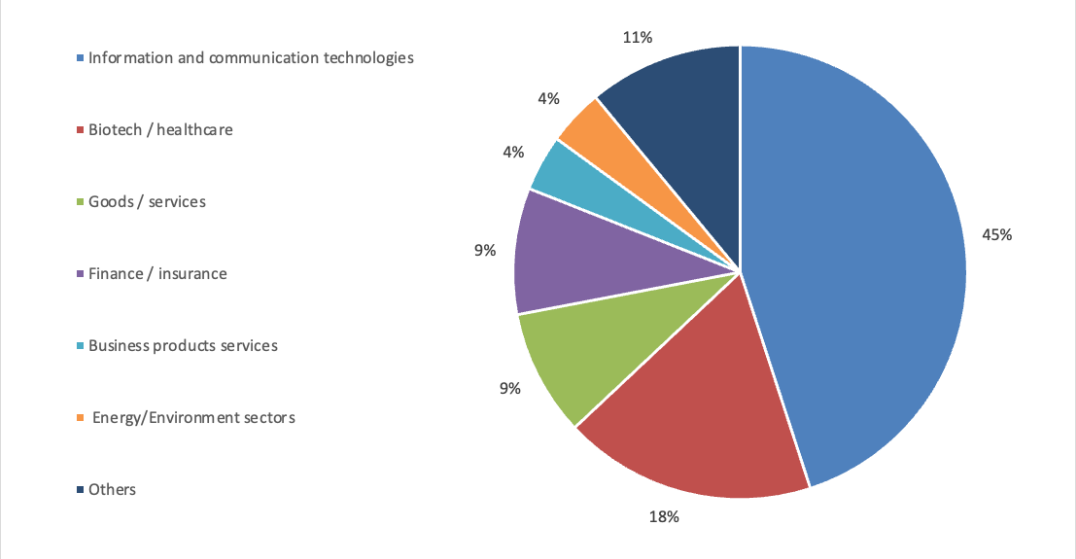

Figure 2.5.-VC investments sector breakdown[32]

The statistics is depicted in this time scale as for venture capital investment it makes sense to look at it in a longer time scale because certain investments skew quite bit.

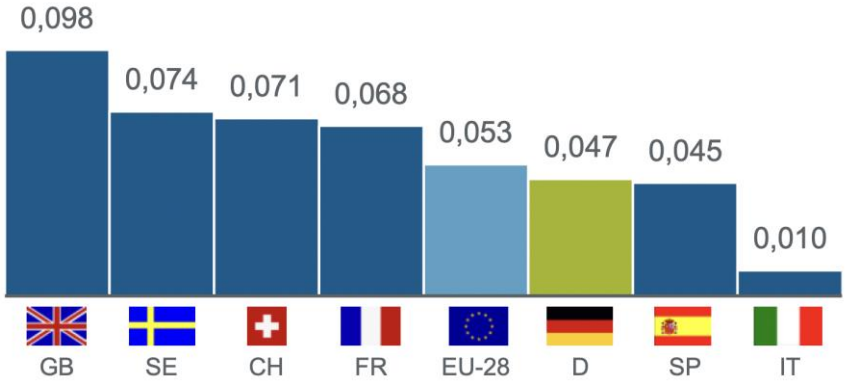

Figure 2.6- VC market in Great Britain per GDP is more than twice as large as the German VC market in precents of GDP[32].

The German VC market in a benchmark comparison.

In Germany, the VC market has been on acceleration in recent years, and VC investments have increased. But at the same time this also applies to other countries. Even the European comparison is clearing out. In terms of economic power, the VC markets in Great Britain and France have developed way better - the German market even lies behind the development of the entire EU-28. In normal state for the years 2017–2019, VC investments in Germany were at a level of 0.047% of GDP.

For the EU-28 the rate is 0.053%. For other large European economies such as Great Britain, Sweden and France, the rates are even higher. Great Britain is perceived as the EU's VC lead market, both in terms of relative and absolute market size. On average for the years 2017–2019, VC investments there were at a level of 0.098% of GDP. In relation to economic power, more than twice as much VC was invested there every year as in Germany.

To perform the breakdown of the most successful regions in Germany, leading their startup scene it is appropriate to demonstrate the fastest growing startups in the country, curated by GlassDollar[42].

Table 2.1[42]			
Top 10 Fastest Growing Startups in Germany by GlassDollar, updated: December 16th, 2020			
Rank	Name	City	Founded
1	Staiy	Berlin	2019
2	Isar Aerospace	Munich	2018
3	VYTAL	Cologne	2019
4	ExpressSteuer	Hamburg	2019
5	Getbaff	Düsseldorf	2018
6	Gorillas	Berlin	2020
7	Medical Magnesium	Aachen	2018
8	Snoopstar	Düsseldorf	2019
9	KoRo	Berlin	2016
10	VAHA	Berlin	2019

Berlin is a home for the vast majority of German top funded start-ups. There is a huge opportunity for Germany to close the gap to other global Tech hubs if governmental support is accelerated and digital infrastructure is brought to the level it needs. It is well known, Germany has two world cities: one with heart (namely Munich) and one without, but with chancellery and Bundestag (Berlin). The situation is very similar with the distribution of start-ups. After reviewing the top 50 start-ups from the past four years, 35 of the 200 prize winners come from Berlin and Munich. This means that the two metropolises must share the title of the German start-up capital[43].

Meanwhile, Hamburg follows by far in third place. The second largest German city has produced 16 top 50 start-ups in the past four years.

Finance and insurance sector is active by 4 German Unicorns (April 2021). The transportation and logistics sector are leaded by 3 German Unicorns. The highest market valuation is the country is captured by Unicorns see Figure 2.7[44] .

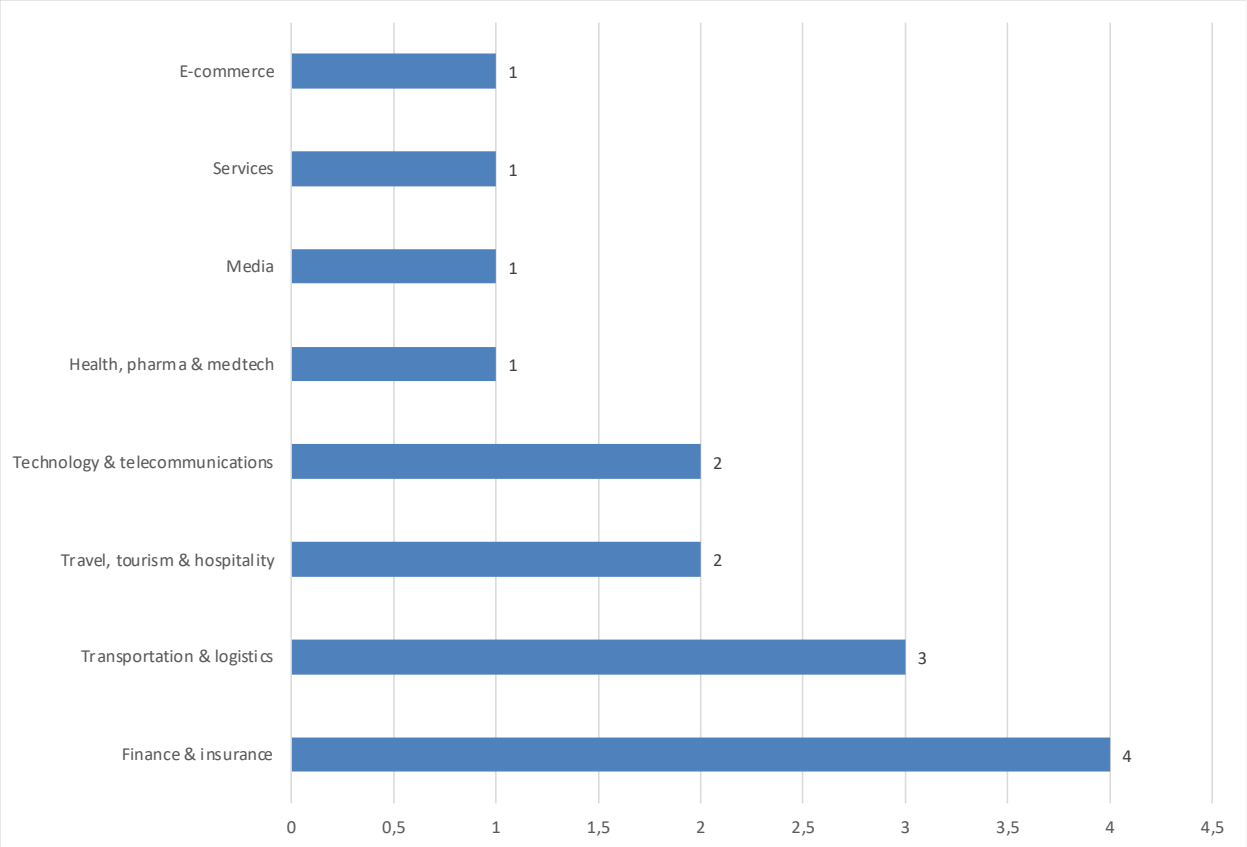

Figure 2.7- Number of unicorns in Germany as of April 2021, by industry[44].

Since the beginning of the year, the number of German unicorns has doubled. The number is constantly increasing exponentially and different statistic sources are not keeping up with the pace. There is a clear focus in the industries: almost half of German unicorns are fintech, about one in four is located in the field of transport.

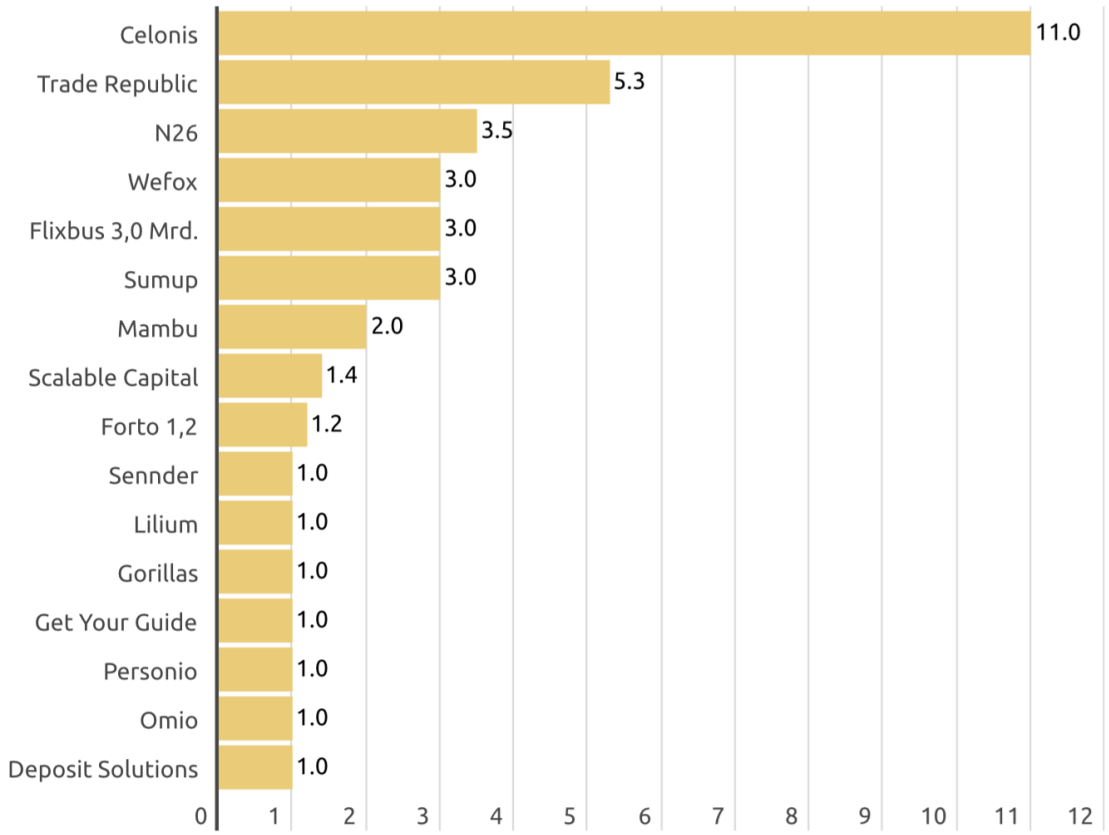

Figure 2.8- German billion-dollar start-ups and their value in billions of US dollars[45].

Especially in 2021, German unicorns have grown significantly. The boom is due to an oversupply of capital. In the first half of 2021, around 6.1 billion Euros in German start-ups - as much as in the whole of 2020. The individual financings are also increasing. The software company Celonis recently collected the record amount of an equal to 820 million Euro. The flood of money continues to drive up the evaluations. To the Gorillas delivery service, the unicorn status was assigned in March 2021 less than a year after founding - faster than any other start-up before.

The growth in the once so rare species is also evident in other countries. Today, there are more than 800 unicorns around the globe. Compared to other start-up nations, the German herd is still quite small. There are currently 411 start-ups with billions in valuations at home in the USA, there are 211 in China. Experts expect the financing boom to continue in the second half of the year. For the start-up scene,

these are the good news. However, the heated market could lead to irrational bets on start-ups that would normally not receive money – it feeds concerns about a bubble.

Defining the leaders[47].

Celonis is currently the most valuable German start-up by the Forbes magazine and it was also announced as a tenfold unicorn at the time being. The initial investment for this startup was $15,000 far back in 2011. The rise of the company took 10 yeas as the main challenge was to state the utility of the software to clients. Basically, the company sells software for analyzing and perfection of the business processes within a company. They wanted to show that there is no need for external business consultants[46].

Trade republic. In 2021 Sequoia, TCV and Thrive Capital as well as the old investors invested a considerable 900 million US dollars in Trade Republic (Berlin). The valuation was 5 billion dollars. FinTech recently has received 62 million euros (investors: Accel, Founders Fund and others. Trade Republic is a mobile and commission-free broker with which customers can trade stocks, ETFs and derivatives.

N26. Was founded in 2013. Insight Venture Partners and GIC were investors for 300 million dollars in the FinTech N26 (Berlin) at the beginning of 2019. Now the evaluation of N26 has grown to 2.7 billion dollars. While another round of investments another $100 million were received by grownup in 2020. Valar Ventures, the Singaporean sovereign wealth fund GIC and the New York venture capitalist Insight Venture Partners were the investors. Later the valuations were already 3.5 billion dollars. In 2021, FinTech then collected 900 million US dollars - with a valuation of 9 billion dollars.

The German market is ready to scale and well positioned to compete with other regions.

Points for improvement to the German venture scene would be that start-ups face tough competition for talented employees, especially IT experts. As far as fixed salaries are concerned, but they cannot win this competition against large corporations. However, the prospect of participating in the increased company value

in the event of growth success should be an incentive for many skilled workers to start or stay with a start-up. Offering simpler solutions in this regard would make it easier for start-ups to survive. It would be a measure that would also strengthen the self-sufficiency of the VC ecosystem. Profits from very successful exits often flow back into the market when the people involved in the start-up become active as VC investors.

In the conclusion to German VC Market, such points can be stated: startups create more jobs than ever before. The business climate in the German startup scene has brightened significantly - and is back at the level of 2019. The founders are even finding better and better conditions in this country: Two thirds rate the startup ecosystem at their location as good. That is four percentage points more than in the previous year.

Startups have already recruited a lot of new people last year and nine out of ten startups are planning further new hires. However, due to the shortage of skilled workers, the search for personnel is anything but easy - and, in addition to raising capital, is developing into one of the major hurdles for young entrepreneurs.

2.3 Parameters of startup ecosystem in Ukraine, current stage , strengths and weaknesses.

According to Kreston Ukraine in collaboration with the Ukrainian Venture Capital and Private Equity Association, the outline of the 2020 year for venture capital deals in tech industry was inspiring: the closed deals in quantity of 188, they were closed $533,5 million. The good half of the deals fell under small grants ($25,000-$50,000) by the virtue of the Ukrainian Startup Fund. This organization is an active investor in the Ukrainian startup funds, only in the last year the investments were $5,3 million[48].

Several Ukrainian startups managed to become unicorns only in three years, before that there were no such precedents. The famous names are: Grammarly,

Gitlab, Bitfury, People. ai, Ring, if counting jointly they have raised $1,3 billon and now are fighting for their place on the global arena.

Table 2.2
Global Startup Ecosystem Index: Top Countries[49]

Rank	Country	Rank Change (from 2020)	Quantity Score	Quality Score	Business Score	Total Score
1	United States	-	19.45	101.17	3.80	124.420
2	United Kingdom	-	8.16	16.86	3.70	28.719
3	Israel	-	5.48	19.14	3.13	27.741
4	Canada	-	6.58	9.75	3.55	19.876
5	Germany	-	3.64	9.92	3.49	17.053
6	Sweden	+4	2.40	9.24	3.78	15.423
7	China	+7	1.33	11.46	2.34	15.128
8	Switzerland	-	3.82	7.58	3.54	14.943
9	Australia	-2	4.46	5.87	3.50	13.835
10	Singapore	+6	3.22	7.69	2.84	13.745

Following the Global Startup Ecosystem Index 2021, powered by StartupBlink, the Europe was stated as the leading region with the most cities in the top thousand. The number of cities in the rankings has increased by 47, which is an increase of 4,7% in one year. But the European experience cannot be stated as entirely positive as 25 of 44 the ranked European counties have dropped their indicators[49].

According to the annual Global Startup Ecosystem 2021 rating from StartupBlink, since 2020 Ukraine has dropped 5 positions in the list of start-up ecosystems and now occupies 34th place in the world.

Kiev still ranks 1st in the ranking of Ukrainian cities, but in the world ranking the capital fell by 16 points and takes 48th place. Though, Kyiv is very positively showing itself in terms of Software and Data, also Marketing and Sales technology.

This city is constantly attracting foreign investment: tech giants as Huawei, entrepreneurs from abroad, venture capitalists, incubators and accelerators are starting to build up here, international talent is also looking for recognition here. The amount of highly qualified IT professionals also adds up to the attractiveness of Kyiv for international creators looking for developers for their startup.

6 Ukrainian cities are conquering the top thousand globally in 2021.

Table 2.3
Startup system overview - national ranking[49]

National Rank	City	Global Rank	Rank Change (from 2020)	Total Score
1	Kyiv	48	-16	8.436
2	Lviv	255	+99	1.259
3	Odessa	394	-38	0.551
4	Kharkiv	513	-72	0.355
5	Ternopil	787	-63	0.179

Lviv surprised this year by taking 2nd place in Ukraine, Lviv climbed dramatic 99 positions up and took 255th place in the world. Now the road for new innovative projects is open not only in Kiev. The fall in the world ranking for Ukraine was caused by another cities` positions this year. For example, Odessa fell 38 spots, Ternopil 63 spots and Kharkiv has decreased 72 spots.

By the global environment, the Ukrainian startup ecosystem is perceived as inspiring example as it manages to create technology that is scalable and global while experiencing severe economic difficulties.

The nature of the description of strength and weaknesses of startup ecosystem is dual, almost every strength bullet point has its downside. They are described holistically from both developers and private and public stakeholders.

The main strengths to mention while describing Ukrainian startup ecosystem are:

- the talent of the developers working in local development centers. Ukraine continues to support a strong scientific base, that`s why a lot of skilled programmers and developers are coming from Ukraine;
- low tax program for residents of DIIA City, 9% - corporate tax, 8% - labor tax, 5% simplified tax for private entrepreneurs but just for IT sector;
- VC common legal tools as convertible loans, liquidation preferences, warranties, NDA, NSA;
- the cost of living in Ukraine is low by western standards;
- developers are well paid by foreign clients;
- dedicated members of Ukrainian startup community attract Foreign Direct Investment and business angels directly through them;
- there are some guaranties for IP protection;
- Ukraine is on the path to greater success and a leadership role in the global startup ecosystem;
- infrastructure and quality of life issues improving in a slow pace;

Describing the weak points of Ukrainian startup ecosystem:

- So-called brain drain is happening. Ukrainian talent is constantly attracted by foreign companies, either remotely or by immigration due to bigger opportunities and higher financial remunerations abroad;
- Public and private stakeholders have a hard time with focusing on actively keeping their impressive and talented workforce in the country with forward thinking incentives;

- geopolitical challenges scarring away investors who are non-familiar with the ecosystem closely;
- high bureaucracy index is still a problem in Ukraine;
- problems of intellectual property protection;
- taxation and low governmental support in venture enterprises, this in turn leads to a lack of foreign investment. Ukrainian public sector may not have enough resources to actively support the local startup ecosystem;
- Financing problem;

The finance weak point is a huge topic for Ukraine and should be described more thoroughly.

There are very few investors in Ukraine who have a complete set of everything that is needed to finance startups, especially in the early stages:

1)Sufficient expertise to support and help startups from different industries;

2) Enough funds to invest in both the required number of startups at an early stage to get the best ones, and for subsequent funding in the survivors;

3) A network of acquaintances and a reputation among foreign investors in order to be able to attract them to co-investors, and they, in turn, could take upon themselves the further introduction of companies to their market.

Full-fledged venture funds are still to expand its activities. Rather, more common are angel investors who invest their own money under various guises, but at the same time want to be investors of later stages. That is, precisely by venture funds. They got burned on early-stage investments and no longer want to be sprayed into small deals that are very risky, time-consuming and have enough expertise to help startups. At the same time, there are not enough startups in Ukraine that have grown to the required size to receive investments in later rounds. As a result, we get a kind of dissonance in desires and opportunities.

It is important to highlight venture investors in Ukraine as they are the drivers of the industry`s success. The country obviously has issues with the protection of intellectual property and copyright, the typical solution for this issue that founders come up with is the registration of their business in foreign countries. But this issue

does not interact with the fact that there are venture capital investments in Ukraine and it`s getting more and more of them.

Top venture investors in Ukraine[50]:

1) U.Ventures.

According to CrunchBase, they were founded on September 2016 in Kyiv by the U.S government, they mainly invest in early stage ventures, seed stage. The founding capital equals to $ 5 million. Their main focus are Ukrainian and Moldavian seed-stage startups with potential to grow globally in their segments. They`ve already invested in such startups: Petcube, eTachki, .io, Rallyware, YouTeam and a few others. For example, the amount invested in YouTeam on a seed investment type was $300,000[51].

2)Ukrainian National Startup Fund was founded on December 10, 2018. Among the industries they are investing in are: financial services, funding platforms, information technology. Their last funding type is seed. They are a state investment fund for startups. Formation funding was $ 2 million. Their aim is to promote the development of the Ukrainian startup ecosystem, for the moment they can be qualified as the largest Ukrainian angel investor. They are also providing education for Ukrainian startups at global acceleration platforms The amount of already funded startups is 299. Their latest investments were: Clasee, Casers, Electronic KYC, Zirity, Eruditio,- all pre seed round[52].

3)AVentures Capital was founded in 1999, Kyiv according to Crunchbase. Founded themselves with $30 million. They concentrate on early and seed investments for software technology which aims to expand to global markets. In their investment portfolio: Augmented Pixels – drone navigation technology, BeLive – broadcasting tool for Facebook live, Bookimed – international patients marketplace. The latest investment: OKHOME raised $3,000,000 Series A from AVentures[53].

4)UFuture is a Ukrainian company founded by Vasyl Khmelytsky, basically turning into life his investment projects. The spheres of investments are vast, among them: impact investing, industrial engineering, information technology, innovation

management and others. The assets of the company are estimated $ 500 million. The impact investment for the company means investments in education, among the initiatives: K. Fund, Kyiv International Economic Forum (KIEF), School for small and medium sized entrepreneurs[57].

5) MagneticOne Group ventures, founded in 2001 by Ruslan Savchyshyn as MagneticOne venture, they are focused on tech companies, they also provide marketing and management consultancy apart from just the investment. For now, they`ve made 30+ investments and 3 exits. Store Manager for osCommerce was their first projects, now they`ve created much more brands, among them: Data2CRM, ServiceOne, SupportOne. The last news: on April 7, 2021 they`ve become a technical partner for AURA project implementing new technologies to music arts[54].

6) Noosphere ventures. Managing assets to transform companies with high potential to real leaders of the market from 2014. They are concentrated on particular segments of the space ecosystem. They are located in California, U.S and operate mainly in Asia and Western Europe, but Eastern Europe is also in the radar. The founder is Max Polyakov and his company already has $500 million of revenue reported[55].

7) TA Ventures is international venture capital company, main operational activity is performed in North America and Europe. Founded in 2010 by Viktoriya Tigipko. The twist of this company is in giving the portfolio companies the access to R&D outsourcing teams in Central/Eastern Europe. The industries they specialize in: enterprise software, health care, logistics, finance. Their initial founding was $50 millon [56].

The Ukrainian startup ecosystem is appearing right now, in front of our eyes, considering statistics and growth of the domestic unicorns in the last three years. The accelerator an incubator culture is only starting to show itself, the same Ukrainian National Startup Fund which makes significant difference was founded just three years ago. The effects of the support of innovation initiatives by the state is beginning to be tangible.

Ukrainian Startup infrastructure[58]:

1) 1991 Open Data Incubator, incubator of projects based on open and big data. It was founded in 2016 and concentrates on processing big amounts of open data to useful startups with a mission to citizens, business and government. Open Data Incubator is busy in such sectors as industrial development for infrastructure, agriculture and energy, analytical systems, electronic services, solutions for municipality. They are non-governmental and non-profit. For now the amount of startups in their list is 170.

2) Sector X is another Ukrainian incubator, acceleration program. Their statistics state more than a thousand startups in CIS unities. Among their clients are well-known Ukrainian companies as Foxtrot, L`oreal Ukraine, Ukrtelekom. They make special blocked seminars – programs concentrating, for example, on entering a certain market. They were created jointly with Unit.City.

3) Unit.City is the first Ukrainian innovation park. They were opened in 2017 and already have 110 residents. It is an innovational space for collaboration of all kinds of institutions and individuals for the sake of the development of Ukrainian startups. Their mother company is UFuture and the value of the project is approximates to $ 500 million. The innovation park has laboratories, campuses, eight accelerators, the Sector X above is among them and three investment funds.

4) Startup Ukraine position themselves as an educational center for entrepreneurs they have a variety of options for any needs of creators. Their path started in 2012, since that time they are actively educating on business creation. Anna Petrosa is the founder. Business camps, online education, complex programs – all these formats are available in Startup Ukraine. From the beginning of their activity, they`ve educated 14000 entrepreneurs through their programs.

5) GrowthUp business accelerator (Kiev). It is the pioneer in Ukraine in the field of technology-based projects. They provide support, consulting startups on expansion for European and US markets, investments range from $25,000-$50,000.

6) iHUB (Kiev, Lviv, Chernihiv). Not a classic accelerator, as it is part of Seed Forum not-for-profit organizations and an official UNESCO-UNEVOC center in

Ukraine, supported by the Ministry of Foreign Affairs of Norway. The first month acceleration is provided for free. This hub provides access to international mentors through international networking and Seed forum conferences.

7) Polyteco (Kiev) is a business incubator created by National Technical University of Ukraine "Kyiv Polytechnic Institute". Their aim is to provide guidance for commercialization of the ideas of young entrepreneurs, in particular, students and postgraduates of this university.

8) Science & Business StartupBootcamp free of charge is a quarterly event from the Ministry of Education and Science of Ukraine and the Innovation Development Fund (Ukrainian Startup Fund), which aims to raise awareness of business, marketing, sales, investment and innovation among scientists, startup developers, companies, experts, investors and the media.

9) From the latest news about new programs: literally December 3 was the day when launched Ninja Ukraine Acceleration Program, the focus is on the Asian market entry. This program is dedicated to seed and pre-seed startups and is 3 months long.

To fully describe the startup ecosystem of Ukraine only one point is missing – the startups themselves. There are five startups that are now conquering global markets together made around $ 9 billion. This number doesn`t include companies with physical products and is concentrated on companies with technological features. Among them are MacPaw, Ajax, People ai., Grammarly, GitLab and Restream. The investments in these companies approximate to $ 1.15 billion[50].

Almost all these companies have already passed their seed stages and are fully functioning growing businesses. These is no necessity in huge staffing – all the companies in average have a thousand of workers. The founders are considering propositions for purchase that come to them and the numbers are large enough to think about it, for example up to $ 100 million is the justified sum that the founder of Letyshops would consider for a review. The company Ajax knows the value and the potential of their developments and is not yet ready to sell even for the amount five times offered to Letyshops. All these companies have their R&D in Ukraine.

Table 2.4

10 positions from the rating of startups in Ukraine according to Forbes 2021[59].

Place	Information	Industry	Valuation	Investment
1	Gitlab	Development	$6 billion	$434 million
2	Grammarly	Web services	$1-2.5 billion	$200 million
3	Ajax Systems	Smart devices	from $500 million	$11 million
4	People.ai	CRM	$420-500 million	$107 million
5	Restream	Streaming	$220-250 million	$55 million
6	MacPaw	Applications	$100-300 million	0
7	Jiji	E-commerce	$150-200 million	$50 million

The conclusion for this sub chapter would be that Ukrainian startup ecosystem is already in the growth stage, speaking startup terms, it is pretty young, newly discovered unicorns made themselves visible just in three years, the perspectives are indeed astonishing. The developing startup infrastructure also started to be more active in the recent years. IT sector remains at the forefront for reasons highlighted in paragraph strengths and weaknesses. Ukrainian venture capital companies are stating their names loudly on the global arena and a lot of them are actively promoting the talent form eastern Europe.

CHAPTER 3. IMPLEMENTATION OF WORLD PRACTICES, STARTUP CREATION AND MARKET ENTRY

3.1. Methodology of a startup creation

Startup creation is a compound and holistic process, demanding not just not individual skills but combination of those in one person or a group of highly motivated and bound together individuals to due to the centricity of the importance of a valid idea for a startup.

At the moment, neither among the startup creators themselves nor among the scientific community there is as such a single set of rules or actions for the greatest probability of creating a successful innovative product or service that would be a perfect product-market fit and will enjoy great success.

Nevertheless, in our opinion, there is a certain framework which in case of adherence to which, the possibility of successful outcome is increases due to consistent and systematized search for answers to questions that many startup creators initially do not pay attention in the course of primary creation of the ideas and their further development.

On the following pages the substantial pillars are to be discussed.

The main milestones that are expected by the investors in the pitch would be determined as:

- The problem and opportunity
- The value proposition , USP
- Business model creation
- The Go-to-Market plan
- Competitive analysis

- Team
- The product demo

The milestones above are to be considered as the main ones but should be adjusted to the product specificity, the activities that are listed below are the ones to be performed in order to come up with a successful final pitch and product.

- Success factors and market types
- Global market trends examination
- Market assessment and sizing; definition of the market opportunity
- Hypothesis validation
- Digital marketing
- MVP creation and prototyping
- UI/UX design

The pitch milestones described above are to be disclosed in the subchapter 3.2 and demonstrated on an example.

While the idea is still in in the development phase, there are some questions that are dedicated to the more detailed and in-deep understanding of the idea by the creators themselves.

Among such questions would be appropriate: What is the central value proposition of your solution? What is the most important customer need that your idea fulfills?

The perfect timing is an extremely important question as it makes clear is it now the time to bring this idea to life or not, is the chosen market growing and showing potential, even a new one can be created, or the realization may come that the idea is not new and someone already started to implement the idea that creator has in his head. Going into the historical development of the product category, outline of current trends that will make this solution possible should be performed.

Another important question is finding out what creates value for customers. The next step is market analysis, knowing who are the customers / customer segments for the idea, how big are the respective segments (market size), how are

the segments developing (market growth), which alternative providers and solutions are already on the market and what do you do better / faster / cheaper than existing solutions (competitive analysis & unique selling proposition).

Who are the main competitors? In which development phase are the products of these providers? Who supports the competitors (investors, industrial partners, etc.)? How long have the competitors been on the market? These questions should be answered while taking time and carving the idea.

The next step is a business model, it was about how the value is created with the business idea, how the money is made with these values, how is the profit stream composed? (Quantity and prices according to customer segment). Resources and activities of the business should be outlined. The most comprehensive tool for this step is the CANVAS framework. It is a one-page diagram describing all business processes of the company: supply, infrastructure, consumers and finance. It's also the core of the book Business Model Generation (co-authored by Osterwalder and Pigneur), which has sold over a million copies in 30 languages. The authors of the framework describe it as a "Shared language for describing, visualizing, assessing, and changing business models[62].

Canvas business model is bult from 9 blocks, which can be combined into 4 groups, each of the blocks describes its part of the organization's business model.

They are: key partners, key activities, the value proposition, customer relationships, supply channels, customer segments, cost structure, key resources, income sources.

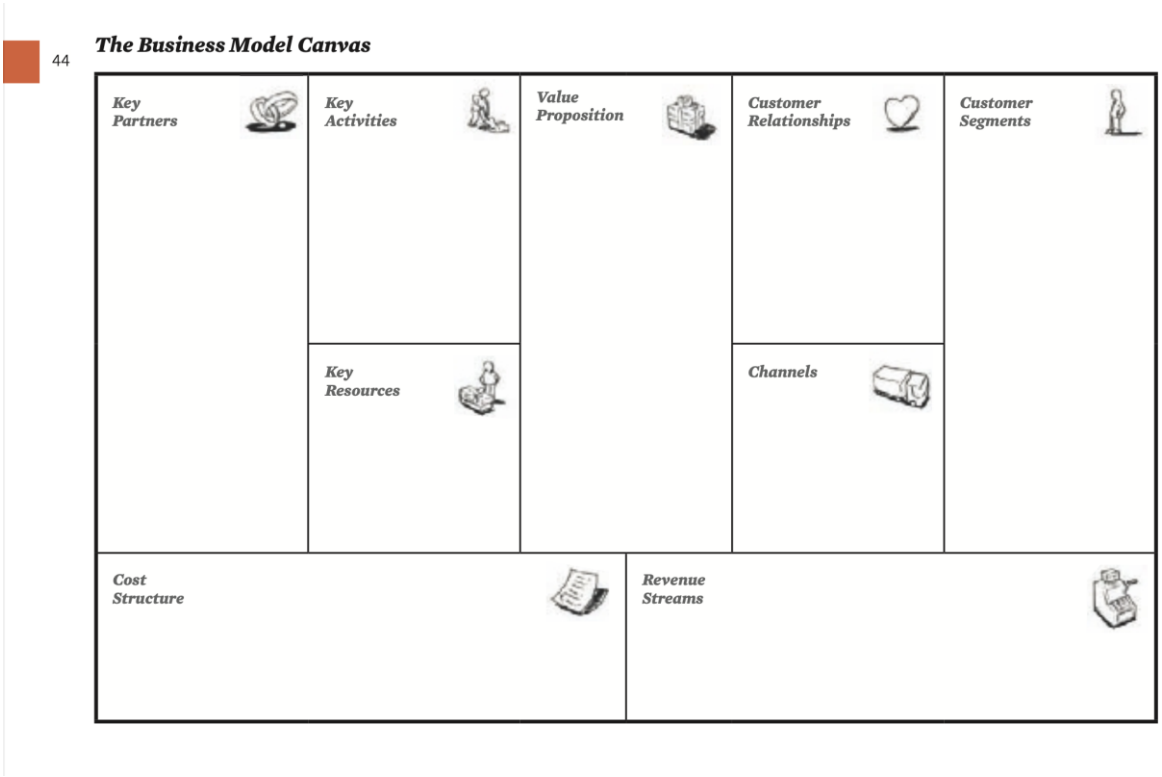

Figure 3.1- The Business Model Canvas[60]

Main groups and blocks within the business model:

Infrastructure - describes how and with the help of which the company produces value, in fact, the basis of the enterprise's production processes is determined. Consists of three areas:

Processes are the most important processes in the value chain for a company's customers.

Resources are the key resources that are required to create value for the company's customers. Resources can be human, financial, means of production, intellectual.

Partners are key partners, the relationship with which can affect the process of creating value for the company's customers. The forms of interaction with partners can take various forms, for example: a key supplier, a strategic alliance, a joint venture, etc.

Offer - describes a product or service that a company offers in the market. Consists of one area:

Value proposition - a set of products and services that distinguish a company from competitors in the market and create value for customers. The value of products and services offered on the market is usually achieved due to the following characteristics: novelty, performance, flexibility and adaptability, completeness, design, brand and status, price, risk reduction, availability, convenience.

Clients - describes the main market segments or clients, the service of which the company will primarily focus on. As well as the main processes and ways of working with clients. Consists of three areas:

Customers - A company must first understand who will use the products or services it offers, what their needs are, and what are the specifics of the target market. Different customer groups include: mass market, niche markets, market segments, diversification (focusing on different market segments at the same time), customer interdependence (the company serves the needs of different customers within one proposal).

Distribution channels are a way of delivering a product or service to a customer that meets the needs of speed, efficiency and cost.

Relationships - how relationships with customers will be built, how the company will acquire new customers, retain existing ones and develop relationships with them. Various forms of customer relationship building include:

Personal service is a personal interaction between a company employee and a client, usually in sales offices, by phone, via online chat, etc.

Exclusive personal service - similar to personal service, but with a dedicated service manager for each client.

Self-service - customers self-serve themselves through the tools offered by the company.

Automated service is similar to self-service, but the company's systems can identify the customer's needs and offer the most interesting proposals.

Customer community - direct interaction between the company's customers, the company provides a platform within which customers can exchange ideas, advice and solve various problems.

Collaboration - Clients are directly involved in the design process of a company's product or service.

Finance - a description of the features of the organization of the company's financial flows, both incoming (pricing) and outgoing (cost structure). Consists of two areas:

Cost structure - a description of the main financial models and investment objects of the company that must be incurred to create a product or service. The main elements in the description of the cost structure: fixed costs, variable costs, cost optimization models (economies of scale, outsourcing of non-core functions, etc.).

Sources of Income - A way of obtaining funding from each of the market segments in which it operates. The following sources of income for the company are distinguished: product sales, usage fees, subscription fees, leasing, licensing, intermediation, advertising.

This framework is advised to perform as one of the primary steps, as all subsequent work will be done as layering on those answers that were found after completion of the Canvas framework.

The phase which follows id defining the market opportunities, as having a big market is a bigger risk. Defining the core elements of each startup – team, product and market. Finding the product/market fit.

To create own startup, it is superior to know the startup types in general. The scalable type of business is the best as it has a potential to growth. Among the essential elements that lead to success, these are: timing – the most important, team on the second place, idea is the third, then goes the business model and then funding.

Market types for startups. There are four of them: existing, resegmented, new and clone market. These are prone to discussed by the team of creators and then

the most suitable one is to be chosen by the characteristics of each one. In this part, it is crucial discuss the market environment for the idea and find out if it's the right timing for it.

Market assessment and sizing should be performed after defining the market type. The TAM SAM SOM technique is the most suitable one as the approximate numbers are needed at this point. There are two ways to conduct the market analysis, top-down and bottom-up. The fist way shows the most optimistic case, the second one shows the realistic or worst scenario. TAM (Total Addressable Market) can show the total existing market demand. SAM (Serviceable Addressable Market) is basically the market slice one exact company which is considered can cover, taking its capacity into consideration. SOM (Serviceable Obtainable Market) the realistic share of market that can be obtained.

The development of an efficient and effective business model is the next step. They are thoroughly described in the subsection 1.2. In order to create a business model, the most modern approach would be to go with the 55 Business Models, learn to combine them and come up with a new one working best with the idea. The challenge of today is the missing innovation. Competition is no longer between products or processes, but between business models.

Also, a simple and useful tool is Business Model Triangle, it is a specific configuration of the four core elements(who-what-how-why?) of a business model. It answers the questions: what is offered to a customer, how is the value proposition created, who is your target customer, how is revenue created.

Eventually, real customers are the ones to decide the factual success of the products. That`s why interaction with them even before the launch of any product is required. Firstly, no business has them at all when creating a new product. Even individuals who are ready to pay for the product, they are only potential customers, as they haven`t seen and used the product yet. This is the main thought that should be stated. "Real customers" on that early stage is not the right term. Hypothesis validation is performed at this stage to see if there is any real interest in the product.

So, the next logical step would be the hypothesis validation. The most comprehensive tool for empirical validation of the idea is the Javelin Board tool. Hypothesis is a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation. Too many startup & product launches fail, Javelin Board = Validation Board, is the best use before simply run the idea, it prevents business ideas from failing. The concept is based on data of 50.000+ entrepreneurs.

The board is split into brainstorm & execution areas, it has hypothesis categories: Customer, Problem, Solution, you state the riskiest assumptions and the methods to test your hypothesis: interview, pre-sell.

Basically, the entrepreneur puts riskiest assumption, for example, that customers will actually use the app created, then the field interviews are performed and the data is rated. After the process the conclusion is made based on the results, in this way real feedback about the product is collected. It is better than not doing any interviews at all but the selection is still too small. The truth is until the product is sold and time passes by there is no real warranty or prediction that the goods will be selling as intended. While getting to the stage when there are any real customers it is crucial to establish a deeper relationship with them than just buying a product, emotional branding is a whole different topic to explore, it is also important not to lie to the customer, even if something went wrong, the loyal customers will cheer for you success and close eyes on occasional inconveniences.

The next core milestone is digital marketing, the target market is to be defined, a customer persona using Facebook Insights, audience research is performed to find out who is exactly our customer, after the research the customer need is defined and finally discussed where can be find the customer.

MVP - minimum viable product creation is a step closer to a successful outcome. It is a mean through which it is possible communicate to the customer how the product will feel, it creates the closest experience of having this product

or service. Functional and non-functional MVP`s are defined as the types of possible MVP.

MVP (Minimal Viable Product) is used to:

- Release a product/service in its minimum possible functional scope
- Early stage product development is tested for detailed customer feedback
- Feedback is used for further development

MVP has to offer a good solution for early adopters to buy/use it, has to show early adopters some future benefits, has to create a feedback loop which will improve the idea, types: Concierge, Wizard of Oz, Landing Page, E-Mail.

Functional vs. Non-Functional MVP – there are the forms MVP .

Functional pros: validates customer action, real conversion, no forecasts needed, improves customer relationship. Cons: high costs, high effort in product development, high effort in further management.

Non-Functional pros: low costs, low effort, easy was to generate customer data. Cons: only measures intentions, you still have to create the product (under pressure).

To create an MVP, you need to firstly choose which type (Functional vs. Non-Functional MVP) you need and then the specific type.

For example, we need a functional one, as it gives the real experience, and we want to implement the Wizard of OZ, we`ll need to do actions to express the solution, and cover actual functions.

Aadwark is an American company: Algorithmic Q&A service platform. The process was different to their system now. They needed an investment to do the costly algorithm for their platform and replaced the algorithm with real people to answer the questions, employees manually assigned Q&A‘s to users, later on algorithm was integrated.

So, Wizard of OZ Is all about the fake it till you make it approach and it gives the full experience to a customer, without him even knowing it is not the actual service yet. MVP can be a site, an app wireframe is click prototype, a real product or anything that suits best to the product in process of perfecting it.

UX/UI Design. What is UX/UI-Design?

User Experience (UX). The user experience (UX) is what a user of a particular product experiences when using that product

User Interface (UI) is what the customer sees while interacting with your product, it includes all the possible visual of the item.

The technical circumstances are becoming more and more equal, the relevance to retain your customers and stand out from the competition with a great and unique usability and visuals, becomes a real USP. For this reason, it is beneficiary to use UX and UI Design elements.

To conclude, business creation is a complex process which requires performing a huge number of actions, the more consistent is the preparation part, the more thoughtful will be every aspect of the product to be created. The developed toolkit and actions described above are the comprehensive tools we recommend to use in order to understand the product and the audience fully and clearly.

3.2. Startup creation, development to a seed stage on an example

Mobility, FinTech and Software businesses show a strong rise in funding volumes in 2019.

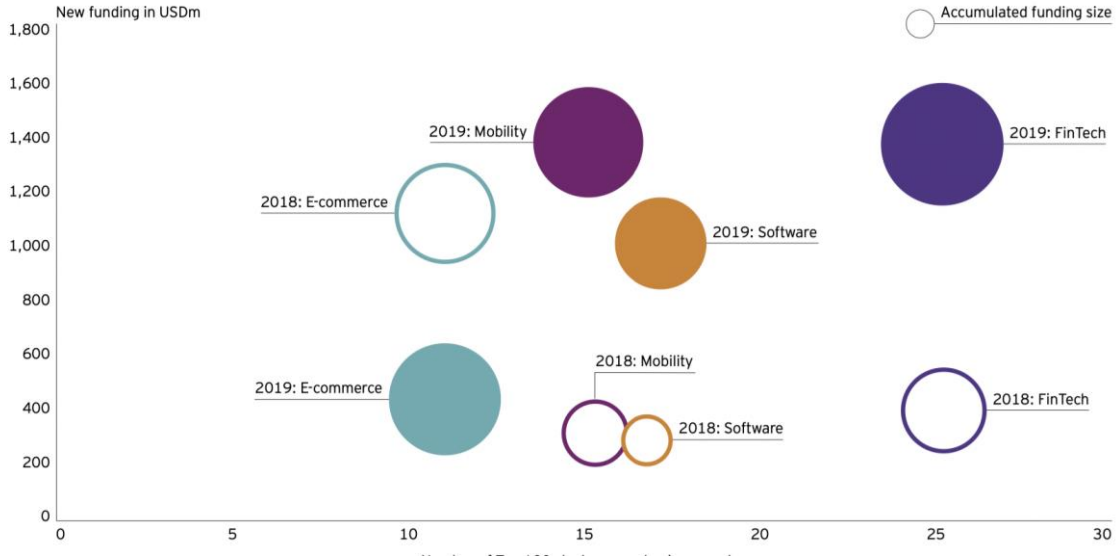

Figure 3.2.- Number of Top 100 start-ups per business sector Germany[61]

2018 vs. 2019 development of Top 100 start-ups per Top business sectors: number of start-ups, new funding, accumulated funding. Similar to 2018, the Top 10 fundings in 2019 represent a diverse blend of companies, mainly focused on business models related to FinTech and Mobility as well as software solutions. At the same time, social venturing as the up-and-coming trend in the German VC ecosystem. There is an evident trend in the ecosystem that entrepreneurs are increasingly trying to solve pressing societal problems through technology. Data supports this clearly. The trend is unfolding all over the world. Traditional funds are applying these learnings to companies that pursue a positive purpose and help these founders achieve scale to have an impact. This reaches beyond philanthropy or the historic impact investing[61].

The startup example, which will be shown below is a bright showcase of finding the right market fit and timing for the business opportunity as it is a FinTech startup in Germany with a sustainable finance feature perceived to resolve societal problems through technology.

Basically, the following showcase would be the result of following the framework described in the sub-chapter 3.1, for the sake of practical applicability and demonstration of the methodology.

Problem description. Sustainable finance is perceived as a rocket science from the first sight.

So, the main problematic voiced at the pitch for this example would be: what does the bank do with deposits; is this stock sustainable; why does it take for the bank, broker and google to invest sustainably;

Solution description. Simply sustainable finance. Our digital platform provides a user-friendly solution to revolutionize banking and investing. It is safe, hassle-free, and transparent, sustainable finance.

The market evaluation. The future of finance is sustainable. The analysis was performed top-down by the framework described in the previous sub-chapter.

The Figure 3.3. Depicts how the Market evaluation slide may be arranged in the final pitch.

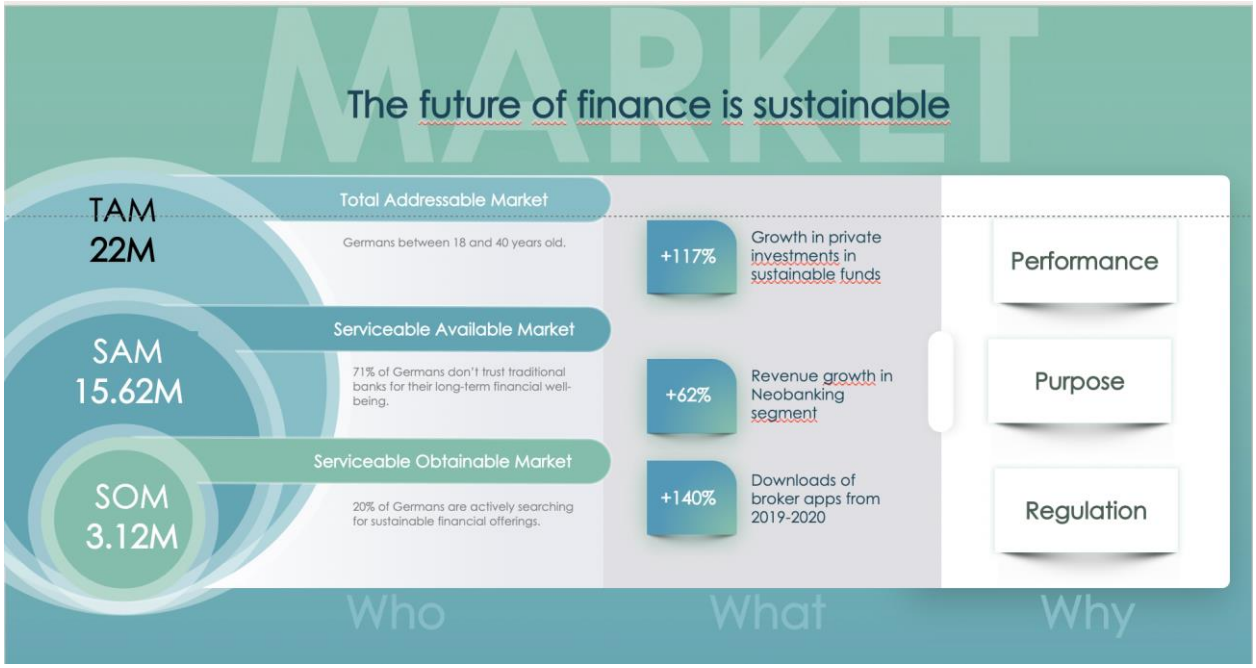

Figure 3.3- Market evaluation slide

Total Addressable Market was estimated $ 22 million. Serviceable Available Market was estimated $15.62 million. Serviceable Obtainable Market $ 3.12 million.

Business Model Canvas.

Key partners:

- Banking Back-End Provider (Solarisbank AG);
- Trading center Mastercard + Cash Withdrawal Providers;
- Strategic Partners Legal Consultants;
- Technical Partners;
- Sustainable Lifestyle Brands;
- Investment Partners/Bonds;

Key Activities:

- Research;
- Product development;
- Community Building/Sales& Marketing;
- Customer Support;
- Network Building;
- Licensing;

Key Resources:

- Brand & Community;
- The algorithm;
- FinTech Bank License;
- Platform/Software;
- Partnerships/Ecosystem;
- Servers;

Value Propositions: the sustainable revolution of banking and your finances.

- We use deposits to invest solely in sustainable & responsible bonds;
- Evaluation of bonds, stocks etc. against top sustainability standards;
- Completely digital and branchless banking – secure finance no matter where you are;
- Low-fee banking;

Customer Relationship: no branches = digital only.

- In App/Online customer service channels (AI-based);

- Phone support;
- Community (Referrals, Q&As);

Channels:

- CRM through Community (Word of Mouth)/Social Media;
- Account set up in App/Online;
- In-App Brokerage;

Customer Segments by generation purpose:

- Young Germans (18-40);
- Digital Natives & Enthusiasts;
- Early Adopters of branchless banking;
- Well-educated;
- Annual income >35k EUR;
- Smartphone Users;
- Sustainability conscious consumers;
- Zero Waste;
- Fair Fashion;

Cost Structure. Mostly fixed costs, but strong scalability.

- Technology development (platform solution/App, the algorithm);
- Legal fees (regulations, compliance, licensing, patenting/copyrights);

Limited variable costs:

- Operating Costs (Labor, servers, etc.);
- Community Management and Marketing;

Revenue Streams. Business Model: Subscription + Customer Loyalty + Digitization.

Primary:

- Account Subscription Fees;

Secondary:

- Fees for value added services (trading fees, Mastercard)Ratchet Fees (Currency exchange rate fee, global money withdrawal);
- Commission from trading centers;

- Proprietary trading;

Table 3.1 Initial funding needed for the app	
Fintech (or virtual) license	$30.000
GmbH registration	$30.000
App development	$150.000
Marketing campaign	$100.000
Legal consultations	$25.000
Total	$335.000

Unique selling proposition. Value proposition.

We do the hard work. So, you don`t have to. Us changing the world one investment at a time.

Competitive landscape. A good idea is to do a petal competitors' diagram, the overview petal competitors' diagram is demonstrated on the Figure 3.4. The competitors on the diagram are grouped by types which makes it a lot easier for segmentation of competitors. That`s why the petal diagram is a commonly used tool for this analysis. The competitors are analyzed taking into consideration their business models and the result is more comprehensive than the regular perception map.

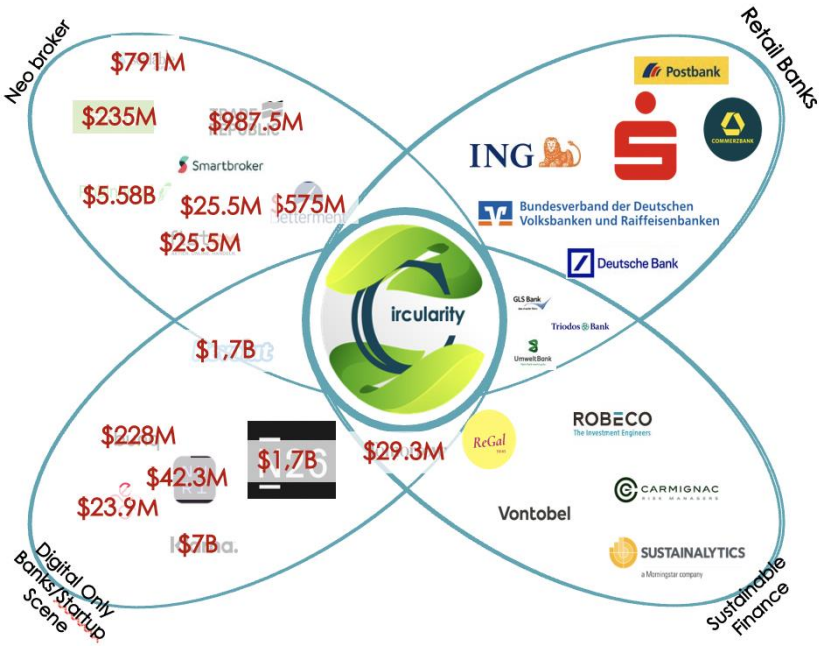

Figure 3.4-Competitor petal diagram

Milestones background is showcased below.

Table 3.2 Milestones Background for the app	
Fintech (or virtual) license	18 month max.
GmbH registration	1-3 weeks Opening in the beginning of the year not to prepare annual accounts for the current fiscal year, which in Germany ends 31 December.
App development	3-6 months (client app development, back-end development as well as a basic admin panel.)
Marketing campaign	marketing plan, within 8-12 weeks Marketing campaign (after the launch) 3 months
Legal consultations	3 months (before, during, after the launch)
App algorithm	8- 12 months (automatic self-enhancement)

Marketing strategy for the app.

We educate:

- Creation of bite-site videos to educate users. Sharing on all platforms YouTube, Reels, Your App , TikTok, etc;
- Sustainability accent . Educating everyone seeking systematized information on sustainable investments or anyone seeking particular financial advice;
- Our app is user-friendly and well-thought (consumers spend about 5 hours a day on mobile devices);

Influence:

- We involve big and small influencers into our marketing campaigns, celebrity partnerships (authenticity and credibility of these influencers is key);
- customer loyalty to the person they are subscribed for;
- outstanding celebrity appearances contribute to the brand image (their brand has to be focused on sustainability and maybe even finance);
- influencer marketing can be expensive, when paired with powerful branding principles, the investment pays off;

Building the trust:

- When it comes to finances, people seek security;
- We transparently state our certificates, compliances and our security protocols;
- The pricing , fees and benefits are completely clear to our customer;
- We provide data usage information when someone signs up. Users can also revisit their privacy information anytime from the privacy settings option;

Incentives:

- Our clients are our best marketing tool;
- Cash backs;
- Joining bonus;
- Referral bonus;
- Cash rewards on achieving a milestone;
- We offer discounts to our influencer`s customers;
- Building loyalty to the brand is an extrapolating process, but only when your client is your best advocate;

The prototype can be performed in different tools, Figma is a useful tool for this aim. It has some disadvantages as for being not very user-friendly. But once the interface is conquered it is a very useful tool for quick clickable prototype creation.

Among the core elements of each startup are : team, product and market. And after timing, the team is the essential element that leads to success. Timing is the most important, team is on the second place. So, team is the fundamental component as without the right team, the idea would not be implemented into life at all.

For obvious reasons, the team hasn`t been described above, as each startup needs its own skilled specialists. Each step requires professionals in all different fields of knowledge are required, this is the most complex part of creating international business or a startup, this is an autonomous project and a manager without a UI/UX designer would have a hard time trying to create a prototype by himself or trying to make the right marketing campaign without a marketing expert with holistic knowledge, one person is never enough as he/she cannot embrace everything in the project without giving up the quality.

That`s why creating a good team is an essential, a good team is created in years, never in a day or two, finding professionals for the project in different countries is usual the case, and it is always a trial and error method as the human factor is in place.

There is a set of skills needed for every position in a startup.

Sales/Marketing — sales heavy for B2B and marketing heavy for impulse, consumer.

Engineering/Technical —building a working product on some level.

Design — determination of what to build and how the product experience best fits the customers.

Emotional IQ/Leadership — managing emotions/focus in the beginning and transitioning to others while growth.

Domain Expertise — expertise in the market the startup is entering.

Basic Business Acumen — how companies work, how accounting works, how to stay out of legal trouble with employees, etc.

Most initial founding teams are lopsided in some way. This is initially fine but rapidly becomes inexcusable - especially when you are asking other people for their money and time.

The soft skills that many startup companies today are looking for include:

-Communication Skills. Being able to communicate well is a crucial skill

-Self-Awareness

-Project Management

-Perseverance

-Team Mentality

-Willingness and Ability to Learn

To conclude this practical part, this example is a perfect guide for the use of the guidelines from the previous subsection. The pitch structure was consistently described and shown by example. The pith deck standard structure includes such concepts, as: the problem and opportunity; the value proposition, USP; Business model creation; the Go-To-Market plan, competitive analysis, team; product demo.

3.3. Startup development forecasts in Ukraine, recommendations for the implementation of world practices

According to the Global Startup Ecosystem Report 2021 created by Startup Genome, some trends such trends are traceable. As discussed in the startup ecosystem chapter before, Ukrainian startup scene in the stage of active development, but in order to understand what affects the world leaders in startup ecosystems, it is necessary to study their experience and the ways in which they achieve their leading positions[63].

For a long time, five leading positions have been held by the same ecosystems, including: Silicon Valley, New York, London, Beijing, Boston, Tel Aviv-Jerusalem and Los Angeles. Their order is not random, but exactly the same as in the global ranking of startup ecosystems in 2021[63].

Resource & Development are the main drivers of some ecosystems getting higher positions in the rankings, the examples of this tendency are Seoul and Tokyo. Unfortunately, no Ukrainian city is included in the top-30.

Compared to world leaders, Ukrainian ecosystems of startups are in the initial stages of development in terms of investment, opportunities to enter the world market and experience in implementing startups. It is encouraging that a large proportion of startups around the world account for the IT sector, which is developing quite successfully in Ukraine and, despite the difficult economic situation in the country, demonstrates steady growth rates. This creates a favorable environment for the growth of the domestic ecosystem of startups. A strong basis of this process is strong IT sphere education. 150 universities are graduating tech talents across all regions of Ukraine, in pace of 23000 graduates a year.

IT sphere in Ukraine: education

- 83% of IT Specialists in Ukraine have completed higher education at university, of which 56% focused their studies on either programming or specific sciences;

- About 79% of Ukrainian IT Specialists speak English on at least intermediate level, 45% of IT specialists are either fluent or can sustain a conversation on the advanced/upper-intermediate level of English;
- Technical education of students in Ukraine in 2017 was carried out by 150 universities: 147 prepared bachelors, 99 - masters, and 35 – specialists;
- Top technical schools in Ukraine include Kyiv Polytechnic University, National University of Kyiv-Mohyla Academy, Kharkiv National University of Radioelectronics, Sumy State University, Lviv National University named after l.Franko, Lviv Polytechnic University;
- In 2018, Ukraine was ranked 4th in International Math Olympiad and has remained in top 30 countries worldwide in the past 10 years[64].

Intensive long-term work is required to create an effective startup support ecosystem. Even with large investments and the desire to replicate successful ecosystems in Silicon Valley or New York, it is very difficult, because their infrastructure has been formed for over 30 years. Singapore's experience shows that economic reforms to liberalize business and financial legislation in the mid-1990`s bore fruit only in the 2010`s. The only exception is Beijing, which in 2010 began the reform of higher education, which led to a qualitative reform of 70 Beijing technical universities, and since 2015 the state has allocated $ 231 billion in startups to support their development[65].

Discussing the strongest startup ecosystems, USA and China together hold almost 80% of all unicorn companies in the world. The USA input is only 6 startups more than China. UK is also a strong participant. The country has 24 of $ 1 billion ventures. The total amount of unicorns in startup terms is 586[65].

At this stage of business development there definitely is a rise of Ukrainian startups, which are evolving quite rapidly and have many users. However, the low interest of the state in modern innovative projects forces young companies to cooperate with foreign investors who help to implement projects and become competitive. That is why it is necessary to promote the effective functioning of startups in Ukraine, to create more mechanisms to increase the effectiveness of their

activities in the domestic market and to recognize the importance of innovative technologies for the successful development of Ukrainian enterprises.

The main barrier to the development of startups in Ukraine is the lack of customers who would like to buy the final product. That's why startups are created in Ukraine with a view to customers from other markets (USA, Europe, Asia, etc.), thus it is easier to attract investment and bring your idea to a serial product, service or IPO.

Therefore, if we talk about universities or the regional level, it makes no sense to spend money on competitions and various types of training for the development of startups. We need to create better conditions for entrepreneurship. In universities, this may be due to the different formation of curricula, the creation of interdisciplinary project groups (which includes students of technical and humanities), which will be assigned mentors, and the purpose of which will be the formation and development of business ideas.

The development of startups in Ukraine requires balanced and effective state support for small businesses in the field of innovation and venture investment in the following areas:

- creation of a system of guarantees and investment insurance;
- maintaining a state register of structures operating in the field of venture
- investment;
- innovation managers training system organization;
- providing guarantees of companies' rights to intellectual property;
- development of an effective mechanism for the formation and use of venture funds;
- development of regulatory framework that would regulate legal relations in the field of investment in innovation;
- development of the procedure for admission to the Ukrainian market of foreign capital;
- development of a methodology for assessing market prospects for the commercialization of scientific research;

- technical products implementation within of startups;

Ukrainian scientists have promising developments, but:

- there are few to no platforms and system programs to support science-intensive startup projects;

- there is no system of effective spending on basic science;

- lack of skills in negotiating with business and understanding the needs of the market;

- there is no effective business model of interaction between scientists - research institutions - business - government;

- the selection of creative (enterprising) students, young scientists is not systematic;

Supporting startups is a complex process, the implementation of which includes:

- increasing investment by the state, and as a consequence, ensuring the development of the industry in the country and paying taxes that will allow after a certain period of the project to return the invested money;

- support of social orientation of innovative projects;

- development of entrepreneurial culture;

- strengthening the intellectual property regime;

- development by state bodies of bills that will promote the development of innovative entrepreneurship;

- strengthening the information opportunities for Ukrainian innovators to participate in international programs.

In conclusion, it`s crucial to mention that the development of innovations and startups is a very dynamic process that must keep pace with market trends and unite the interests of all participants in the ecosystem, because everyone has a goal: a startup is to implement their project; business angels, investment funds - it is profitable to invest their resources; the state - that innovative enterprises pay taxes and develop in its territory; in universities - to have high world rankings among applicants and additional sources of income.

The ecosystem of startups in Ukraine is at the stage of active formation, and in recent years its development has been marked by positive dynamics. There is an increase in the total number of startups, which is accompanied by bigger number of players in the ecosystem and at the same time their more active participation in the ecosystem. Support for startups, although to varying degrees, is provided in areas such as government regulation, funding, training, infrastructure and information promotion. A feature of the development of the ecosystem of startups in Ukraine is the minimal participation of the state in this process. Financing and development of infrastructure organizations is mainly funded by private investors. Taking into account all these factors, it is necessary to systematize the general approach to the formation and development of the ecosystem of startups of its main subjects, to find ways to develop a general strategy for strengthening this ecosystem.

CONCLUSIONS

The goal of studying the global experience of venture financing for the benchmarking purposes with further implementation into the Ukrainian startup ecosystem has been achieved in the masters` thesis. The available data was systematized, the ecosystem shortcomings were identified and recommendations for the Ukrainian startup scene were developed.

The most revealing points of the study are highlighted below:

- Increasing environmental dynamics make virtually any career path more unpredictable as an entrepreneur. Small companies are more agile and therefore cope better with the ever-increasing change, whereas large organizations suffer from organizational inertia. Higher income and job satisfaction may be achieved through entrepreneurship. The main terms for innovation activity were presented.
- The best methods of creating a business model for venture businesses were researched and presented, the main pillars were disclosed. The competitive advantage of business model innovation was explained and the business model triangle was introduced.
- Having performed vast analysis, the main forms of venture capital participation were shown in terms of participation phases and delimitation, types of venture donors, among them: business angels, independent venture capital companies, Corporate Venture Capital Companies, public venture capital funds. Participation process from a perspective of a VCC was disclosed by stages.
- The world segmentation of venture capital was disclosed, global venture deal volume with breakdown on stages was highlighted, leading regions by deals were uncovered with North-America leading, Asia on the second position and Europe region as the third. The most successful startups and the ecosystems in the context of several countries were studied.

- Having analyzed Germany as the fourth largest economy in the world, it became clear that in terms of the venture capital market, it has some problems. Late rounds of startup funding are suffering, with digital startups pinning hopes of rapid growth, which requires significant capital inflows, unlike the US market, which accounts for this. England is ahead of Germany in the volume of venture capital investments, despite the overall positive growth in the German venture capital market. On the positive side, the coronavirus crisis did not significantly affect investment activity, and the positive impact of venture capital on the success of startups in growth, innovation and commercialization of their proposals is especially well documented in the economic literature.
- Ukrainian startup ecosystem, it`s main participants, strengths and weak points were analyzed. Ukrainian cities` positions in global rankings were analyzed, 10 best Ukrainian startups and their activity industries were defined.
- The methodology of a startup creation was elaborated. It focuses on a comprehensive understanding of what the critical success factors are for startups, systematically presents the best elements for a high-quality creation of such, allows a seeker to analyze the good sides and shortcomings according to the provided framework, which, with sufficient processing of this information, will be helpful in the systematic improvement of a creator`s own project.
- The information provided as an example for the startup creation contributes to the clear understanding of the information that the investor wants to see at the presentation of the project, main aspects of how to build your pitch deck and what information must be highlighted.

According to the analysis results, the ecosystem of startups in Ukraine is in formation stage. The basis for the formation of such an ecosystem is the development of the domestic IT sector. This sector is confidently strengthening its position in the country's economy and is a source of valuable human resources that can join the development of startups. Private international and domestic

institutions are increasingly involved in financing startups. The number of successful startups with Ukrainian roots that have received worldwide recognition is growing.

The world experience in the development of startup ecosystems was studied. The breakdown of venture capital involvement was performed in the context of the world and leading countries in venture capital deals, leading sectors were identified. The structural components of the startup ecosystem are analyzed, their role in the functioning of the system and the relationship between them are identified. The description of the functioning and main success factors of startup ecosystems in the USA, China, Great Britain, France, and Germany was performed. The author's approach to systematization of steps necessary for founding one's own startup is proposed. The role of processing and searching for one's unique business model is demonstrated. Forms of venture capital involvement were investigated and presented consequentially . The Ukrainian experience of creating a startup ecosystem is investigated, the positive sides and main weak points of the Ukrainian startup ecosystem are outlined, recommendations for implementation were developed.

This analysis is intended for practical use, application of the proposed approach to a startup creation will contribute to an increase in quality startups in Ukraine subsequently strengthening Ukraine's position on the global startup scene.

ABSTRACT

The country's competitiveness is largely dependent on successful innovations, effectively commercialized research and development results. One of the economic instruments that have ensured the innovative development of the leading European countries over the past decades is the mechanism of venture financing. Currently, the venture business is acquiring special relevance, which contributes to the formation and development of super-tech companies. Venture business is a dynamically developing direction in the economy.

This study is aimed to collect the world experience in the venture financing sphere, on the experience of European active participants in the startup scene The United States is the undisputed leader in the venture capital business.

Currently, the United States accounts for half of all venture capital investments in the world. venture capital investments in the United States are the main mechanism for supporting and developing small and medium-sized businesses, especially in the field of advanced technologies. In Germany, venture capital funds form their capital with the help of banks and private investors.

To resolve issues in Ukraine, extensive work should be done in the following areas: creating programs for comprehensive support of scientific-intensive developments, a new regime for protecting intellectual property, better awareness and greater publicity of the startup sphere and the opportunities that it has, these are only a small part of the necessary initiatives.

Keywords: startup, venture capital, venture deals, startup stages , startup ecosystems, sustainable business development, world startup leaders, German experience, Ukrainian experience, business angels, entrepreneurship.

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