

CHALLENGES OF SUSTAINABLE COMPANY DEVELOPMENT: CASE OF CRAFT BUSINESS IN LATVIA

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ABSTRACT

The authors of the paper analysed international coffee trade, which is one of the most important factors for sustainable development of the industry, and also analysed the Latvian coffee roasters and their activities. The authors defined sustainable development in environmental, social and economic context, and established an implementation scenario of sustainable development in Latvian coffee roasters based on the importance of various criteria. The business model was approved in Rocket Bean Roastery Ltd. The sustainable development model was confirmed by the company's financial calculations and the developed sustainable coffee supply chain. The most important conclusions and suggestions of the research are that a sustainable business model of a coffee roaster has to be commercially successful, despite the growing effects of climate changes and volatile commodity prices, and should be a part of a sustainable society that is informed, knowledgeable and aware of the impact their purchases have.

Keywords: sustainable development, business model, craft business

1. INTRODUCTION

In the context of sustainability, international coffee market is one of the most analyzed markets today, as it currently faces a number of environmental, social and economic problems, such as the effects of climate change - pests, coffee tree diseases, decline in suitable coffee farmlands, low pay to coffee farmers for green coffee beans, low pay to workers and child labor, as well as fluctuations in green coffee prices and market intermediaries' speculations. Therefore new, innovative solutions are being sought to address these problems not only in coffee producing countries, but also involving players throughout the entire coffee supply chain.

The objective of the paper is to study and analyze sustainable development models and to develop a sustainable business model for coffee roasteries in Latvia according to the core values and sustainability criteria. The authors of the study put forward the following **hypothesis**: introduction of a sustainable development model in coffee roasteries in Latvia will improve the financial position of the company and reduce the negative impact of its operation on the environment and society.

To achieve the goal, the following **tasks** are defined:

- To know theoretical basis of sustainable development;
- To carry out analysis of sustainability of coffee production companies in Latvia;
- To analyse the sustainable development model for the trade of coffee beans;
- To develop a sustainable development model to facilitate development and growth opportunities for coffee roasters in Latvia;
- To approve the model in the coffee company *Rocket Bean Roastery, Ltd.*

The research has the following **limitations**: Due to the limits associated with amount of work, the coffee industry and the opportunities for sustainable development in this industry are chosen as the research sector. Coffee roasters in Latvia are the object of analysis – companies importing green beans for the post-processing and marketing. In the context of Latvia, these companies are also defined as coffee producers. The study does not cover companies that deal exclusively with distribution of international coffee brands in the territory of Latvia and are not roasters.

Conventional methods for the quantitative and qualitative data analysis of economics and management science have been employed during the preparation of the research, including multi-criteria decision-making method (Analytic Hierarchy Process (AHP)), statistical data processing, data grouping, inductive and deductive methods of data analysis.

2. SUSTAINABLE DEVELOPMENT

In view of the rapid deterioration of the climate, decrease of natural resources, in particular the availability of energy and water, and the growing gap between developing and developed countries, a solution must be sought to reduce the growth of such factors. The concept of sustainable development is not new, its origins date back to the second half of the 20th century, but nowadays the importance of sustainability has grown considerably both in society and in the international political context and it has gained a new form of expression.

Based on the 2030 Agenda for Sustainable Development adopted at the United Nations Sustainable Development Summit in New York on 25 September 2015, [1] the Latvian Sustainable Development Strategy for 2030 was developed defining the key long-term goals of the state and society towards a unified goal of balanced and sustainable development of Latvia. The concept of

sustainable development was defined clearly and extensively: “Sustainable development is an integrated and balanced development of the society’s well-being, the environment and the economy that meets the current social and economic needs of the population and ensures environmental compliance and the preservation of biodiversity without compromising the needs of future generations.”[2] The strategy set the goals and objectives to achieve in several priority sectors – the development of the Latvian cultural space, human capital, the paradigm shift in education, innovative and eco-efficient economy, nature, spatial development perspective, governance and public participation. According to the authors of the paper, the described definitions of sustainable development do not have any significant differences in their wording, but they have several common features that are visible in all definitions of sustainable development, namely:

- Desired public status – a society that people want to keep and live in, because it corresponds to their desires and needs;
- Long-term ecosystem status – an ecosystem that retains its ability to support the existence of people and other living creatures;
- Balance between present and future generations, taking into account the needs of the present generation.

The concept of sustainable development is defined in different sources, but the term ‘sustainable business’ is a new and unspecified concept. Contemporary trends in sustainable economic development theory are based on the need and importance of preventing an irrational increase in the use of natural resources, given the growing global competitiveness in business and the rapidly growing profits of multinational companies and corporations.[3] Based on this and the above-mentioned information, sustainable business can be defined as “discovery and use of economic opportunities in the development and realization of a product or service for a company’s ecologically and socially sustainable operation.”[4] Shepherd and Patzelt (2011) define sustainable entrepreneurs as entrepreneurs whose companies or organizations integrate both what needs to be sustained in the long term (nature, environment, communities) and what needs to be developed (profits, and economic and other benefits for society and business). Sustainable business is also often referred to as ‘green’, social, environmental or eco-business, but these terms overlap in the context of sustainability.

According to the authors of the paper, the concept of sustainable development not only determines how society develops, but above all, it is a set of views on how to ensure long-term prosperity and quality of life. It is based on the principles of democracy, gender equality, solidarity and the rule of law, as well as respect for human rights. In order to achieve the highest possible results in sustainable development, it is necessary to ensure the country and society as a whole with a dynamic economy, full employment, a high level of education, good medical care, environmental protection in a safe environment for people, respecting cultural, racial and gender differences..

3. COFFEE PRODUCTION COMPANIES IN LATVIA

Considering the Latvian climate and business environment, the Latvian coffee market is dominated by companies importing roasted coffee beans, coffee capsules, coffee pads or other kinds of coffee ready for sale and use from other countries, mostly Italy. The major retail chains contract with foreign coffee manufacturers and import coffee brands such as Illy, Nespresso, Paulig, Löfbergs Lila and others. The coffee market can be divided into two separate segments: the retail market, where

coffee is purchased in large quantities, not only for consumption at home, and the public catering market or HoReCa, where coffee is for out-of-home use – in restaurants, cafes and bars, offices, and other public places.

Overall, coffee supply and diversity in Latvia is high, exceeding the indicators of other Baltic countries. In the Latvian coffee market, the competition among the largest coffee importers is considered to be quite intense. Entrepreneurs wishing to start a business must take into account not only the retailers’ requirements for civil liability, but also the difficulties in concluding contracts with large, international manufacturers without ensuring the possibility of large sales.[5]

Coffee producers or roasters have a much smaller market share in Latvia than coffee importers – the amount of coffee produced in Latvia is only 3-4% of the coffee market, and competition between the coffee roasters is not great. It is considered that to coffee producers belong also those businesses that import green coffee beans and roast them in Latvia, rather than distributing coffee for sale to retail chains. According to the NACE classifier: economic activity 10.83 Processing of tea and coffee, 33 companies are currently registered in Latvia, of which only 11 companies import green coffee beans, and roast and process them in Latvia. [6] The authors of the paper are of the opinion that the number of coffee roasters in Latvia is so small for a number of reasons: first, coffee beans are not Latvian agricultural products because climate conditions are not suitable for coffee cultivation; secondly, raw materials (green coffee beans) are to be transported from coffee growing countries, which is a relatively time-consuming process; and thirdly, the coffee roasting process is not cheap – large financial investments in the company’s fixed assets (mostly roasting equipment) are required.

For these and other reasons, several companies choose to distribute internationally recognized and well-known coffee brands by signing a distribution agreement rather than starting their own production. Coffee roasting, in turn, is the business of enthusiasts of the industry and the product.

4. SUSTAINABLE DEVELOPMENT MODEL FOR THE TRADE OF COFFEE BEANS

At a first glance, a model of sustainable business development may not seem to be profit oriented but to address social and environmental issues, which are the primary operational aspects. However, the most recent definitions of a business model by various authors are based on a number of interdependent factors and a set of activities that form the concept of business, including profit making, without which the company cannot exist.

Amit and Zott defined a business model as a system of interdependent activities that determine how a company is doing business with its customers, partners and suppliers.[7] Casadesus-Masanell un Zhu [8] defined a business model as finding new logics in doing business, which will bring value to stakeholders by focusing on new ways of generating income and defining the value that the company will deliver to customers, suppliers, and partners. Markides [9] wrote about fundamentally different business models in already existing companies that, in order to have a new business model, need to expand their current economic activities, either by attracting new customers in the market, or by encouraging existing customers to consume more business products.

Taking into consideration the latest business model definitions, the authors of the paper can make conclusions and offer their own business model definition in the context of sustainability – a business model is a set of interrelated and interdependent activities that consist of well-organized, monitored internal

processes in the company for the purpose of providing value to the environment – society and the economy in general, while taking into account the company’s impact on the environment. The company must develop a business model that ensures the competitiveness of the company while following the principles of operation and being part of a sustainable society. Taking into consideration such a definition of a business model, the authors prepared a sustainable development model for coffee producers in Latvia.

According to the authors of the paper, a perfect sustainable development model for coffee producers has the following characteristics:

- The business model must be commercially successful – the company must be aware of the value of the product and how to profit from it;
- The company must operate in the perspective of future – i.e., the company will continue to operate successfully despite climate changes, rising and volatile prices of raw materials and energy;
- The company must be part of a sustainable society – to be able to define the business model as sustainable it must be based on specific external conditions. At the same time, these conditions must coincide with a prosperous national economy that ensures social progress within the environmental capacity.

However, in reality, such values cannot coexist or they can exist only in a highly structured environment that has evolved over the long term, both within the company and in the country in which the company operates. In addition, future prospects are difficult to predict accurately taking into consideration climate changes, which are inevitable, and it is difficult for an individual company to mitigate their impact. The company’s efforts to be part of a sustainable society can be useless as they may not deliver the expected results and profits in the context of the business environment of the country. In the framework of this study, the authors developed a sustainable business model for coffee producers in Latvia, which can have a positive impact on processes in the environment as well as bring a profit.

In order to introduce the concept of sustainability in the company and change the company’s current practices, which would have a positive impact on the development of the company and the surrounding factors, it is necessary to evaluate the current business model of the company, thus gaining an understanding of the company’s operating principles and possibilities of changing them taking into consideration sustainability factors. One of the most current and frequently used business models in both large and small companies worldwide is the Business Model Canvas (Osterwalder, 2018) [10], which is mostly used in the start-up phase of new businesses. The authors of the paper believe that within the framework of this study, the model can be the first tool to be used to transform the business model or to create a sustainable development model.

The authors of the paper created three dimensions of the value proposition within the framework of the research – economic, environmental and social value, which responds to a number of issues such as product value / contribution to the company, environmental / ecosystem value, and impact on the environment, and value to the client and society as a whole. The authors also enhanced the costs and income structure blocks, adding two additional business impact factors. Factors with a negative / minus sign or negative impact on the environment and society were added to the costs block, while in the income block, the canvas was complemented by factors with a positive / plus sign or positive impact on the environment and society.

As a result, when designing a business model, the company takes into account and plans not only the course of activities and the

resources needed, but also understands and plans the potential business outcomes in financial, environmental and social terms. Canvas development provides a structure for the model but it is not complete, because it does not envisage the development of specific criteria or goals in time frames. Further analysis is needed to determine the most important criteria to characterize the sustainability of coffee producers. By summarizing and evaluating the factors obtained in the SWOT analysis, the authors of the paper selected the factors according to their importance. The most important factors that coffee producers in Latvia should pay attention to are: climate changes (coefficient 4.75), increasing coffee production costs (4.25), unpopularity of Latvian brands (4), certified, organic coffee, or direct trade labels (3.8), building close relationships with coffee suppliers (3.6) and diversified products (3.5).

These and other factors derived from the analysis were divided into three groups by the authors of the paper, taking into account the distribution of sustainable development dimensions, which will be further defined as criteria for the model development. Environmental, social and economic criteria were defined. The main environmental criteria for coffee production are: certified, organic coffee, or direct trade labels, environmentally friendly packaging, and mitigation of climate changes. The social criteria are high quality coffee products, stable, long-term company relationships with suppliers, the Latvian coffee producer must be a coffee culture enthusiast and a knowledgeable industry specialist, as well as educate society about the coffee industry. Whereas, many more criteria were determined in the context of the national economy in Latvia and are as follows: stable demand for coffee in the market, reduction of production costs, product diversification for customer attraction, enhancing brand recognition, export of products and attraction of financial support.

In order to determine the importance of these criteria and to choose the most important criteria for all the Latvian coffee producers, the authors used the method of Analytical Hierarchy Process (AHP), developed by the American mathematician Thomas L. Saati in 2008 [11], defining priorities among the existing criteria to make a more successful decision on the solution of an existing problem / issue in an organized way.

When calculations were made for all criteria and sub-criteria, the authors obtained the following assessment that was used as the basis for a sustainable development model of Latvian coffee roasters. The percentage in brackets is expressed in terms of the percentage of each criterion calculated.

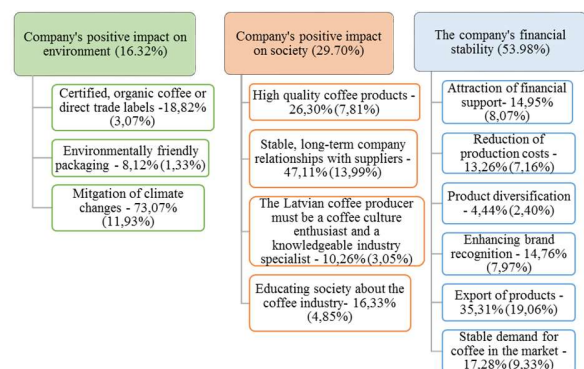


Fig. 1 The intensity indices of the importance criteria and sub-criteria

The results obtained – the intensity indices of the importance criteria and sub-criteria – show that for coffee growers, mitigation of the effects of climate changes is still the most important factor, which has a significant impact on many interrelated factors such as yields, production costs, price of coffee beans, etc. It is also worth noting that this criterion is one of the UN sustainable development goals – to take urgent measures to combat climate changes and their impact – not only in the coffee sector but also in other agricultural sectors.

Stable, long-term relationships with coffee suppliers are defined as the second most important sub-criterion. Maintaining such relationships is very important in the coffee sector because, as already mentioned, such relationships benefit the coffee grower / supplier as well as the coffee roaster. So, long-term co-operation agreements are concluded agreeing upon the price of coffee beans and ensuring direct co-operation without intermediaries, which is more advantageous for coffee producers in time and financial terms. The third most important sub-criterion in the sustainable development model is the export of products, which is especially important in the context of Latvia where the domestic market is small.

5. MODEL APPROBATION IN THE COFFEE ROASTERY

Taking into consideration several studies both on the international coffee industry in general and Latvian coffee producers, the authors developed a model based on the business model canvas principle. Rocket Bean Roastery Ltd., which is one of the newest players among Latvian coffee producers, was chosen as a pilot coffee roaster as the authors of the paper believe that it needs a sustainable development model to continue successful operations in the future.

The HAM method helped to identify the most important criteria in the environmental, social and economic dimensions of the sustainable development model, thus the authors of the paper defined the following indicators as the most important criteria and sub-criteria for the particular coffee producer Rocket Bean Roastery: • The company's financial stability (53.98%) – stable market demand (9, 3%) and identifying new export markets (19.1%); • The company's impact on society (29,70%) – stable, long-term relationships with suppliers (14%); • The company's impact on the environment (16.32%) – support for farmers, suppliers of green coffee beans in the coffee-producing countries affected by climate changes (11.9%).

By combining these factors and implementing significant changes in the company, the roaster, according to the authors, would operate on the principles of sustainable development, which would help to stabilize its positions in the Latvian and foreign markets in the long term. The focus of the company's business planning should be on ensuring the financial stability of the company; for this roaster, identification of new export markets and stable demand for coffee should be the priorities. Whereas, the company's impact on external factors – the environment and society – in the coffee sector is closely linked, which means that the criteria for enhancing long-term relationships between the roaster and the supplier, and supporting farmers affected by climate changes are complementary and mutually beneficial to the processes in the industry.

Although international initiatives and system development are needed to mitigate the effects of climate changes, coffee roasters in Latvia can influence their operations and consumer habits in various ways, which would result in a positive impact on the environment and coffee growing conditions. Ways of mitigating

climate change effects in the context of Latvian roasters are, according to the authors, as follows:

- Eco-friendly packaging – consumer habits in coffee consumption play a major role in determining the ecological footprint of the coffee industry. The currently popular coffee capsules, designed to preserve the smell and taste of coffee, leave a much larger ecological footprint considering the amount of emissions generated when producing the metal capsules. Companies that distribute capsules should look for ways in which the buyer can transfer the used product for recycling, e.g. special recycling facilities for coffee capsules. For packaging of beans or ground coffee products, it would be better to choose paper or cardboard.

- Training and knowledge transfer – in the coffee culture and growing knowledge transfer between growers and roasters, as well as between roasters and distributors or consumers is a very important factor, because without this knowledge transfer, it is impossible to produce and sell high quality products. Many big roasters have developed training programs for coffee plantations, which describe the coffee harvesting process and selection of the best coffee beans to ensure high quality. Product distributors need to organize more specific training on proper preparation of coffee, while knowledge transfer would enhance consumer awareness of the origin of the product and its quality, which influence the price of coffee.

- Long-term relationships with coffee suppliers (which also include an appropriate fee / bonus for the coffee grower) – in the coffee sector, the most active participants are the owners of small coffee plantations (small farmers), who do not have financial means for the adaptation of coffee plants to climate changes (change of the plantation site or diversification of coffee tree types), therefore, a coffee roaster should be advised to establish long-term market relationships with a farmer on favorable terms, which would provide for and guarantee a better payment – above the market price.

A business model consists of four interlocking elements that, taken together, create and deliver value. The most important to get right, by far, is the first. Every successful company already operates according to an effective business model. By systematically identifying all of its constituent parts, executives can understand how the model fulfills a potent value proposition in a profitable way using certain key resources and key processes. With that understanding, they can then judge how well the same model could be used to fulfill a radically different CVP — and what they'd need to do to construct a new one, if need be, to capitalize on that opportunity. In any business, a fundamental understanding of the core model often fades into the mists of institutional memory, but it lives on in rules, norms, and metrics put in place to protect the status quo (for example, "Gross margins must be at 40%"). They are the first line of defense against any new model's taking root in an existing enterprise [12].

To have a concentrated and clear view of the factors of the sustainable development model for the Latvian coffee company, Rocket Bean Roastery Ltd., the authors created a sustainable business model canvas for the coffee producing company, determining the economic, social and environmental value of the product, as well as forecasting the company's long-term impact on the environment and society. A detailed business canvas can be seen in Figure 2.

<p>Main cooperation partners</p> <ul style="list-style-type: none"> • Coffee growers – suppliers of green coffee beans; • Coffee brewing tool rental firms; • Landlords of industrial premises • Coffee equipment engineers; • Developers of brand guidelines and ad-makers 	<p>Main activities</p> <ul style="list-style-type: none"> • Responsible, transparent purchase of raw materials; • Employee training; • Roasting and packing of coffee; • Marketing and advertising activities, branding; • Quality control. 	<p>Economic value</p> <p>Coffee products roasted in Latvia, and their preparation equipment – brewing tools.</p>	<p>Customer relations</p> <ul style="list-style-type: none"> • Customer training on the coffee market and processes, raising socially responsible awareness; • Establishing a close circle / club of clients; • Regular support for brand distributors. 	<p>Main market segments</p> <ul style="list-style-type: none"> • High-income customers who support a product manufactured in Latvia, demand quality and excellent coffee taste, are knowledgeable about the coffee market and are aware of the value of the product. • Distributors – cafes, restaurants and bars that value quality and products roasted in Latvia and are aware of the coffee market processes and the value of the product.
	<p>Main resources</p> <ul style="list-style-type: none"> • The factory / premises; • Green coffee beans without defects; • <i>Loring Smart Roast Kestrel35</i> coffee roasting equipment; • Coffee brewing tools; • Qualified workforce with knowledge of the coffee making process. 	<p>Environmental value</p> <p>Coffee products purchased and roasted ensuring quality control and transparency, coffee products with guaranteed quality, environmentally friendly packaging and a bonus for the coffee grower.</p>		
<p>Cost structure</p> <ul style="list-style-type: none"> • Production costs of the product sold, such as raw materials, customs and excise duties, packaging, utilities; • Sales costs such as transport costs, advertising and marketing, employee training, employee wages; • Administration costs, such as office expenses, administration salary, representation. 		<p>Income structure</p> <ul style="list-style-type: none"> • Coffee products sold in the coffee cafe roaster; • Rental of equipment for distributors and purchase of coffee products from roasters; • Income from exported goods in Europe where there is high demand for quality coffee; • Coffee industry training membership fees from distributors and consumers. 		
<p>Negative environmental impact</p> <ul style="list-style-type: none"> • Emissions from the coffee roasting process (but their impact is small and insignificant). 		<p>Positive environmental impact</p> <ul style="list-style-type: none"> • Technical assistance to coffee growers (bonus, training) who are directly affected by the effects of climate changes and need resources to mitigate them; • Quality control and transparency at all stages of the chain, especially in the process of harvesting and processing coffee cherries; • Use of environmentally friendly packaging. 		
<p>Negative social impact</p> <ul style="list-style-type: none"> • Coffee products are only available to a specific customer segment that is able and willing to buy expensive coffee products. 		<p>Positive social impact</p> <ul style="list-style-type: none"> • The consumer is aware of the sustainability processes in the coffee sector, gains an understanding of the price of coffee; • Promoting the awareness of a socially responsible society – an individual with his / her decision to purchase a product can also indirectly influence the living conditions of the coffee grower; • Belonging to a particular group of people who favor responsible purchases that deliver more value. 		

Fig.2. A sustainable development model for the company Rocket Bean Roastery Ltd.

According to the authors, implementing such a sustainable development model in the coffee roasting company could, in the long term, ensure the principles of sustainability and minimize the impact on the environment and society while ensuring the financial stability of the company. In the long term, when sustainability factors in the environmental and social context become more and more important, the company will be able to gain a competitive edge and attract more responsible and brand loyal customers with the core values of its activities, described in detail in this research.

6. CONCLUSIONS

In the context of sustainability the coffee industry is one of the most seriously endangered sectors as it is currently facing a number of environmental, social and economic challenges, such as temperature changes, coffee tree diseases, reduced amount of land suitable for coffee farming, low payment to coffee growers, green coffee bean price fluctuations and marketing intermediaries' speculations that significantly affect the regularity of the harvest season and the yield of coffee, as well as availability of farmland.

For Latvian coffee roasters to be able to ensure financial stability and growth that would have a positive impact on the environment and society in the long term, the authors recommend using the model of sustainable development worked out in this study, which can be used to determine the existing type of business activities and to improve the processes on the basis of sustainability criteria and their importance.

Coffee roasters should build close, transparent market relationships with green coffee bean suppliers in the long term, excluding marketing intermediaries. Direct, fair trade in the long term will allow coffee roasters to keep track of the origin of coffee, quality control, and pay the coffee growers accordingly, while coffee growers will get regular customers and become aware of the importance of quality because for higher quality they will receive higher payments. The hypothesis is confirmed.

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