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STUDENTS START-UPS: ESTABLISHMENT AND DEVELOPMENT

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Pursuant to Act no. 111/1998 Coll. concerning universities as amended and pursuant to the BUT Study Rules, by the Director of the Institute, you have been assigned a Bachelor's Thesis entitled:

Students Start-ups: Establishment and Development

Characteristics of thesis dilemmas:

Introduction
Problem definition, goal of the bachelor thesis
Theoretical approach to solutions
Business sector analysis
Proposal for the establishment of a small business
Implementation schedule
Conclusion
Literature
Appendices

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Based on the analysis of the business sector, propose steps to establish a small business.

Basic sources of information:

Hisrich, R. D., Peters, M. P., Shepherd, D. A. 2016. Entrepreneurship. McGraw: Hill Education. ISBN 9781260565621.

Blank, S., Dorf, B. 2020. The Startup Owner's Manual. John Wiley & Sons. ISBN 1119690684.

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Osterwalder, A., Pigneur, Y. 2010. Business model generation. New Jersey: John Wiley & Sons, Inc. ISBN 0470876417.

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Abstract

The subject of this thesis is to analyse the actual state of vegetable and microgreens market in Czechia and set a solid foundation for establishment of a microgreens business. The outcome of the thesis is supported by findings from analytic tools such as SLEPTE, SWOT, Porter's Five Forces model and Lean canvas. The theoretical part includes definitions of basic terms regarding entrepreneurship, startups, and basic explanation of analytical tools. The outcome of the work is to assess all the acquired data and evaluate feasibility of the business plan.

Abstrakt

Předmětem této práce je analýza současného stavu trhu se zeleninou a microgreens v České republice a vytvoření podmínek pro vybudování vlastní farmy microgreens. Výsledek práce je podpořen zjištěními vycházejícími z užití analytických nástrojů jako je SLEPTE, SWOT, Porterova analýza pěti sil a lean canvas. Teoretická část obsahuje definice základních pojmů týkajících se podnikání, startupů a analytických nástrojů. Výsledkem této práce je shrnutí získaných dat a následné zhodnocení proveditelnosti projektu.

Key words

Student startup, startup, entrepreneurship, small business, microgreens, vertical farm, SLEPT, SWOT, Porter's Five Forces model, lean canvas, financial analysis,

Klíčová slova

Studentský startup, startup, podnikání, malý podnik, mikro bylinky, vertikální farma, SLEPT, SWOT, Porterova analýza pěti sil, lean canvas, finanční analýza

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PROHLÁŠENÍ

Prohlašuji, že jsem svou bakalářskou práci na téma založení farmy microgreens vypracoval samostatně pod dohledem vedoucího bakalářské práce a využití volně dostupných informačních zdrojů a odborné literatury. Všechny prameny jsou citovány a uvedeny v seznamu literatury na konci práce.

V

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Introduction

The Idea of establishing a sustainable and planet-friendly business was in my mind for a long time. However, my zeal for the microgreens business came shortly after the beginning of the Coronavirus crisis.

When lockdowns suddenly came upon Europe, a vast logistical issue of delivering vegetables and fruits emerged. That is caused by great dependence on imported food from all around the world. Things we eat may travel hundreds and thousands of kilometres before they get on our plates.

Along with this issue comes global warming and gradual climate change that sets a massive obstacle to traditional farming. Fields face long periods of drought, and later they are unable to absorb enough rainwater and maintain ideal conditions for crops. Then the fields deal with monocultural growing and chemicals that devastate them.

Luckily, there are other ways of producing fresh vegetables. *Indoor growing* is a trend that might solve the issues stated above with minimal negative impact on the environment. Thanks to indoor growing, it is possible to easily create and maintain conditions suitable for growing various crops. This farming method is way more efficient than traditional farming methods and uses up to 80% less water and space.

A great way to utilize indoor farming is growing microgreens. They are small vegetable greens that can be harvested in a brief period. Depending on the crop type, they can be harvested in a time horizon of one to three weeks. In addition to that, microgreens have a robust flavour and contain higher values of vitamins than fully grown crops. Microgreens can be grown in small trays filled with soilless mediums, coco coir, or a substrate for sprouting. The trays are usually placed on multi-levelled racks with LED lights. The lights are not necessary, but they are ideal for setting the best environment for ideal growth.

The most significant value regarding microgreens is the possibility to produce and sell fresh, organic, and locally grown crops. The buyers themselves can see the growing process and benefits of the product. Microgreens are an excellent fit for any meal in restaurants and an even more fantastic snack for people seeking fresh, tasty and healthy refreshment.

The inspiration for this business comes from abroad, where many people are establishing their vertical farms and filming videos about them. The trend has arrived in Czechia too. For the purpose of this bachelor thesis, I contacted people from Prague Microgreens Farm and Farm to space. They are both companies specialized in the hydroponic growing of microgreens. Thanks to them, I gained more insight into this business.

The bachelor thesis is divided into the theoretical and practical part. The **theoretical part** includes definitions and explanation of terms and areas connected to entrepreneurship and startups. Additionally, there are defined forms of business that the startup can utilize. Businesses need a clear framework to operate appropriately. That is why this part also includes analysis methods such as SLEPT, SWOT, Porter's Five Forces

Framework and lean canvas. The **practical part** contains practical usage of the analysis methods stated in the last part. Thanks to the analysis methods, it is possible to assess the essential data and prepare the business plan.

1. Goal of thesis, methods and processing procedures

This thesis aims to conduct a strategy and business plan to prepare the company for entering the market. Core of this business plan is growing microgreens and selling them to restaurants or individual people at farmer markets. The microgreens will be grown in a small room using indoor farming methods.

Before establishing any business, it is necessary to conduct various analysis methods and evaluate elements that impact the business. These elements are evaluated using analysis methods such as SLEPTE, SWOT, Porter's Five Forces framework, and lean canvas. The thesis includes a short financial plan, thanks to which it will be easier to predict and allocate the necessary financial input.

The thesis is divided into two parts. The first one is theoretical and includes definitions and explanations of basic terms, including startups and entrepreneurship. Additionally, it includes analysis methods of the market and startup itself. The following practical part contains an implementation of the analysis methods stated above and the business plan.

For completing the bachelor thesis, educational business literature and articles freely available on the internet were used. In addition to that, I contacted Prague Microgreens farm and Farm to space, which is both hydroponic microgreens farms.

2. Theoretical outcomes

This chapter defines terms regarding entrepreneurship, startups and legal requirements that are needed for establish this business.

1.1. Entrepreneurship

Entrepreneurship is a crucial factor in the creation and growth of businesses and the prosperity of regions and nations. Great successes often start from humble beginnings when an individual discovers a lucrative entrepreneurial opportunity.

According to the authors (Hisrich, R. D., Peters, M. P., Shepherd, D. A., 2016, page 16)

Authors of the book Entrepreneurship state that entrepreneurial actions are:

“Those situations in which new goods, services, raw materials and organizing methods can be introduced and sold at greater than their cost of production”.

One example of this can be the utilization of an existing technological product in a different market. Also, creating a completely new technological product, offering a unique service or creating a new product and a new market are all alternatives of an entrepreneurial opportunity. All of those stated above have one thing in common – They all present something new. (Hisrich, R. D., Peters, M. P., Shepherd, D. A., 2016)

1.2. Entrepreneur

The actions of entrepreneurs are triggered by what they believe is an opportunity. However, not all opportunities can be transformed into a successful business. Therefore, entrepreneurs must use their experiences and judgement and decide whether they should act or not. A critical skill is required to successfully assess the chances of success or failure in a potential opportunity. The entrepreneur must bear the uncertainty of a business opportunity and not be stopped by doubt. That is where two key factors come into play: knowledge and motivation. Knowledge in a certain business area can take a clearer picture of the opportunity, and motivation suggests a willingness to deal with uncertainty. (Hisrich, R. D., Peters, M. P., Shepherd, D. A., 2016)

Being an entrepreneur includes identifying and pursuing an opportunity worth the money, time and effort, which involves entrepreneurial thinking – By the authors (Hisrich, R. D., Peters, M. P., Shepherd, D. A., 2016, page 7) it is

“individuals’ mental processes of overcoming ignorance to decide whether a signal represents an opportunity for someone and/or reducing doubt as to whether an opportunity for someone is also an opportunity for them specifically, and/or processing feedback from action steps taken.”

1.2. Startup

To find out what a startup truly is, we must first understand what startup is not. In the past 50 years, tools, rules, and processes used in huge businesses were taught and suggested to be also used in startups. With this doctrine, Investors have been surprised that startups often failed to meet the plan criteria and goals. After five decades, it is generally known that traditional teaching for running large companies does not work in startups and has a negative influence. (Blank, S. and Dorf, B., 2020, str. 16)

Startups are not only smaller siblings of big companies. Startups are at their core still seeking their own repeatable and profitable business model. On the other hand, big businesses already know how to run the company successfully. This means that startups and big business are on very different sides of the barricade and have different problems and needs. (Blank, S. and Dorf, B., 2020, str. 16)

Startups desperately need to find the suitable business model, which requires certain tools, sets of skills, specific direction, and rules to maximize chances for success and minimize risks.. (Blank, S. and Dorf, B., 2020, str. 16)

The authors (Blank, S. and Dorf, B., 2020, page 16) conclude that

„A startup is a temporary organization in search of a scalable, repeatable, profitable business model “ and „The early days of a scalable startup are about the search for a repeatable and scalable business model. Scale requires external venture capital investment in the tens of millions to fuel rapid expansion. Scalable startups tend to cluster in technology centres such as Silicon Valley, Shanghai, New York, Bangalore, and Israel and make up a small percentage of entrepreneurs, but their outsize return potential attracts almost all the risk capital (and press).“

All new products and companies start with a vision. It is the burning light inside entrepreneurs, which differentiates startups from big businesses. To make the vision real, founders must recruit a team that shares the same vision and is willing to step on a path of uncertainty, hardships, and potential failure. Each new startup deals with problems without a guide to success and believes there are no models or templates applied to them. However, Campbell suggests that there is a typical outline. The path of a successful startup is well known and repeatable. (Blank, S. and Dorf, B., 2020,)

1.3. Forms of business

There are two fundamental divisions of business forms in Czechia. They are personal entities and legal entities.

Personal entities are determined for a natural person who is self-employed – OSVČ. Legal entities include companies, societies, associations, and cooperatives. Each of the divisions of business is different and carries different types of benefits and obligations. After selecting the division, it is necessary to visit the trade licensing office and report the trade.

Along with this, the Czech Social Security Administration and a health insurance company will consider this fact. (JVL Finance, 2020)

1.3.1. Personal entities

Self-employment is the easiest way to start doing business. That is why most entrepreneurs start a business in this form. As a benefit of this in comparison with other divisions, there is relatively simple paperwork and not so many obligations. Establishing the trade carries an administrative cost of 1,000 CZK, and it can be set up at a trade office. (JVL Finance, 2020)

One of the down sights of being self-employed is that self-employed persons are liable with all their property, which can be destructive in business failure. (JVL Finance, 2020)

Terms and conditions for self-employment are legal capacity and integrity (Jana Konečná, 2014)

1.3.2. Limited liability company

A limited liability company is a legal type of business and is very different from a self-employed person. Establishing a limited liability company is more demanding than self-employment. However, in comparison with that, the entrepreneur in a limited liability company is liable for their misdemeanour only up to the amount of their unpaid deposit. (JVL Finance, 2020)

In comparison to OSVČ, the administration is more complex, and the establishment of L.L.C. must be in the form of a notarial deed. A considerable disadvantage is also in the form of taxation – First, 19% of corporate income tax is deducted from the profit. The profit is split to the associates, who must reduce it by 15% in personal income tax. A natural person or legal entity can establish a limited liability company. (JVL Finance, 2020)

Terms and conditions for establishing l.l.c.:

- basic capital from 1CZK – The basic capital must be deposited in the company's bank account.
- The owner of the property must agree on the seat of LLC. This agreement must be done with a verified signature of the owner.
- A clean criminal record of the managing director of LLC is required. The managing director also must be qualified to perform legal acts.
- The official name of LLC must not be deceptive and mistakable for other LLC. It also requires containing an appendix s.r.o.
- for some types of trades, it is required to have a responsible representative who meets the conditions required by the trade licensing act according to the specifically selected trade (Tomáš Hlavsa, 2018)

1.3.2. Limited partnership, K.S.

A limited partnership company is not very common. The basic capital is 5 000 CZK, which is a suitable price for beginning entrepreneurs. Only one associate is required to make a basic deposit – “Komanditista”. However, the other partner is liable with all their property - ”Komplementář”. The associate who makes the basic deposit is not liable for any obligations. (Lucie Mečřřová, 2019)

“Komplementář” is subject to 15% personal income tax rate and “komandantista” is subject to 19% corporate income tax and subsequent withholding tax. (Lucie Mečřřová, 2019)

1.3.3. Public company (Veřřejn obchodn společnost) V.O.S.

The public company is the second most frequently used legal form for small and medium businesses and can be established by natural persons or legal entities. (Veber & Srpov, 2012)

This type of business is not dependant on the exact lowest amount of basic capital. A partnership agreement is required for establishing a public company. At least two associates can establish this type of company and all of them are liable for misdemeanours and debts with their own personal property. (Lucie Mečřřová, 2019)

An advantage of a public company is that the profit is not subject to corporate income tax. First, it is split between the associates and then subject to personal income tax. (Veber & Srpov, 2012)

1.3.4. Summary of legal entities

The advantages of self-employment are low administrative costs and lower tax rate compared to limited liability company. The disadvantage is a full liability with the entrepreneur’s property. A self-employment is an ideal form of business for entrepreneurs working on their own without any employees. In comparison with other forms of business, self-employment can be set up much faster and cheaper.

Establishing a limited liability company can take a long time and carries more administrative necessities than working as self-employed. Additionally, the tax burden is considerably higher. However, the advantage of choosing a limited liability company is that the entrepreneur is not liable with their own property. Nevertheless, unlike self-employment, a limited liability company can be transferred to other personal or legal entities.

2. Types of analysis methods

IBA(International Institute of Business Analysis, 2015, page 217) state that

“Business analysis is the set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization, and to recommend solutions that enable the organization to achieve its goals.”

Business analysis methods are Tasks and techniques applied in business with the goal of understanding various policies, structures, and operations, in order to recommend solutions to achieve the objectives of the organization.

2.1. SWOT

SWOT analysis is a method used to analyse multiple aspects of current state of a business swiftly. This method evaluates strengths, weaknesses, opportunities, and threats that are faced by the company. SWOT is a foundation for opportunity analysis, competitive analysis, strategic planning, and development of the company itself. (International Institute of Business Analysis, 2015)

The analysis is conducted in five steps. (International Institute of Business Analysis, 2015)

- First, it is necessary to **draw a grid or matrix**.
- Then, we have to **define a certain problem** that we are solving and type it on the grid.
- The following step includes a **brainstorming session about each of the parts**. In this step, we have to keep in mind that strengths and weaknesses are internal factors while opportunities and threats are external factors of the company.
- **Simplify the results of the discussion and analyse the outcome**. It is essential to keep in mind that this discussion is based mainly on expectations, not on accurate data. That is why the outcome needs further validation.
- After confirming the data from the previous step, the group **brainstorms possible solutions to the problem** they are facing. Standardly the internal strengths and weaknesses are compared against external opportunities and threats with the outcome of defining strategies for each part.

Strengths are anything that is done well by the company. It can be, for example, an experienced staff, relationships with customers or quality of the product.

Weaknesses are parts of the business that are done poorly by the company.

Opportunities are things that the company can take advantage of. There are always incredible amounts of opportunities that can be used. However, many of them are beyond the scope of the company. New technologies, changes in the market and many other factors can be considered as opportunities.

Threats are factors that can have a negative impact on the company. They can not be controlled by the company as they are an external aspect. An example of them is the entrance of a new competitor on the market or a tax increase.

SWOT analysis is a handy tool for quick analysis of various aspects of a company or its environment. This analysis can then be used for solving particular problems the company is facing. However, the analysis looks at the issues from the “big box” point of view and therefore, more detailed analysis is needed. (International Institute of Business Analysis, 2015)

2.2. PESTLE

PESTLE is an analysis method that helps recognise several external factors influencing a certain subject. PESTLE uses a framework that contains six fields which are very important when identifying sources of change. The fields are political, economic, socio-cultural, technological, legal and environmental. (Candle, J., Paul, D., Turner, P., 2014)

There are few more variants of this method that also analyse the external environment. They are, for example, PEST, PESTEL, PESTLIED and steeple.

The political field includes aspects that correspondent with potential changes of government, policies, priorities, or new government initiatives. Usually, it is limited to the home country of the company, but at this age of globalisation, it is necessary to look beyond borders. Because of that, the development and changes of the European Union, bodies of global trade or multinational organisations must be taken into consideration.

Economic factors can be limited to the company's home country; however, globalisation causes economies to be very dependent on each other. For example, the economic situation in the USA or China heavily impacts economic trends worldwide. This has been shown in practice in 2008 during the mortgage crisis that started in the USA and followed up worldwide. On the other hand, economic factors can be positive in the case of economic growth or market confidence.

Socio-cultural factors are aspects reliant on customer decisions, patterns of behaviour or demographic issues. They are difficult to predict and changes in these aspects are often very subtle and problematic to recognise.

The technological area investigates aspects regarding the development of technology. There are two main types of technological developments. It can be either development in IT or development in technology tied to a specific industry or market. Companies often fail to recognise the potential use of new technology. Because of that, they can be destroyed by competition that uses the newest technology and offers it to their end customers. The identification of technical aspects is very crucial.

Legal compliance with existing regulations and laws is crucial for the sole operation of the business. Businesses must consider regulations set by the national government and EU laws or global accounting regulations. Companies often face recognising laws that impact them even if they are not based in the country from which they originate. This situation must be dealt with in international trade.

Environmental or ecological factors are concerns arising from the awareness about the environment and "green" future. In this age, people and companies aim to be sustainable and environmentally responsible. This gets them a positive response from customers as simple thing as somewhat eco-friendly packaging can be viewed as a very positive element.

PESTLE analysis is usually conducted in a meeting or in a type of workshop. Company members specialised in certain functions prepare research and possibly make a presentation of data regarding aspects that can be applied in PESTLE analysis. For example, a legal team prepares a summary of possible upcoming changes in laws or regulations.

The usage of this technique is simple. All relevant data from each element is presented, documented, and discussed by competent members involved in the workshop or meeting. Then all factors are evaluated according to their importance or threat to the company. This creates a list of the most important external influences that might affect the company. They can either be an opportunity or a threat that must be dealt with. (Candle, J., Paul, D., Turner, P., 2014)

2.3. Porter's Five Forces framework

Porter's Five Forces analysis takes into considerations external business factors just like PESTLE analysis; however, this technique considers the exact business industry of the company. Porter's Five Forces analysis aims to identify potential business pressures that the company might have to bear with. During this analysis, a set of services or products delivered by the enterprise is examined by various factors.

The potential pressures are divided into five categories: Industry competitors, new entrants, substitutes, buyers, and suppliers. Each of these categories lead to questions such as: What is the level of competition? What kind of other substitutes are available? Can the buyers easily change their supplier? How many other suppliers are on the market? By asking and answering these questions, it is possible to identify factors influencing the analysed industry or business domain that have an impact on the company – positively or negatively.

Conduction the analysis

The first step of using **Porter's Five Forces framework** is to define the exact business domain or industry in which the company operates. Specification of this is extremely important, and results vary very considerably depending on the industry. The industry and depth must be specified particularly clearly. After the specification, all five above stated categories are examined, and their pressures identified. (Candle, J., Paul, D., Turner, P., 2014)

Industry competitor's category contains an examination of other companies and competition in the industry. It is necessary to ask how powerful position our company has and how vulnerable it is to competitive moves.

Category of **New entrants** leads to questions whether other competitions operating in different industries can step into the identified industry. It is necessary to think about barriers of the entrance to selected industry and how new competitors can be deterred.

Substitutes are all products or services that are not precisely a natural part of the market but solve the same problem. In the case of a luxury handbag company, a substitute can be a company producing rucksacks.

Buyers and their stance towards the selected company may vary. It must be determined whether buyers are easily able to switch supplier or how much power they have regarding price negotiation.

Suppliers can eventually be very reliant on their customers. It can be analysed how much power they have or lack. If there are many similar suppliers, then they have to fight over the same customers and make concessions in prices or offers.

Answers to various questions help identify factors with the potential to have an impact on the specific company. If so, then whether they are positive or negative. This analysis requires knowledge of the industry and the companies involved. Some of the areas can be difficult to analyse because of a lack of knowledge or changes in the market. (Candle, J., Paul, D., Turner, P., 2014)

2.4. Business model canvas

Business model canvas is a very handy tool used to design a new business model. It is straightforward and can be used like a painter's canvas. The main goal is to practically explain how an organisation creates, delivers and captures value. (Osterwalder, A., Pigneur, Y., 2010)

“Business model canvas is a shared language for describing, visualising, addressing and changing business models.”

The nine blocks include customer segments, value proposition, channels, customer relationships, revenue streams, key resources, key activities, key partnership and cost structure. (Osterwalder, A., Pigneur, Y., 2010)

2.4.1. Customer segments

The block of customer segments describes various groups of organizations or people who the business aims to reach and propose to. Customers are key for successful operation of a business and without them it is impossible to make any profit. A company must define groups of customers who would pay their product or service. It is necessary to describe which groups of customer segments to serve or ignore. Various groups require different distribution channels, relationships, or pricing. Once the groups are carefully set, a business model can be designed around them with the understanding of their specific needs.

There are many particular types of customer segments. A business can target **mass markets** which are defined by a large group of people with very similar problems and needs. On the other hand, **niche markets** are limited to very limited and specific customer segments. The propositions and relationships are then tailored to their specialized requirements. **Diversified** customer businesses aim at two different segments of customers with distinct needs and problems.

2.4.2. Value propositions

The block of value proposition defines the bundle of services and products which create value for targeted customer segments. Value proposition is the aspect why customers turn to one company beside other. It solves their problems and satisfies their needs. Value proposition is an aggregation of what the company sells to the customers. The propositions can be like the offers already on the market simply with added features or new innovative offers.

Value proposition can be divided into quantitative and qualitative type. Both of them can contain value based on innovation, performance or customization of the product or service.

2.4.2. Channels

Channels describe how the company reaches and communicates with their customer segments in order to deliver value proposition. Channels are a very important part of customer experience. It is the touch points where the company and customers meet and exchange value. Thanks to channels customers can purchase products or services, raise awareness, or have the company provide support.

Channels consist of five distinct parts and channels can be divided into **direct** or **indirect**. The channels can be owned by the company or by their partner. The first channel phase is **awareness**. During this phase arises a question of how to raise awareness about the proposed products or services. During the second phase of **evaluation**, it is important to ask how to help customers evaluate the offered value proposition. In the following phase must be set which possibilities of **purchase** will the customers have. After purchase, the value has to be somehow **delivered** to them. In the end comes the last phase **after sales** during which the customers must be provided support.

2.4.3. Customer relationships

The block of customer relationships specifies the types of relationships a company has established with the targeted customer segments. Maintaining and deepening relationships can be automated or done personally. Good maintenance of customer relationships will possibly boost sales or improve customer retention and acquisition.

Companies can choose various methods of maintaining customer relationships. Individual industries and segments demand specific means of communication. Some industries tend to focus on **self-service** type of maintaining relationships. They provide everything necessary for the customer to do everything they need. **Automated services** combine customer self-service with automated processes in order to fulfil their needs. Other businesses rely on **personal assistance** which is based on friendly interaction with their customers.

2.4.4. Revenue streams

Revenue streams represents the cash generation from each customer segment. The company must correctly answer the question of how much are their customers willing to pay for the value proposal. By correct determination of prices, the company can generate revenue streams from each segment of customers. Business models can contain different types of revenue streams. They can be **one-time payments** or **ongoing payments** to deliver value proposition or provide customer support.

Ways of generating revenue streams include for example an **asset sale**. That means selling ownership of a physical product to the customer. **Subscription fees** revenue stream can be generated by selling access to a product or service. Another method from many is **renting/leasing**. The profit is made from selling a right for usage of an asset for specific period of time.

The pricing can be **fixed** or **dynamic**. Dynamic pricing changes and is based on the conditions of market. On the other hand, fixed pricing is based on static variables.

2.4.5. Key resources

Key resources are evaluated as the most important assets that are necessary for the business model to work. Key resources allow businesses to create a value proposition and, in the end, earn revenues. Various types of resources are needed for each company. They are divided into **financial, physical, human, and intellectual resources**.

2.4.6. Key activities

Key activities are the most important things that must be done in order for the business model to work. They are very similar to the key resources and each business model contains different key activities. Key activities are actions that a company has to take in order to operate.

Key activities are divided into three categories. **Production** activity is dominant in manufacturing companies. The activities of production are for example developing, designing, or delivering a product. **Problem solving** is typical for companies that help their customers find new solutions for problems. They demand high knowledge and training in the specific area. **Platform/network** require specialized activities of management, promotion of platform or provisioning services. An example of this is eBay or Microsoft.

2.4.7. Key partnerships

Key partnerships form the network of suppliers and trade partners which make the business model functional. Stable alliances optimize business models and lower risks that companies must face. There are four types of partnerships: **Strategic alliances, cooptition, joint ventures and buyer – supplier relationships**.

There are three main motivations for setting up and maintaining partnerships. Outsourcing some assets or services helps reduce costs and optimizes the operation of businesses. Partnerships also help reduce all kinds of risks in uncertain competitive environment. Rather than performing all activities needed to run the business it can be very helpful to use services or products of other companies. This can be motivated by better knowledge or skills in certain areas.

2.4.8. Cost structure

The cost structure involves all costs that are connected with operation of a business model. Creating and delivering value is associated with costs. They can be calculated very simply when above stated areas are well defined.

Cost structures can be either **cost-driven** or **value driven**. Cost driven business models aim to minimize costs as much as possible. They use low price value propositions and

extensive outsourcing. On the other hand, **value-driven** business models focus on creating and delivering as much value as possible. They can be characterized by a highly personalized service and offer premium value to their customers.

2.5. Financing

Raising finance is often considered to be one of the most difficult parts of business. There are two main sources of finance available: internal sources and external sources. (Riley, J., 2020)

2.5.1. Internal sources

Personal sources are the most fundamental source of finance for a start up. Internal sources can be for example personal savings or other cash that has been acquired. Entrepreneurs usually invest their own savings into their business. By investing own money, the control over business is kept solely in the hands of the founder.

Savings – Using savings to finance a business is considered to be a cheap form of financing that is readily available. This investment can be seen as a strong signal of commitment to the outside investors who could also provide their money to the business. Re-mortgaging is a popular way of raising money for the startup. Entrepreneurs take a mortgage on a property and invest a part or all of the amount in their business. This is considered a low-cost financing, however in case of failure the property can be lost just like the business. (Riley, J., 2020)

Borrowing money from friends and family – This is a very common way of financing the business. Family and friends introduced to the business are often able to provide some amount of cash to the entrepreneur. It is much faster and cheaper than a standard bank loan and the terms can be more flexible. However, in case of failure the relationships may be irreversibly damaged, and creditors never see their money again.

Credit cards – Credit cards are a very surprising but popular way of financing a business. It is a very common source because the entrepreneurs are able to get access for free financial credit for thirty to forty days. After making money in their business, they are able to pay the money back.

Retained profits – This is money that is generated by operation of the business if it is successful. This money can be used for expansion or paying various costs.

Share capital – This is a very common way of financing a startup. The founder invests in the share capital with the purpose of forming a company. By providing all the finance all the control belongs to the founder.

2.5.2. External sources

Most common sources of external financing are bank loans or bank overdrafts. However, there are various non-banking ways of financing. All of the forms carry various risks and opportunities. (Riley, J., 2020)

A bank loan – Bank loan is a long-term financial commitment. Bank loans do not provide much flexibility. They are repaid on a fixed period in exact amount of repayments and rate of interest. A bank usually requires some kind of a security, which can be provided by the entrepreneur's personal guarantees. Bank loans are an ideal type of financing of fixed assets.

A bank overdraft – Bank overdraft is a short-term financial commitment often used by small business or start-ups. When the businesses bank account balance goes below zero, the bank lets the company still draw money from the account in return for a high interest rate. This is used for example during seasonal fluctuations or because of cash flow issues.

Business angels – Business angels are professionals willing to invest hundreds of thousands to millions in startups. Their main focus are businesses with high growth possibilities. The angels often operate in the company they invest and recommend their experienced contacts to the company. They can be a huge benefit not only from money-wise point of view but also provide valuable advices. However, their engagement in the company means loss of total control from the entrepreneur.

Venture capital – Venture capitalists are very experienced and wealthy investors. Their investment is often in millions or hundreds of millions. However, they are not often investing in startups, more often they invest in business they established themselves.

2.5.3. Summary of financing

The cheapest way of financing business is from the entrepreneur's savings. The invested money from savings is not subject to any additional interest or burden on the founder. If the founder decides that they want to borrow money from friends or family, it can be also a cheap form of funding the business, however in case of failure it can lead to destruction of the relationships.

Regarding external sources, a bank loan usually requires some kind of security, which some people wanting to start a business might not own and thus this way of financing is not available for them. Then there come business angels or venture capitalists. They can help the business financially and also personally. However, they usually demand a share in the company which might lead to losing control over the firm of the owner.

3. Analysis of current state

This part of the thesis contains outcomes of SWOT analysis, PESTLE, Porter’s Five Forces and lean canvas.

3.4. Lean canvas business plan

This part of the thesis includes lean canvas business plan and describes its properties.

<p><u>Key partners</u></p> <p>owner of building</p> <p>seeds and substrate suppliers</p> <p>hygienic station</p> <p>agricultural association</p>	<p><u>Key activities</u></p> <p>production of microgreens</p> <p>delivery</p> <p>selling face to face</p>	<p><u>Unique value proposition</u></p> <p>providing organic products</p> <p>sustainable all year production</p> <p>extremely healthy</p> <p>less waste, more usage of technology</p>	<p><u>Customer relationships</u></p> <p>personal assistance</p> <p>discount for big and continual orders</p> <p>small gifts</p>	<p><u>Customer segments</u></p> <p>Local restaurants, cafés, bistros</p> <p>Farmer markets</p> <p>Small healthy groceries</p> <p>open minded home cooks</p> <p><u>Early ad.:</u> Vegans</p> <p>healthy diet focused people</p>
	<p><u>Key resources</u></p> <p>knowledge of farming</p> <p>farm infrastructure</p> <p>initial investment</p>		<p><u>Channels</u></p> <p>Website</p> <p>farmer markets</p> <p>social media</p> <p>face-to-face proposition</p>	
<p><u>Cost structure</u></p> <p>marketing strategy</p> <p>farm infrastructure and facility costs</p> <p>materials for production</p> <p>maintenance</p> <p>energy costs</p> <p>packaging and delivery costs</p>			<p><u>Revenue streams</u></p> <p>selling to businesses weekly</p> <p>selling to customers weekly/one time</p> <p>selling microgreens on farmer markets</p>	

3.4.1. Customers

The early adaptors are restaurants and people who focus heavily on their lifestyle and healthy diet. The targeted restaurants are ones that offer meals of higher quality and price range.

The business focuses on selling products as business to business and business to customer.

There are various customer segments that fit to this business plan. First of all, vegan and healthy diet focused people and cafés are the early birds. They are the first who are seeking new, cool and healthy products from their area.

B2B segment: The microgreens will be a good fit to any small café offering snacks, local restaurants following new trends and bistros. They are usually more expensive restaurants with focus on high quality ingredients and customer satisfaction.

Another type of business willing to purchase microgreens are small healthy grocery stores. Owners of these stores are usually small entrepreneurs with passion for healthy diet and local products. They will surely be willing to prepare one shelf in fridge to offer microgreens to their customers.

B2C segment: People who buy organic or BIO vegetables are usually more educated and financially secured. Their focus is to keep their body and mind in shape. These people know that what they eat reflects on their quality of life and life expectancy. These customers will have the possibility to purchase microgreens online using our eshop or Instagram.

Then there is last but not least customer segment consisting from visitors of farmer markets. The people willing to purchase microgreens on farmer markets are:

- 1.) our followers from social media who want to have a chat and taste all kinds of microgreens
- 2.) curious people who are not afraid to taste new things. These people are ones who brought extra money to the market. One example of this can be a family with kids visiting market or an elderly woman excited about the nice looking healthy crops.

3.4.2. Value proposition

The farm offers a unique premium value. The microgreens grown at the farm are sprouted using high quality seeds that ensure great taste and high values of nutrition. The seeds are organic and are not chemically treated.

Microgreens have a wide range of use. They can be consumed just like they are as a healthy snack, put into salads as main element or as a decoration to pretty much any meal.

Microgreens have an explosive taste that activate all taste buds in the mouth of the consumer. Some microgreens offer nice bit of spice and others the classic leafy and

healthy taste. Along with that microgreens in comparison with the fully grown crop, contain more vitamins and nutrient. It means that a small bowl of radish microgreens can contain as much vitamins as a kilo of fully grown radish as we know it.

3.4.3. Channels

The main channel for B2B sale is direct face-face proposition. During the face-to-face proposition will be presented all kinds of microgreens that the customer can order in the future. The customer can taste them and order first batch of microgreens with a reduced price so they can try the product first and then decide whether it fits to their menu or not.

Selling the product on farmer markets will be done very simply. There will be a stand with microgreens presented in trays as they are normally grown. Then there will be microgreens ready to be tasted by the potential buyers. Then after they taste them they have the possibility to buy either a box with already harvested microgreens or a small tray with microgreens still in the soil.

Selling on the internet. The microgreens are offered mainly on website but customers also have the possibility to purchase them via Instagram direct messages. However, the main internet channel is website where customer will have the possibility to preview possible packages of microgreens that can be delivered straight to their doorstep.

3.4.4. Customer relationships

The company extremely values relationships built with the customers. The relationship is based on personal communication and befriending of the customers. The goal is to build a relationship close to friendship. The customers will be offered with assistance and full refund if they do not like something on the order. Then, loyal customers will obtain small gifts from time to time. The gifts will be small packages of different microgreens or even fully grown crops. The loyalty will surely be greatly appreciated and thanks to that the customers will share good word about the company.

3.4.5. Revenue streams

The key revenue stream for the company are repeated purchases of the products. Mostly cafés, restaurants, bistros and grocery stores will repeatedly order the products. It is expected that this type of customers will order once a week to assure maximal freshness of the microgreens.

This revenue stream is the most important for the business. Not only it will bring most revenue, but it will also bring stable cash flow and assurance of future existence of the company.

Another revenue stream comes from sales on farmer markets. Farmer markets are seasonal and could never be the main supply of revenue. Farmer markets in the area pop

up seasonally and usually about once every two or three weeks. The company will visit farmer markets in towns close to the farm: Přerov, Olomouc, Kroměříž and Prostějov.

Lastly sales will be possible via website and Instagram. Customers will have the possibility to order microgreens as one time purchase or subscription, which means that they can receive a package of fresh microgreens every week or different time period that they choose.

3.4.6. Key resources

The company needs various tangible and intangible key resources for stable operation.

Intangible resources

The key intangible resource is knowledge of growing microgreens. If microgreens are grown improperly, problems such as mold or slow growth can occur. Additionally, the microgreens can grow properly but not effectively if the seeds are spread too far or too close from each other.

Another key resource is contacts. It is important to establish good contacts with seed and soil suppliers. It can be a really long process until the right seeds and growing medium is found.

Tangible resources

The first necessary tangible resource are finances. Thanks to savings and borrowed money from family it is possible to invest in the whole infrastructure of the farm and pay for other costs related to running of the business.

Then the farm itself is a key part of the business. Without space, infrastructure and tools for farming it is impossible to create any value.

3.4.7. Key activities

The first key activity is obviously the sole production. However, in order to successfully produce high quality microgreens it is important to first **order quality seeds and soil**. Then finally comes the **production** which is done using complex techniques. After microgreens are produced, they must **be sold** to the customers. To cut costs and make relationships better, they are **delivered** personally to businesses and customers close to the farm.

3.4.8. Key partnerships

The first key partner of the company is the owner of the building where the farm is situated. The owner must allow all necessary interventions to the space so there could be a farm.

Workers from hygienic station are people who can decide that some things on the farm are not how they imagine they would be. So it is necessary to communicate with them properly and try to avoid possible arguments or even fines. Along with them comes the agricultural association which outlooks all producers in Czechia.

Suppliers of seeds and substrate are also extremely important. They must be able to deliver their products on time in the best quality.

3.4.9. Cost structure – value driven

The farm is value driven which means that it aims to deliver a premium product to the customers using high quality materials. First of all there has to be made an investment into the whole infrastructure of the farm. The farm purchases organic sprouting seeds and organic substrate without chemical treatment.

Each month the farm must pay for expenses such as electricity, water, marketing activities on social media and of course costs for seeds, substrate and packaging. Along with these costs the business must consider repaying loan each month.

3.2. PESTLE analysis

This part of the thesis contains outcomes of the PESTLE analysis.

3.2.1. Political

Political situation in The Czech Republic and EU regarding business can be considered stable. The Czech Republic has long strived for a stable and member state supported cohesion policy aimed both at closing the differences between EU regions and elimination internal disparities. This attitude supports successful co-operation and drawing regional subsidies from European grant funds. (Ministerstvo pro místní rozvoj ČR, 2020)

Towards the end of year 2021 there are parliamentary elections being held in the Czech Republic. A change in the composition of the government is expected (fry, var, ČTK. (2021). The surveys show that coalitions of today's opposition parties will gain more votes than ANO, which was the winner of previous parliamentary elections. But it seems very unlikely that such change would drastically affect small entrepreneurs.

This year the constitutional court abolished the current method of converting electoral votes into parliamentary seats which was unfair for less successful parties. It means that the less successful parties will this year have the possibility to gain a few seats more than they would have gained with the previous system.

The cabinet of Andrej Babiš extended the abolition of the obligation to use EET until the end of year 2022.(Vlada, 2020) This makes it easier for small entrepreneurs and people selling on farmer markets.

The mandatory minimum payments for social and health insurance was increased in 2021. The sum for social insurance was increased by 44 CZK to a total amount of 2 588 CZK. Health insurance rose by 41 CZK to an amount of 2 393 CZK.(Redakce finance, 2021)

Flat tax was introduced in 2021. The flat tax rate is set on 5 469 CZK monthly. From 5 469, 2 393 CZK is paid for health insurance, 2 976 CZK for pension insurance and symbolic 100 CZK for income tax. The flat tax rate is available for self-employed people whose yearly income is lower than 1 000 000 CZK. This is especially very useful for self-employed people who pay high income tax or who simply do not want to spend time with settlement of tax return. (Michal Bureš, 2021)

These changes do not really affect the microgreens business. However, the introduction of flat tax rate might be a good and simple solution for the owner of microgreens farm.

3.2.2. Economic

Coronavirus pandemic has an Incredibly high impact on economical situation not only in Czech Republic, but worldwide. The pandemic carries a huge wave of uncertainty.

In the year 2020 Czechia experienced a fall of GDP of more than 6% and increase in unemployment(Žurovec, M.,2020) . However, in the year 2021 after calming the epidemiological situation is expected rise of GDP of about 2% (Pocnarová, J., 2020).

Inflation rate is forecasted to be about 2-3% (Žurovec, M.,2020) and the unemployment is expected to rise above the mark of (ČTK, iDNES.cz, 2021) 4%. The crisis has mostly affected providers of services, including restaurants which are considered to be the key customers of microgreens business.

The economy is expected to recover from coronavirus crisis to the pre-pandemic level in the year 2023, however the rest of the year 2021 seems to be good for revival of the current economy.

3.2.3. Socio-cultural

Microgreens are an organic product that can be segmented in between other BIO products because of its quality and lack of chemicals. (SOCR, 2019) The market of BIO food in 2018 grew by 33% and reached 4,4 bil. CZK. This has been the highest growth in the past 10 years and It keeps on growing. Most of BIO labelled food was sold in supermarkets, shops specialized on healthy food and drug stores. This can be justified by the fact that people are realising more and more that healthy food prolongs their life and increases quality of life.

This trend shows that people thrive for organic and healthy food.

Studies(ČTK, 2012) show that Czech people are third worst in EU in consumption of vegetables and fruits. Average Czech consumes about 250 grams of vegetables and fruits a day, however WHO suggests that people should consume about 400 grams instead. WHO reckons that low consumption of vegetables and fruits can lead to higher chance of heart diseases and gastrointestinal cancer.

Generally women in comparison to men eat more vegetables and fruits. They often focus more on their diet and lifestyle, which leads to an assumption that there will be more female than male customers in the microgreens business. (Kateřina Hovorková. (2016).

people who buy bio food do not really care about the price. They are focused on the health benefits, knowing that the food is safe and without chemicals and they expect it to be healthier than other non-bio labelled food. They prefer shopping at places where they are assured about the origin of the products if possible. (Kateřina Čapelíková, 2019)

People with higher education are more conscious about their diet than less educated people. At this age 40% employees choose their food according to the nutritional value of the meal, which is a good sign for the microgreens industry. (Karolína Hlavatá. (2019) This trend is confirmed by restaurants and the menus they offer. Their daily menus often offer at least one rather healthy meal or salad. Along with that, newly established restaurants also prefer to use homemade food made with high quality and fresh ingredients. (Kateřina Čapelíková, 2019)

Newly established restaurants and bistros go hand in hand with this trend. Soup restaurants are being established all around Czechia. They allow people to go for a tasty and light lunch. These light lunches consist of vegetable soups, healthy breads, salads,

nuts, avocado toasts and other healthy ingredients. Many of them are labelled as vegetarian, vegan or raw - which microgreens surely are too.

3.2.4. Technological

Hydroponic, aquaponic and microgreens farms are being established all around the world. They thrive on the factors of sustainability and responsibility towards the planet. This kind of farming brings huge technological development in cases of growing mediums, water usage, innovation in lightning systems and logistics.

There are various ways of applying modern methods of farming to vertical farming. PFAL (plant factory with artificial light) is one of vertical farming systems. This system uses space in industrial buildings for production. A very practical production can be done using container farms. They are built in shipping containers and equipped with various farming systems. The best advantage is that they can be built and moved almost anywhere. In-store farms are a trend which helps supermarket or restaurant customers see vertical crop production live. These farms are placed at places of consumption or purchase. Appliance farms are usually small and suitable for any consumer. They are a small indoor growing system aimed to be used at offices or homes.

However, this type of technology has questionable cost-effectiveness and scalability. Vertical farms can be up to ten times more expensive to establish than high-tech green houses. (Rabobank, 2018)

The sector of vertical farming is relatively new and still has a lot of room for improvement. The business model for highest profitability using vertical farming still has to be found. (Kozai, T. Tagaki, M. Niu, G, Initial. (2019)

3.2.5. Legal

There is legal demand on microgreens farm just like on any other small farming business. The product must be produced on an approved place using legally supported methods and equipment. Then the product has to be

The legal burden on this business is not very high, there simply needs to follow the legal and health standards of manipulation with the product.

According to zákon č. 252/1997 Sb., o zemědělství (2017), agricultural entrepreneur is a natural person who operates an agricultural production as continual and individual business activity. The entrepreneur operates on behalf of their name, responsibility and with the goal of making profit. A person who is at least 18 years old, has legal capacity and permanent residence in The Czech republic can become agricultural entrepreneur.

The entrepreneur must apply at the register of agricultural entrepreneurs before they start operating. The entrepreneur must have a food hygiene certificate which can be obtained from a practitioner.

It is necessary to inform the relevant regional office of the state agricultural and food inspection authority. This must be done latest at the day of starting the business operation.

According to (Ministerstvo zemědělství 2018), the safety of produced crops must be ensured. The farm must meet hygienic requirements, use appropriate materials and maximally reduce the risk of contamination. Along with it the farm must be able to prove the origin of all materials and where the products were sold.

The farm must ensure that no pests can enter the facility, adhere to hygiene, and have a guide that describes all necessary processes.

The ideal form of business for microgreens farm is an agricultural entrepreneur as a natural person that is not registered in the business register. This form of business is considered to have low administrative and financial demand. This type of business does not necessarily have to lead bookkeeping. Instead, tax records are all that is needed regarding financial reporting to the state authorities.

The place of production must be approved as a place for food production or farmstead. However, it is difficult to approve farmstead in centre of the city, so the approval for food production works better.

3.2.6. Environmental

Thanks to growing microgreens it is possible to lower the amounts of CO₂ that are produced by shipping vegetables hundreds or thousands of kilometres. Microgreens use about 80% less water than traditional farming, which marks them as a very responsible business. Also, indoor growing is not reliant on the weather just like traditional farming.

Vertical farming companies claim to be very environmentally friendly, however the real sustainability is still being reviewed by researchers. The conclusion at this moment is that environmental responsibility differs from farm to farm. In comparison to greenhouses, vertical farms are less efficient regarding consumption of electric energy because of high usage of artificial lightning. (Graamans et al., 2018)

Conclusion of PESTLE analysis

From economical and political point of view it might be a good time to start a company. The economy is waking up from lockdowns and money is again starting to flow like always. The political situation with focus on business seems to be fine. A positive thing is abolishment of the obligation to use EET.

People these days focus more on good life-style and healthy diet than before and along with that restaurants usually offer light and healthy meals, which is a good sign for microgreens business.

The technology used in vertical farms is still developing and companies are willing to invest in such development. Many methods, lighting systems and growing mediums are being developed.

Microgreens farms must obey to many legal regulations regarding administration and the sole processes. It should not be a problem to obey all the regulations and avoid possible sanctions.

Vertical farms using artificial lighting consume a lot of energy, which is an issue at this moment. However, in the end such farming methods should still be much more environmentally friendly than traditional farming.

3.3. Porter's Five Forces framework

By completing the framework of Porter's Five Forces analysis it is possible to make a summary of the market environment of such microgreens farm located in Přerov.

3.3.1. Industry competitors

Directly there is very low or none competition of microgreens farms in Olomoucký kraj. There are companies which are developing complex growing systems, but they do not directly sell microgreens to restaurants or people on farmer markets.

However, when all substitutes are considered, the competition is strong. Farmer markets are usually attended by many vegetable sellers and fresh vegetables can be purchased in various small shops or stands in the town. Then there are supermarkets which offer big variety of products; however, they cannot compete in quality.

Leaf learn

This company does not directly offer microgreens to restaurants in Olomoucký kraj. However, they sell easy to use growing systems that are aimed specifically at restaurants or for use at homes. A luxurious restaurant Entrée in Olomouc uses one of their growing systems and add the fresh microgreens to their meals. They are not a direct competitor in terms of growing microgreens. They are a competitor that offers different solution of resourcing microgreens for restaurants. This company is not using the latest technology, the company develops the technology itself.

MAKRO

Makro offers microgreens. However, they do not seem to be such competition because of questionable quality and origin. MAKRO offers microgreens in small packages and does not offer any type of personalized service regarding this product. They also sell a very limited and not personalized microgreens.

Billa

Billa has recently started offering microgreens to their customers too. However, they offer low variety of microgreens and the available microgreens on shelves often seem that they have very low quality and questionable origin. These microgreens can often be seen dried out on the shelves without anyone noticing. They do not seem to be such competition. In the end Billa spreads more awareness about microgreens overall.

Small entrepreneurs

As mentioned above, small entrepreneurs selling vegetables in town can be considered a competition too. They usually offer better quality of products than supermarkets and have loyal customers.

3.3.2. Threat of new entrants

At this time, it is highly possible that there will be growth in this industry and many other farms will be established. The media cover topics of indoor growing more and more. Thanks to that many people are finding hobbies in this area. Along with it many companies are willing to invest in such business industry (Kozai, T. Tagaki, M. Niu, G, Initial. (2019)

However, to establish a new farm it is necessary to have wide knowledge and experience in the area of growing microgreens. In addition, people can face many legal difficulties while establishing this business.

To establish a new farm, it is necessary to either have knowledge and experience in the area of growing microgreens or have a good financial background. Learning how to grow microgreens is not difficult and the topic is covered a lot on the internet for free. Now that companies are willing to invest in vertical farms it is very likely that new companies in this industry will be established. It is considered that barriers to entry this industry are low.

There should be prepared a retaliatory action for when a new company appears on the market. If another business enters the market, it is necessary to keep the current business partners close and seek for other business partners in the area of new entrant. This strategy of seeking for new and keeping established customers close might help gain higher market share.

3.3.3. Threat of substitutes

There are many substitutes available on the market. Microgreens are very similar to sprouts which are very easily available in supermarkets and wholesalers. In the end, normal vegetables are a huge substitute for this market. Another substitute is salad mixes available in every supermarket.

However, microgreens are in comparison to these substitutes a more premium product with advantages in the areas of nutrients values and more rich taste. Their down side is price for the amount customers get.

On the other hand, typical vegetables will always be a better value for price per weight and have wider possibility of use. Normal vegetables available in every supermarket will for a long time be more important people. Additionally, unlike microgreens they can be processed in many ways.

Sprouts are smaller and few days younger crops than microgreens. They offer high nutrient values. People often produce sprouts themselves because it is a very simple process and the people who do it, often care a lot where the products come from. They want to have control over them, so they rather make it themselves other than buying at stores.

Salad mixes often consist of carrots, lettuce, baby spinach and other leafy crops. People consume them because of their health benefits, taste, and lightness. In comparison to microgreens, salad mixes offer lower price per weight and better availability.

3.3.4. Bargaining power of buyers

With the possibility that our farm will be the only supplier in the area, buyers will not have much space for negotiation. However, with the aim of maintaining and deepening relationships we will offer them discounts for continual and bigger orders. In the end, the most valuable thing for a company is a happy customer and that is our goal.

It is expected that there will be various types of buyers and decent amount of them. B2B buyers will usually make big orders and B2C customers will make small orders. The prices set are very similar to prices of microgreens farms in other cities. The buyers have possibility to use substitutes of lower quality but for better price.

There are no switching costs for buyers. The buyers can make or cancel orders ten days before delivery. Our product offered to buyers are very different from competition. The costs for microgreens do not pose significant percentage of the buyer's costs or purchases. With these facts in mind, it can be considered that the bargaining power of buyers is medium.

3.3.5. Bargaining power of suppliers

There are many various suppliers our farm can use. It is possible to order seeds from any part of Europe and eventually even the world. Also, substrate, nutrients and equipment can be purchased from various suppliers. There is no direct dependence on one exact supplier. This means that if the farm makes orders in bulk, there will possibly be space for negotiation in prices and discount.

Various suppliers do not offer much differentiation from each other and most of them offer very similar products for similar prices. The supplier groups do not have much bargaining power.

Conclusion of Porter's Five Forces Framework

Factor	Degree of impact
Industry competitors	high
New entrants	high
Substitutes	medium
Buyers	medium
suppliers	low

Table 1: Porter's Five Forces Framework 1

3.1. SWOT analysis

SWOT analysis is an irreplaceable part of a business plan. In the following part there are presented the strengths, weaknesses, opportunities, and threats of the business.

3.1.1. Strengths

- First farm to approach market in Olomouc region
- Very high quality of the product + organic + healthy
- Focus on strong relationships
- People these days often focus on their diet and seek for new healthy products
- High margins on the product
- No need for employees = cutting costs
- Friendly and local brand

3.1.2. Weaknesses

- No experience in gastro or farming industry
- No established contacts
- Low initial investment
- The town has limited amount of possible restaurants willing to buy the product
- Limited amount of potential B2B customers in the town

3.1.3. Opportunities

- Opportunity to sell the product at various farmer markets
- Make and sell kits for growing microgreens at home
- Make seminars and presentations about microgreens and spread the knowledge
- Possibility to expand beyond Olomouc region
- Selling microgreens on the internet
- Make different products from microgreens that could not be sold

3.1.4. Threats

- Possibility of new entrants with high financial background coming to the market
- Possibly unintentionally breaking some hygienic or legal regulations and being fined
- Not being able to sell everything that is produced
- Fails in producing or storing microgreens

Conclusion of SWOT analysis

There are many things that can be taken from the SWOT analysis. The opportunities offer another possible source of income. Developing seminars for people and selling microgreens kits can help the business reach higher earnings and more market share. Thanks to that the business can become more renowned and invest in further development.

The businesses brand wants to stay local, however it may reach a point when there are no more businesses to supply. That is when it may be ideal to move to other towns close to Přerov. However, such expanding may bring the need for bigger space for the farm and difficulties with logistics. Thanks to high margins on the product it may not be that difficult to finance such growth of business.

There are many great possibilities how to differentiate from new entrants with high financial background. The microgreens farm plans to offer great communication on personal level with the aim to solve all needs of the customer and along with that build stable relationships.

It might occur that not all microgreens that are grown are sold in the end. That creates a possibility to make different products from the yield. For example it is possible to dry the microgreens and make seasoning packages which can be sold to the grocery stores or on the web.

Regarding the threat of possibly breaking hygienic or legal regulations, the owner can contact other microgreens businesses all around Czechia and exchange valuable information in this area. Additionally, the administrative workers from hygienic stations are surely willing to answer any questions and give advice whenever they are asked.

4. Proposal and contribution of suggested solution

This part of the thesis includes the implementation of the business plan focused on producing and selling microgreens. Firstly, there are stated basic information about the newly established business entity which will be followed by other parts of the business plan. This results into a structured business plan and findings whether the business can be successful.

4.1. The business idea

Core of the business idea is producing and selling various types of microgreens. The microgreens will be produced in a small, rented space using indoor vertical farming methods. Microgreens will then be sold to B2B and B2C markets.

4.1.1. Basic information about the business

Name of the company:	MicrogreensTom
IČO:	12345678
Residence:	Kratochvílova 7, Přerov
Legal form:	natural person – agricultural entrepreneur
Main scope of business:	Growing and selling microgreens
Capital:	220 000 CZK

4.1.2. Type of business entity

The chosen type of business entity is natural person as an agricultural entrepreneur. This type of business entity was chosen because of better tax conditions and no need for bookkeeping. Another reason for this is that the owner of the business is the only associate in the business.

4.1.3. Legal obligations

Every business producing food must obey many legal and hygienic regulations in order to assure safety of the products. The entrepreneur starting the business must register as an agricultural entrepreneur at the trade office and along with that apply to the register of agricultural entrepreneurs. Before the business operation starts, the person working with the crops must have a valid food hygiene certificate. The regional office of the state agricultural and food inspection authority must be informed about the business operation no later than the day of starting the operation of business. The business must make a document where all the processes on the farm are written and ensure safety and hygiene at the farm.

4.1.4. Place of the business

The farm will be located in the city centre of Přerov. The chosen space is commercial non-residential premise located on a busy street nearby cafés and restaurants. The space is only about 30m² but it is just enough for this kind of farm and can still be enough even if the business grows fast. Customers are not normally allowed to visit the farm but can be appointed at the farm so they can see the conditions and make sure the products are in good hands. The space first has to be adapted for such farm, but the investment needed is not extremely high.

4.1.5. Operation on the farm

The owner of the business agrees on orders for B2C customers 10 days before delivery. The microgreens in average need about that much time to be fully grown. The owner visits the farm every day in the morning and afternoon. The microgreens are watered twice a day and when they are harvested, the owner either packs them into plastic packages or delivers them to the customers in the trays.

4.1.6. Offered products and services

The farm offers microgreen crops such as radish, mustard, wheatgrass, sunflower and peas. The products can be delivered to customers either in boxes with soil or already packaged in plastic containers. The customers have the possibility to make subscription and receive microgreens weekly or make single orders. The microgreens can be delivered straight to the businesses or picked up at the farm.

There are two types of offered products. The first product is a package of microgreens which costs 45 CZK. The second product is a returnable tray full of grown microgreens which costs 210 CZK. The small package consists of microgreens grown from about 20g of seeds and the tray about 100g of seeds.

4.1.7. Pricing

The pricing is similar to other microgreens farms in different cities. The business offers small packages of microgreens for 45 CZK and a tray of microgreens for 210 CZK.

4.1.8. Distribution channels

There are various distribution channels used by this company in order to target as many customers as possible. B2B distribution channel will be direct face to face proposal to the businesses. This seems like the best way because the business owners or chefs can directly see and taste the product, which will hopefully persuade them to purchase it.

Regarding B2C there are two distribution channels. One is on the internet where customers can order microgreens on the website or via Instagram direct messages. Then

The farm will try to visit most of the farmer markets in Přerov, Olomouc, Prostějov and Kroměříž.

4.1.9. Marketing

The company will try to get as much attention as possible. One of marketing methods will be adverts and frequent posting on social media. Then the company will try to make its name on farmer markets and offer microgreens to people on the streets of Přerov and try to get them to order microgreens via our Instagram or website.

Then the company will try to co-operate with local chefs and influencers. The company has a budget of 1 000 CZK for the marketing strategies. The budget will mostly be spent for sponsored posts on Instagram and Facebook.

4.2. Financial plan

The financial plan accounts with investment of the founder's saved up money along with an investment from a family. The financial plan accounts for the first three years of functioning of the business. The financial part includes costs needed to establish and maintain the business, expected incomes and future expenses which will be expressed in optimistic, realistic and pessimistic variants.

The business aims to be as cost effective as possible. That is why the whole operation stands only on the owner. The owner does not plan to hire any employees.

4.2.1. Source of finance

The owner disposes with 20 000 CZK which is obviously not enough to run such business. The owner asked his family for money and the family lent 200 000 CZK to fund the business. This amount will be enough to pay for all start-up costs and give space for additional unexpected expenses.

Such low investment is possible because the owner of the business works alone and does not plan to hire any employees in the first years.

4.2.2. Conditions of lent money

Often people lend money within family without signing contracts. It is based on mutual trust and the imagination that relationships will be good forever. However, to assure the lenders that their money is safe and will be returned, there will be signed a contract regarding the money loan. The contract is signed between two natural persons – the owner and his father.

The contract is signed between Vladimír Miček and Tomáš Miček. The amount of loaned money from Vladimír Miček is 200 000 CZK. The money is loaned by the date of 1.6.2021 and money will be returned each month starting from 1.10.2021. The amount of money returned each month is 5 000 CZK. The contract does not include any fee, but has interest of 2,5% (5 000 CZK of the total sum). The contract states that the money will be returned to the creditor in 41 payments and period of 41 months. The sum of 5 000 CZK is paid on the first day of each month. With correct payments and no delays the loan will be paid back by 1.2.2025.

4.2.3. Basic information about the loan

Natural person to natural person

Amount loaned: 200 000 CZK

Interest: 2,5%

Loaned by 1.6.2021

Repaying from 1.10.2021

Amount paid each month: 5 000CZK

Total payments: 41

Estimated date of total repayment: 1.2.2025

4.2.4. Repayment schedule

1.6.2021 = money lent

1.10.2021 = first repayment

1.5.2023 = 100 000 CZK repaid to the creditor

1.2.2025 = 205 000 CZK repaid to the creditor

Sum of money paid for loan each year

	2021	2022	2023	2024	2025
Month		5 000	5 000	5 000	5 000
January		5 000	5 000	5 000	5 000
February		5 000	5 000	5 000	
March		5 000	5 000	5 000	
April		5 000	5 000	5 000	
May		5 000	5 000	5 000	
June		5 000	5 000	5 000	
July		5 000	5 000	5 000	
August		5 000	5 000	5 000	
September		5 000	5 000	5 000	
October	5 000	5 000	5 000	5 000	
November	5 000	5 000	5 000	5 000	
December	5 000	5 000	5 000	5 000	
PAID TOTAL	15 000	60 000	60 000	60 000	10 000

Table 2: Calendar 1

4.2.4. Start-up costs

Those are costs needed to be paid even before the business itself is established and running. These costs include administrative fees, website domain and infrastructure for the farm. The space where the microgreens farm is empty and needs to be fully equipped and prepared for production. It must be fully renovated and prepared to meet all hygienic and process requirements.

Regarding administrative fees, there must be paid trade certificate and food hygiene certificate. The trade certificate costs 1 000CZK and food hygiene certificate costs around 300CZK at practician. Also, the raw materials for production of microgreens must be purchased

Items	Amount	Cost per 1 in CZK	Total price in CZK
Renovation of space	1		40 000
Stand for farmer markets	1		5 000
Sink with a long hose	1		4 000
Tub	1		4 000
Racks	5	2 000	10 000
Trays	300	65	19 500
LED stripes	50	400	20 000
Power source	2	2 250	4 500
El. Cables	X		2 500
Small fans	20	150	3 000
A/C	1		17 000
Steel table	1		4 000
Administrative costs			1 300
Spray bottle and tank	1		1 000
Other equipment	X		2 000
Materials for first month	X		7 400
TOTAL			145 200

Table 3: Startup costs 1

Total startup costs are 145 200 CZK including all items stated above.

4.2.5. Operating costs

Operating costs include costs such as electricity, water, phone bills, internet, health & social insurance, rent. They are costs which usually must be paid monthly. The operating

costs are set to be as low as possible. To reduce costs the owner of the business does all the work himself and thus does not need to pay for any employees.

Water	1 000
Electricity	2 000
Phone	300
Internet	500
Flat tax rate	5 469
Rent	5 000
marketing	1 000
Loan repayment	5 000
TOTAL	20 269

Table 4: Operating costs 1

The total amount paid for operating costs monthly is 20 269 including payments for the loan. However, the payments for loan start 1.10.2021, which means that from 1.6.2021 until then the operating costs are only 15 269.

One meter of LED lights that are fit for growing microgreens can cost up to 40 CZK a month if we consider that the light is on for 12 hours a day. This means that each month the costs for electricity make up to 2 000 CZK.

The total monthly fixed costs including loan repayment make up about 19 800 CZK. The highest expenses include insurances, rent and loan repayment. Then there are costs to be paid regarding seeds, substrate and packaging. These costs vary each month depending on the volume of sales.

4.2.6. Planned expenses and incomes

This part focuses on expected incomes and expenses of the business. First it is necessary to calculate how much every sold package and tray of microgreens costs to produce.

Substrate is supplied from local substrate producer. The prices are decent because the supplier acknowledges long-term cooperation and offers good deal. The price is 130 CZK per 50L bag of soil. The amount of soil used for each tray and package is calculated in litres. 1 litre of soil costs 2,6 CZK.

The seeds are ordered from foreign online shop. Seed prices range from 150 CZK/kg to 1 000 CZK/kg. The price for seeds overall used for calculations is average price for selected seeds. According to calculations, the average price for kilo of seeds is 380 CZK. That converted to grams means that 1 gram of seeds costs 0,38 CZK.

The business will sell microgreens in small packages for price of 45 CZK. The packages are sold to customers online, on farmer markets and to small groceries offering healthy food. The expenses for their production consist of soil, seeds and packaging. The substrate costs 1,3 CZK, seeds 7,6 CZK and a package costs 2 CZK. In total expenses for raw materials for this package make up 10 CZK which makes space for a decent margin.

Another article offered to businesses such as restaurants, cafés and bistros are trays of microgreens. The trays are five times the size of small packages and costs 210 CZK.

The expenses for production consist of soil and seeds. The microgreens are delivered on a tray which is then returned to the business on the next delivery. The expenses for substrate make up to 6CZK per tray and 38 CZK for seeds. In total it is 44CZK as expenses for raw materials.

Before the microgreens farm even starts operating, the customers are already arranged. A realistic estimate is that by the first week of farm operation there will be 45 orders for packaged microgreens and 39 trays for businesses. This estimate stays the same for the first month. It is expected that each of the restaurants order 6 trays every week and each café orders 3 trays weekly. 30 of the packages of microgreens are expected to be sold to grocery stores and about 15 of them in average are going to be sold either online or at farmer markets.

Realistic weekly sales & expenses

	PACKAGES	TRAYS	TOTAL
SALES	2 025	8 190	10 215
EXPENSES	450	1 716	2 166
PROFIT	1 575	6 474	8 049

Table 5: Weekly sales and expenses 1

Monthly sales and expenses

	PACKAGES	TRAYS	TOTAL
SALES	8 100	8 190	10 215
EXPENSE	1 800	1 716	2 166
PROFIT	6 300	6 474	8 049

Table 6: Monthly sales and expenses 1

Weekly profit: 8 049 CZK

Monthly profit: 32 196 CZK

The business expects slow but stable growth in sales. It is expected that in the first year the demand for microgreens will steadily grow by 2,5% each month. Then in the following year the demand will grow by 1,5% and in the third year by 1%.

Expected realistic incomes

Year	2021	2022	2023
Month			
January	0	48 096	54 733
February	0	48 817	55 280
March	0	49 305	55 446
April	0	49 798	55 612
May	0	50 296	55 779
June	40 860	50 799	55 947
July	41 882	51 307	56 114
August	42 929	51 820	56 283
September	44 002	52 338	56 452
October	45 102	52 862	56 621
November	46 229	53 390	56 791
December	47 385	53 924	56 961

Table 7: Expected realistic incomes 1

Expected material expenses according to sales

Table with calculation of expected material expenses according to expected incomes.

Year	2021	2022	2023
Month			
January	0	10 196	11 603
February	0	10 349	11 719
March	0	10 452	11 754
April	0	10 557	11 789
May	0	10 662	11 825
June	8 662	10 769	11 860
July	8 878	10 877	11 896
August	9 100	10 985	11 932
September	9 328	11 095	11 967
October	9 561	11 206	12 003
November	9 800	11 318	12 039
December	10 045	11 432	12 075

Table 8: Material expenses 1

The following table shows expected total sales and expenses for raw materials in the first 3 years of operation.

	2021	2022	2023
SALES	308 388	612 756	672 026
MATERIAL COSTS	65 378	129 904	142 469
PROFIT	243 010	482 852	529 556

Table 9: sales and expenses for material 1

Then There are fixed costs that are paid each month. In the first year the loan starts repaying from the date of 1. 10.. In the second year the costs increase by 500 CZK for electricity because of higher demand. Then in the third year the electricity costs again increase by 500 CZK.

2021	2022	2023
121 833	249 228	255 228

Table 10: Costs 1

The following table shows realistic table including all costs and incomes in the first three years of operation.

Simplified Profit and loss statement

	2021	2022	2023
LOAN	15 000	60 000	60 000
SALES	308 388	612 756	672 026
MATERIAL COSTS	65 378	129 904	138 288
OPERATING & STARTUP COSTS	259 683	249 228	255 228
EARNINGS	-31 673	173 624	214 329

Table 11: All costs and incomes 1

Cash flow

The following table shows expected realistic cash flow of the business.

YEAR	2021	2022	2023
START	20 000	211 610	443 727
LOAN	200 000	0	0
INCOMES	508 388	603 701	652 302
EXPENSES	321 778	371 584	387 888
CASH FLOW	186 610	232 117	264 414
FINAL	206 610	443 727	708 141

Table 12: Cash flow 1

PESSIMISTIC AND OPTIMISTIC EXPECTATIONS

Each business must count with various financial situations that can occur. Typically businesses prepare pessimistic, realistic and optimistic expectations. The pessimistic expectation in this case counts with 7% lower sales than the realistic mode. The optimistic approach counts with 7% higher sales than realistic expectation.

Pessimistic expectation for sales and expenses in the first three years

	2021	2022	2023
SALES	286 801	569 863	624 984
MATERIAL COSTS	60 802	120 811	132 497
PROFIT	225 999	449 052	492 487

Table 13: Pessimistic expectation 1

Optimistic expectation for sales and expenses in the first three years

	2021	2022	2023
SALES	329 975	655 649	719 068
MATERIAL COSTS	69 955	138 988	152 442
PROFIT	260 020	516 652	566 625

Table 14: Optimistic expectation 1

Pessimistic expectation of yearly earnings

	2021	2022	2023
LOAN	15 000	60 000	60 000
SALES	286 801	569 863	624 984
MATERIAL COSTS	60 802	120 811	132 497
OPERATING & STARTUP COSTS	259 683	249 228	255 228
EARNINGS	- 48 684	139 824	177 259

Table 15: Yearly pessimistic earnings 1

Optimistic expectation of yearly earnings

	2021	2022	2023
LOAN	15 000	60 000	60 000
SALES	329 975	655 649	719 069
MATERIAL COSTS	69 955	138 998	152 442
OPERATING & STARTUP COSTS	259 683	249 228	255 228
EARNINGS	- 14 663	207 423	251398

Table 16: Yearly optimistic earnings 1

Pessimistic cash flow

YEAR	2021	2022	2023
START	20 000	206 316	406 140
LOAN	200 000	0	0
INCOMES	506 801	569 863	624 984
EXPENSES	320 485	370 039	387 725
CASH FLOW	186 316	199 824	237 259
FINAL	206 316	406 140	643 399

Table 17: Pessimistic cash flow 1

Optimistic cash flow

YEAR	2021	2022	2023
START	20 000	220 337	487 770
LOAN	200 000	0	0
INCOMES	529 975	655 649	719 068
EXPENSES	329 638	388 216	387 725
CASH FLOW	200 337	267 433	331 343
FINAL	220 337	487 770	819 113

Table 18: Optimistic cash flow 1

Conclusion from financial point of view

The financial plan shows that the business does not make incredible sums of money. The business can set a very good margin on the product, however the business in such scale carries high operating costs.

In all scenarios the business ends in loss in the first year according to the profit and loss statement.

Conclusion

The goal of the thesis was to create a business plan with the goal of establishing a microgreens farm that would produce and sell microgreens.

The first part of the thesis includes theoretical background regarding entrepreneurship, founding a new company and types of business entities. Then followed types of financial funding and analysis methods that are used to analyse the business either internally or externally.

The following part of the thesis includes the conducted analysis methods : SWOT analysis, SLEPTE, Porter's Five Forces and lean business canvas.

SWOT analysis revealed that the microgreens farm has a huge advantage by establishing the first microgreens farm in the Olomouc region. Thanks to that the farm can build up big market share in this area.

SLEPTE analysis concludes that people are seeking healthy food to improve their diet. The customers of this industry are willing to pay more for high quality food. These customers also prefer sustainable food production that is environmentally friendly. Along with such customers, companies are also willing to invest in this type of food production and they believe in it's future. This trend gives the farm a big chance for success.

The Porter Five forces analysis helped see the industry from comprehensive view regarding vegetable and microgreens industry as a whole in the region.

Lean canvas is a tool that helped form the business idea and precisely define key areas of business.

The most important part was introduction of business proposal and contribution of suggested solution. This part includes all necessary areas such as choice of entity, place of business, pricing or marketing.

Then followed the financial plan which included calculations of expected expenses and incomes. The financial plan showed that although the business has big margins, it is not very profitable on such scale because of high operating costs.

The thesis concludes that the business plan can be realised, however in this scale the owner can not expect high incomes.

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