ALFRED NOBEL UNIVERSITY DEPARTMENT OF GLOBAL ECONOMICS

Bachelor's Thesis

DEVELOPMENT AND WAYS OF IMPLEMENTATION OF THE INTERNATIONAL INVESTMENT PROJECT "ECOVILLAGE IN FINLAND"

Student: Yelyzaveta Polshchykova Group: MEB-17a Specialty: 292 International economic relations Supervisor: Mahdich A.S., Ph.D. in Economics

ALFRED NOBEL UNIVERSITY DEPARTMENT OF GLOBAL ECONOMICS

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The Bachelor's Thesis Assignment

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Abstract

Polshchykova Y.P. Development and ways of implementation of the international investment project "Ecovillage in Finland"

The thesis is devoted to the study of general economic development features of Finland. It outlines the changes in leading economic indicators, investigates the country's export-import activity and scrutinizes Finland's position on global scale. The major part deals with consideration of Finnish ecology and its progress on achieving Sustainable Development Goals (SDG). It also includes the consideration of Finland as a country for investment and for starting business. Especially much attention paid to assessment of Finnish investment climate and identification of the degree of its attractiveness to Ukrainian investors.

The practical part of the thesis is presented by the substantiation of the investment project for ecovillage creation and the assessment of the need for investment resources. The forecast for income is estimated and properly described. The assessment of economic efficiency of the international investment project "Ecovillage in Finland" is provided.

Key words: Finland, Finnish economy, investment climate, international trade, foreign direct investment, business, investment project, economic effectiveness, bioeconomy, ecovillage, agriculture.

Анотація

Польщикова С.П. Розробка міжнародного інвестиційного проекту "Еко-поселення" в Фінляндії

Робота присвячена вивченню загальних особливостей економічного розвитку Фінляндії. Вона окреслює зміни у провідних економічних показниках, досліджує експортно-імпортну діяльність країни та ретельно вивчає позицію Фінляндії у світовому масштабі. Частина присвячена розгляду питання екології Фінляндії та її прогресу у досягненні Цілей Сталого Розвитку (УЦР). Вона також включає розгляд Фінляндії як країни для інвестицій та започаткування бізнесу. Особливо велика увага приділяється оцінці інвестиційного клімату Фінляндії та визначенню ступеня її привабливості для українських інвесторів.

Практична частина роботи представлена обґрунтуванням інвестиційного проекту створення еко-поселення та оцінкою потреби в інвестиційних ресурсах. Прогноз доходу оцінюється і описується належним чином. Надано оцінку економічної ефективності міжнародного інвестиційного проекту «Еко-поселення у Фінляндії».

Ключові слова: Фінляндія, фінська економіка, інвестиційний клімат, міжнародна торгівля, прямі іноземні інвестиції, бізнес, інвестиційний проект, економічна ефективність, біоекономіка, екопоселення, сільське господарство.

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INTRODUCTION

The development of bioeconomy sectors implies increased energy efficiency, efficient waste management, the development of renewable energy based on biomass, the greening of the industrial sector, increasing the sustainability of agriculture, the production of new food products, and the development of medical technologies. In 2021, humanity should pay more attention to ethical and environmental issues. Sustainability is one of Finland's top brands. Over the past few years, many polluted lakes and rivers have been cleaned up, an extensive network of protected natural areas has been created, and the air quality around industrial zones has significantly improved. In addition, Finland has been showing its sustainable cities projects for a long time.

A sustainable city, or adapted example of ecovillage, is a settlement created concerning environment and inhabited by those people, who have a desire to minimize energy, water and food consumption, eliminate unreasonable heat generation, air pollution with CO2 and methane, and water pollution. Currently, ecovillages are an example of striving for a sustainable life.

The Ecovillage investment project in Finland is not only economically interesting, but also meets global eco-requirements and contributes to the achievement of Sustainable Development Goals. With the rise of globalization, climate change, global warming and pollution, the economy has long needed to start adapting to a more conscious path, including production and consumption.

The aim of this bachelor's thesis was to consider an implementation of the ecovillage project in Finland.

The goal of this thesis was to present a detailed plan of alternative, sustainable homes construction with a benefit for both community's members and non-members.

The objectives of the course work are the following:

- to study in detail the Finnish economy, its trends and features;
- to analyse Finland as a country for investment and determine its attractiveness for investors;

- to develop a competent financial plan for an ecovillage investment project in Finland.

The object of the research is the investment climate in Finland; the subject of the research – the systematic analysis of Finnish economy and study of the peculiarities of doing business, the process of adapting the economy to the new realities through the example of establishing sustainable homes.

The research methods that have been used are: theoretical, descriptive, analytical, graphic, forecasting. The Bachelor thesis consists of an introduction, three sections and conclusions. The set objectives are covered in three chapters correspondingly. The first chapter is related to the Finnish economy overview, its general characteristics and some common information about its quality of labour and international trade. The second chapter is related to analysis of the investment climate of Finland. The third chapter is devoted to the project itself, where the main concept will be described, provided with all the calculations needed.

The paperwork will be useful for scientists and sociologists, as the concept of ecovillage is based on both self-sufficiency of resources and a loyal community, which lives in a tight connection with one another, delegating and dividing the goals needed to achieve the whole community's prosperity. The financing plan included in this thesis can be used when establishing an ecovillage in Finland.

«Influence of climate on economic sectors and how the economy should adapt to climate change» (2021) key theoretical findings were reported at the XXX International scientific-practical conference of young scientists and students «Transformation of economic systems and institutions in new geostrategic realities».

CHAPTER 1. FINLAND ECONOMY: THE CURRENT SITUATION, DEVELOPMENT TRENDS AND MAJOR PROBLEMS

1.1 General characteristics of the Finland

The Republic of Finland is a Nordic country located in Northern Europe and bordered by Sweden, Norway and Russia. The flag of Finland (1848) has a blue Nordic cross on a white background, as Zacharias Topelius, Finnish poet said: "the blue of our lakes and the white snow of our winters" (Fig. 1.1) (Flag of Finland, 2021). The coat of arms (1580) is represented by a yellow lion with a crown on a red field (Fig. 1.2) (This is Finland, 2021).



Figure 1.1. Flag of Finland Source: Flagpedia (2021)

Figure 1.2. The coat of arms of Finland Source: This is Finland (2021)

Since December 6, 1917 Finland has been an independent state (2017 was declared the year of celebration of the 100th anniversary of the country's independence). Finland is a unitary state and its form of government is considered to be a parliamentary republic. Since February 5, 2012, Sauli Niinistö has been holding the post of the president. The one and only currency is EUR. With its area of 338,455 km2, Finland has a lot of forests and is known as "the land of a thousand lakes" (Finland | Geography, History, Maps, & Facts, 2021).

According to statistics of 2020, there are approximately 5.5 million inhabitants in Finland and 650,042 residents in its biggest city and capital – Helsinki (WorldOMeter, 2019). Deeply observing the data given on Figure 1.3, the number of Finnish population continues to increase since 2005. However, looking at the yearly population growth rate,

the change is moderate and has been slightly decreasing since 2012 (Figure 1.4) (Statistics Finland - Population, 2021).





Fig. 1.4. Annual population growth (%) in Finland, 2005-2020 Source: Statistics Finland – Population (2021)

The gender composition of the residents of the country at the end of 2020 was 50,6% of men and 49,4% of women (Fig. 1.5) (The World Bank, 2021). In 2020, the average life expectancy for Finnish women is 85.1 years and for men 79.8 years (total 82,5 years) (Fig. 1.6) (The World Bank, 2021). This result is two years higher than OECD's average (80 years) (OECD Better Life Index, 2021).



Fig. 1.5. Population in Finland by gender, 2020
 Source: The World Bank (2021)

According to a 2020 study by the University of Oulu and the Finnish Environment Centre, 85.9% of Finns are considered as urban population, the rest (14.1%) is rural population (Fig. 1.7) (Statistics Finland – Population, 2021).



Fig. 1.7. Urban and Rural Population in Finland, 2005-2020 Source: Statistics Finland – Population (2021)

The main language is Finnish, but Swedish is the second official language of Finland, and is mainly spoken in certain coastal areas of the country (Fig. 1.8) (Weibull, 2021). The majority of other speaking languages in Finland hold the minority languages. The largest national minorities in Finland are Karelians, Finnish Swedes, Roma, Finnish Jews, Finnish Tatars and Sami. In general, Finland is rather unevenly populated. The main densely populated cities are located in the south of the country, where the climate is more moderate and transport connections are more developed (Fig. 1.9).





Fig. 1.8. Language Composition in Finland, 2020

Fig. 1.9. Population density in Finland, 2020

Source: Languages of Finland - Institute Source: Population- European Commission for the Languages of Finland (2021) (2021)

Statistics place Finland among the countries with the least religiosity of its inhabitants (9th place ranking by the Gallup Coexist Index 2009), although according to the Constitution of Finland, Evangelical Lutheran and Orthodox have the status of state churches (The Gallup Coexist Index 2009: A Global Study of Interfaith Relations, 2009). Nevertheless, the majority of Finns are Christians (70.55%), among others Lutherans dominate (Table 1.1). Representatives of the churches themselves use the concept of "national church", not the state one. The relationship between church and state is regulated by special agreements, and the activities of the churches themselves - by special legislation. The state church has the right to a special church tax (collected with the help of state tax structures on the basis of the voluntary entry of citizens into a particular church structure) (Population: Demographic Situation, Languages and Religions - Eurydice - European Commission, 2021).

Table 1.1.

Religion	People	%
Christianity	3,909,054	70,55%
Islam	16,674	0,30%
Judaism	1,101	0,02%
Buddhism	1,792	0,03%
Hinduism	367	0,01%
Indigenous religions and neo-paganism	60	0,00%
Other religious groups	21,852	0,39%
Persons not members of any religious community	1,574,392	28,41%

Population of Finland by religion, 2020

Source: Cultures and religions in Finland (2021)

Finland is a member of the Nordic Passport Union (since 1952), the United Nations (since 1955), the Nordic Council (since 1956), the European Union (since 1995) and the

Schengen Agreement (since 1996). It also has a membership with the Council of Europe, WTO, World bank, International Monetary Fund and the OSCE as well.

The country is divided into several geographic regions (Finland | Geography & Maps | Goway Travel, 2021).

1. Coastal lowlands - stretch along the Gulfs of Finland and Bothnia, having thousands of rocky islands. The main archipelagos are the Turku and Åland Islands.

2. The Lake District is an inland plateau located on the south from the centre of the country covered with lakes and forests.

3. Northern upper reaches, most of which are located beyond the Arctic Circle. It is characterized by rocky mountains and hills.

Most of Finland is low-lying, but in the northeast some mountains reach heights of over 1000 meters. Almost two thirds of Finland's territory are covered with forests, which supply valuable raw materials for the timber and pulp and paper industries. North and south taiga forests grow in the country, and mixed coniferous-deciduous forests grow in the extreme south-west. It is known that the forest for Finland is the basis of the economy. But in the 60s of the last century, the felling of trees turned out to be so intense that the forests were severely emaciated and their area was sharply reduced. Therefore, a new forestry development plan has been developed in Finland. According to this plan, the following measures were taken: in remote areas, timber roads began to be laid, swampy areas were drained, fertilizers were actively taken in areas of forest plantations. And as a result, already in the 70s and 80s, the forest fund of Finland was replenished (Destinations and Ltd, 2021).

Finland has a temperate climate, transitional from maritime to continental. Winters are moderately cold. Despite the fact that in the northern part of the country the polar night reigns in winter, the sun shines in the southern regions. Rainfall in Finland varies greatly from region to region. The least rainfall is in Lapland and on the coast of Ostrobothnia, where the annual rainfall is about 40 cm (d.o.o, n.d.). The hottest month in Finland is July, in 2019 the average temperature was 17,4°C in Helsinki and 13.3°C in

Sodankylä (Fig.1.1.2), while coldest one is January with average temperature of -4.6°C and -16.7°C correspondingly (Fig.1.1.3) (Statista - The Statistics Portal, 2021).





Fig. 1.10. Helsinki in theFig. 1.11. Monthly average temperatures in Helsinki andSouth and Sodankylä in theSodankylä, Finland, 2019North of FinlandSource: Statista - The Statistics Portal (2021)

Almost all rivers in Finland flow into the Baltic Sea, with the exception of a small number of rivers in the north of the country that flow into the Arctic Ocean.

As it was mentioned before, Finland is usually called "the land of thousands of lakes" as there are about 190,000 lakes, which occupy 9% of its area. Those lakes are usually connected by other channels which form a branched lake system. Also, small lakes with an average depth of 5–20 m prevail the most (Land of a Thousand lakes — VisitFinland.com, 2021).

1.2 Finland's ecology and progress on 2030 Agenda

The country is one of the states with a fairly favourable environmental situation, while the issue of toughening the wording in the criminal code in the field of environmental crimes is being considered.

One of the pressing environmental problems in the country is soil acidification and atmospheric warming due to the impact of natural fuels. These problems are recognized as international, and Finland is working on their solution together with other countries of the European Union. Thus, in accordance with the EU decree on the reduction of greenhouse gas emissions into the atmosphere by 2030 by 40% of the 1990 level, Finland intends to reduce emissions by up to 50% (Environmental protection in Finland - thisisFINLAND, 2021).

In 2015, the UN set 17 goals and 102 targets that should be achieved globally by 2030. The 17 Sustainable Development Goals (SDGs) are: (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation and Infrastructure, (10) Reducing Inequality, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life On Land, (16) Peace, Justice, and Strong Institutions, (17) Partnerships for the Goals. The overall performance on SDGs indicates Finland as a progressive country (Fig. 1.12).



Fig.1.12. The overall performance of Finland 2017-2019

Source: Report on the implementation of the 2030 agenda for sustainable development

(2021)

Finland officially holds the first place in the Europe Sustainable Development report 2020. The report was published for the second time to track progress in the actions of European states to achieve the Sustainable Development Goals agreed by all UN member states in 2015. The report's authors are the Institute for European Environmental Policy (IEEP) and the Sustainable Development Solutions Network (SDSN). Finland took first place in the ranking with 81.1, up two places from 2019. The top three also include Sweden (81.0) and Denmark (80.1). The average score for all member states of the European Union was 70.1.

According to the report, Finland has achieved seven Sustainable Development Goals out of 17. Among them are: affordable and clean energy, reducing inequality, clean water and sanitation. Work remains to be done to achieve the goals of responsible consumption and production and to combat climate change (Fig.1.13) (Finland country profile - SDGs and the environment, 2021).



Fig.1.13. Finland's distance from achieving 102 SDG targets Goals Source: Measuring Distance to the SDG Targets 2020 (2021)

For the most recent news, dated 25th March, 2021, an international Catalyst 2030 Award for sustainable development was given to Finland. It highlights the country's participatory approach on achieving SDG and its international cooperation in promoting sustainable consumption and production (Statistics Finland – National Commission on Sustainable Development, 2021). Krista Mikkonen, Finnish Minister of the Environment and Climate Change, said: "Finland's work in the field of sustainable development is a source of genuine interest and enthusiasm around the world, and the Catalyst 2030 Award is another indication of this. The Finnish National Commission on Sustainable Development is a social innovation collaborating to build Finland's future on a sustainable basis". The Finnish National Commission on Sustainable Development in general works hard and its efforts are visible: it sets the national sustainable development goals and does its best in order to implement them.

The private sector in Finland is becoming more and more sustainable: both small and big companies review its policies and aim for integration of SDGs. The statistics shows that more than a half of big Finnish companies paid attention to SDG as a part of business operations (Fig.1.14).



Fig. 1.14. Consideration of the UN SDGs as a part of Finnish business operations Source: Report on the implementation of the 2030 agenda for sustainable development

(2021)

Besides, many Finnish cities and municipalities have already been working on implementation of SDGs and climate targets. The municipalities in Finland are responsible for the satisfaction of all of the needs of its inhabitants and have a monopoly on statutory land-use planning within their territory. They also offer and maintain the basic infrastructure (water and waste management, energy supply, streets) for their citizens and companies. Finnish municipalities have a wide range of responsibilities and thus lots of possibilities to influence sustainable development (Report on the implementation of the 2030 Agenda for sustainable development, 2021). According to the Finnish statistics, 45% of Finns live in a municipality committed to carbon neutrality by 2030. The development of sustainable communities with the focus on ecology and economy is the solution. The Ministry of the Environment is running the Sustainable City Programme (2019–2023) that promotes the sustainable development of cities and municipalities through practical urban development and strategic management. The

widespread ecovillages among the Finnish territory are the examples of homes that ensure comprehensive economic, social and ecological sustainability.

Ecovillages satisfy the bigger part of SDGs at the same time:

- Goal 2, Target 2.5 promote sustainable agriculture;
- Goal 2, Target 2.A increase investment in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks;
- Goal 3, Target 3.9 reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination;
- Goal 6, Target 6.3 improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally;
- Goal 6, Target 6.4 increase water-use efficiency;
- Goal 7, Target 7.1 promote modern energy services;
- Goal 7, Target 7.2 increase the renewable energy;
- Goal 7, Target 7.3 improve energy-use efficiency;
- Goal 8, Target 8.4 promote resource efficiency in consumption and production;
- Goal 8, Target 8.9 attract volunteers and tourists that implies to create jobs and promote local culture and products;
- Goal 9, Target 9.2 promote sustainable industrialization with resource-use efficiency and great adoption of clean and environmentally sound technologies;
- Goal 11, Target 11.3 enhance inclusive and sustainable human settlement;
- Goal 11, Target 11.6 reduce the environmental impact of cities;
- Goal 11, Target 11.7 promote green public spaces;
- Goal 11, Target 11.B increase the number of human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters;
- Goal 12, Target 12.2 improve the efficient use of natural resources;

• Goal 12, Target 12.5 - reduce waste generation through prevention, reduction, recycling and reuse.

Ecovillages also promote satisfaction of needs of community members (1st goal); mental health and well-being (3rd goal); reduce drug/alcohol/tobacco use (3rd goal); employ people (8th goal); glad to participants irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status (10th goal); reduce its impact on climate change (13th goal).

1.3 Finland's economy

Finland is a developed and industrialized country in Northern Europe. After World War II, Finland was not as developed and industrialized as it is nowadays. In addition, a large part of the population was working in such spheres as mining, agriculture and of course forestry. The economy of Finland started to grow rapidly in the 1980s, which is linked to the fact that the country had been engaged in strong trade relations with Europe. However, in the early 1990s, Finland was in an economic recession that reflected the loss of its main trading partners, as the Soviet Union collapsed in 1991 and a general European economic downturn started as well. The economy began a slow recovery only closer to the end of 1990s, as Finland continued to adjust its trading relations to Western Europe primarily (Finland - The post-war period, 2021).

Finland's northern position creates certain restrictions and complications on its industrial activities. Harsh winter conditions increase construction and heating costs, and ice and snow impede transportation. Industrialization in Finland began in the 1860s, but the pace was slow, and at the beginning of the 20th century, only about 10 percent of the population received a livelihood from manufacturing. Only in the mid-60s, production overtook agriculture and forestry as an employer.

Forest products remain a vital sector of the Finnish economy. In the process of development, the traditional production of vegetable resin gave way to lumber and pulp, followed by recycled paper products, building materials and furniture.

Reimbursement of losses paid to the Soviet Union after World War II was initially a heavy burden, but ultimately proved to be a boon for Finland; their payment required the development of heavy industry, which subsequently found markets in both Western and Eastern Europe. The technology sector is the largest constituent of Finland's industrial sector (WorldAtlas, 2018). Biotechnology is also gaining importance in the Finnish economy. Metals and mechanical engineering make up another large sector of Finnish industry. Finland is an international leader in the construction of icebreakers, luxury liners and other specialized vessels, as well as the manufacture of paper equipment. The Finnish chemical industry also grew rapidly and became a very important part of the economy. An important branch of the chemical industry is oil refining, the production capacity of which currently exceeds the domestic demand for oil (Finland Economy: Population, GDP, Inflation, Business, Trade, FDI, Corruption, 2021).

At the end of the 20th century, the Finnish industry received new technological developments with great enthusiasm. Information technology and telecommunications products, led by firms such as Nokia, became more and more important.

Textile factories are located in Turku, Tampere, Vaasa, Forss and Hyvinkaa. One of the largest porcelain factories in Europe is located in Helsinki, and Karhula (Kotka), Iittala and Nuutajärvi are famous all over the world for their glass. Other important commodities include leather and pewter goods, beer and vodka, and cement. Food and beverage, including functional food (nutritious and anti-inflammatory), is one of the largest industries in the country (Technology Finland, 2021).

The period of 2007 to 2020 is indicated as the rapid growth of Finnish GDP in comparison to the data of 1980-2006. However, since 2007 the GDP is unstable, but over the past years is tending to increase (Fig.1.15).



Source: Statista (2021)

The PPP and annual GDP growth rate differ from each other quite a lot (Fig.1.16-1.17). Thus, the purchase power parity in Finland has had a positive dynamic for the last 15 years if not taking into consideration the 2008 crisis and the COVID-19 pandemic, which affect the world economy.





Fig. 1.16 GDP (PPP) in Finland, 2005-2020, in US\$

Fig.1.17. GDP annual growth% in Finland, 2005-2020

Source: tradingeconomics.com (2021)

Source: Statista (2021)

The annual GDP growth rate in its turn shows not as stable dynamics as PPP, however we can see a rapid decline during the 2008-2009 which happened because of the crisis. On the other hand "the economy is set to grow strongly next year, recovering from this year's Covid-19-induced GDP contraction. A recovery is expected on the back of the reopening of economies as international travel and foreign trade resume, buttressing both domestic and external demand" (Creator, 2014).

The statistics show a big decrease in inflation over the past 5 years. For this time period the inflation remains the same -0.21% (Fig.18). It is expected inflation to 0.21% in 2021, 0.2% in 2022 and 0.2% in 2023.



Source: World Bank (2021)

The national debt in Finland is the highest ever, although it slightly decreased with the previous year (Fig.1.19). However, the share of debt of GDP rapidly increased (Fig.1.20.).







Fig.1.20. Finland: Evolution of debt as a percentage of GDP (%), 2005-2020 Source: World Bank (2021)

Finland has a mixed economy and its GDP per capita is on the same level as the UK, Germany and France, which points to its high level of economic development and favourable conditions for holding a business. Finland's economy is primarily based on private property and free enterprise, however, in some sectors, the government is presented in a form of state monopolist.

It is not surprising, a properly good education and skills are important for a job search. Finland is a global leader in its education system according to a global ranking of countries compiled by the Economist Intelligence Unit for the Pearson media holding (Worldwide Educating for the Future Index 2019). By the way, in 2020 88% of people aged 25-64 have upper secondary education, which is 10% more than OECD's average (OECD Better Life Index, 2021). In addition, women are more developed in this case and surpass men in 6%. Finland has one of the highest rates of employment for women in Europe, with about nine-tenths of Finnish women employed full-time. On the whole, women workers are slightly better educated than their male counterparts and are more unionized; however, Finnish women are still paid only about seven-tenths of what men earn for the same job (Finland Employment Rate 1988-2021, 2021).

With such a good quality of education, Finland has relatively small indexes in unemployment. Moreover, during the last three years the number of those who are unemployed dropped significantly (Fig.1.21). In terms of jobs, 70% of people (aged 15-64) have paid jobs, and job vacancies are increasing within the last few years. Although the COVID-19 slightly changes the situation, the number of job vacancies is still tending to increase (Fig. 1.22).







Fig.1.22. Job vacancies in Finland, 2013-2020

Source: Statista - The Statistics Portal, 2021 Source: Statista - The Statistics Portal, 2021 On the other hand, according to the OECD, Finland's job market is the least flexible of the rest of Nordic countries (Meeting place for people and jobs, 2021).

Unemployment in Finland was relatively low until 1991, when it rose rapidly. The average employment rate is 66.8%. Unemployment security benefits for those seeking

employment are at an average OECD level. The labour administration funds labour market training for unemployed job seekers, the training for unemployed job seekers can last up to 6 months, which is often vocational. The aim of the training is to improve the channels of finding employment (Finland Employment Rate | 1988-2021 Data | 2022-2023 Forecast | Historical | Chart, 2021).

The largest source of employment and still significant is human health and social work activities as well as manufacturing, while the proportion of those who are involved in the increasingly marginalized agricultural sector is comparatively small (Table 1.3) (Statistics Finland, 2021).

Table 1.3

	Thousand
Industry	persons
Agriculture, forestry and fishing; mining and quarrying	99
Manufacturing; electricity, gas, steam and air conditioning and water supply; sewerage	
and waste management	359
Construction	188
Wholesale and retail trade; repair of motor vehicles and motorcycles	270
Transportation and storage	134
Accommodation and food service activities	78
Information and communication	130
Financial, insurance and real estate activities	81
Professional, scientific and technical activities; administrative and support service	
activities	312
Public administration and defense; compulsory social security	121
Education	189
Human health and social work activities	411
Arts, entertainment and recreation; other service activities	149
Industry unknown	7
Total	2 528

Employed persons aged 15 to 74 in Finland by industry, 2020

Source: Statistics Finland – Labour Force survey (2021)

Through the years, the average monthly earnings in Finland increases. From 2015, the salary increased to 43,9% (Fig. 1.23).



Fig.1.23 Average monthly earnings in Finland, 2005-2020, in EUR€ Source: Tradingeconomics.com (2021)

The immigrants exceed emigrants about twice. In 2019, the balance equalled 15,495 immigrants (Fig.1.24).



Fig.1.24. Migration in Finland, 2005-2020

Source: Statistics Finland (2021)

Finland is among the first countries in many world indexes. It ranks 11th in the UN inequality-adjusted human development index (IHDI) – it combines a country's achievements in health, education and income with how those aspects are distributed among the population (Human Development Reports, 2021). It also holds 10th place according to Climate Change Performance Index (Climate Change Performance Index |, 2021); 14th place in Global Peace Index (Global indexes - Vision of Humanity, 2021), 11th according to Global Competitiveness Report (Global Competitiveness Report 2020, 2021), It ranked first on the World Happiness Report for 2018, 2019 and 2020 (Human

Development Reports, 2021) and third with both Corruption Perceptions Index and Social Progress Index (Fig.1.25) (Corruption Perceptions Index 2020 for Finland, 2021) (Social Progress Index. 2021).



Fig.1.25. World Indexes in Finland, 2020

The organization for Economic Co-operation and Development, which makes the analysis within 11 indexes of a country's well-being, notes Finland performs quite well. The country has the top Better Life Indexes in Safety, Life Satisfaction, Environment and Education; and holds the above average position in Work-Life Balance, Health, Community, Jobs and Housing, but below in Civil Engagement and Income (Fig. 1.26) (OECD Better Life Index, 2021).



Fig.1.26. Better Life Index in Finland, 2020 Source: OECD Better Life Index (2021)

Economic freedom rating indicates Finland as "mostly free" with the rate of 73.99 out of 100. In global, the country holds 12th place on the top by its economic freedom. Observing the lists presented by the World Bank, that measures business regulations, Finland is the 20th country preferable for doing business. The 2020 Finland doing business score is 80.2, which is 0.2 better, than in 2019: the features of Starting Business,

Dealing with Construction Permits, Registering Property, and Paying Taxes have improved significantly (Fig.1.27).



Source: Explore Economies (2021)

CHAPTER 2. FOREIGN ECONOMIC ACTIVITY OF FINLAND: INTERNATIONAL GOODS AND CAPITAL MOVEMENT

2.1 Export-import activity of Finland

Finland's economy is heavily dependent on foreign trade. Exports counted 40.2% of Gross Domestic Product (GDP). In 2020, Finland exported €57.3 billion (which made it 36th biggest exporter in the world) and imported €59.4 billion (45th importer in the world), resulting in a trade deficit of €2.1 billion. Since the huge decrease in both exports and imports in 2009 due to the crisis, the trade flows' value has been increasing, but the trade balance remains negative since 2011 (Fig.2.1).



Source: World Bank (2021)

On the international market, Finland is known as a manufacturer of various technical means, machines and tools for the forestry industry, pulp and paper products, clothing and equipment for leisure, electronics. Most Finnish products are competitive and are in demand due to product design: Finnish manufacturers were among the first in the world to understand the role and importance of industrial design, based on two important principles - rationalism and practicality.

The largest sources of export earnings for 2020 were chemical industry products (\in 10.6 billion), forest industry products (\in 10.27 billion), metal and metal products (\in 8.87 billion), machinery and equipment (\in 8.6 billion), electric and electronics industry products (\in 6.7 billion) (Fig.2.2).



Fig.2.2. Finland's exports by product category in %, 2020 Source: Finnish Customs (2021)

Finland's main imports for 2020 were chemical industry products (\in 10.38 billion), electric and electronics industry products (\in 8.87 billion), transport equipment (\in 6.32 billion), machinery and equipment (\in 5.98 billion) and products from mining and quarrying (\in 5.6 billion) (Fig.2.3).



Fig.2.2. Finland's imports by product category in %, 2020 Source: Finnish Customs (2021)

Because of the fact that Finland has a relatively small domestic market, specialized production, and lack of energy sources, foreign trade is extremely vital for the country's economy. It was previously mentioned that because of the collapse of the Soviet Union, Finland had lost its main trading partners. However, nowadays, Germany is Finland's biggest trading partner. In addition to Germany, Finland's main partners are Sweden, the United States, Russia, Netherlands and China (Fig.2.3-2.4).









The global pandemic has naturally affected the lives of millions of people, entire countries are quarantined, and the number of deaths does not reduce this at a time when one of the vaccines, as it turned out, causes thrombosis in some people. As we can see, the situation is critical, which in turn affects the world economy.

The ratio between cured and dead is so high, that on the diagram it seems like there are no victims of the virus at all, which is unfortunately not true, as for the time of pandemic there are 862 people who died because of coronavirus. On the other hand, it is only 1% from the total number of infected. Finland manage to handle this problem so effectively, as there the SARS-CoV-2 infection rate is lower than in the rest of Europe (Fig.2.5-2.6)





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Fig. 2.6. Daily deaths from COVID-19, Finland (Jan, 2020-Feb,2021) Source: World Health Organization (2021)

Finland is one of the countries in the world in which the COVID-19 pandemic is most successfully controlled. According to Johns Hopkins University, as of November 25, 22,652 Finns have been diagnosed with coronavirus since the beginning of the year, 388 of them have died. No other country in Europe has such a low level of SARS-CoV-2 infection.

When the number of people infected with coronavirus rose sharply around the world in the spring, the Finnish authorities reacted immediately - and introduced a twomonth quarantine in the country. Travel to and from Helsinki and the region surrounding the capital was prohibited. Schools and other institutions closed, and later also restaurants. This happened in a relatively early period of the spread of SARS-CoV-2, the number of infected was still relatively low at that time.

Finland's export-oriented economy is entering a difficult period of recession, despite easing quarantine measures and a phased return of economic activity. Partial opening of borders, primarily between the main trading partners and neighbours, will not give a full-scale effect and will not restore the demand necessary to support the economy. And the risk of unemployment, the desire of the population to save and social distancing do not stimulate consumption.

Official statistics show negative values: drop in GDP in the first quarter of 2020 by 1.1%; unemployment is estimated at 8.1% and continues to grow; two thirds of Finnish companies are preparing for layoffs and sending employees on forced leave. A decline in GDP in 2020 is forecasted at the level of 5–5.5% (experts from the Economic Institute ELTA announced a fall of 5%). At the same time, Finland announced a "hybrid strategy" to combat the virus, when restrictions are lifted, but precautions are maintained, testing

for the virus is increasing, contacts are being traced using a mobile application. This combination of measures is aimed primarily at resuming the work of enterprises and mitigating negative trends in the economy. Unlike its neighbours, Finland predicts GDP growth in 2021–2014. only in the region of 1.5–0.8%. Although the country has seen a sluggish rise in new infections, the number of recoveries is growing rapidly, and death rates are among the lowest in the world.

2.2 The scope and main directions of foreign direct investment in Finland

The Finnish government uses different methods like grants, loans, and investments in equity, as well as employee training in order to promote investments in areas which were in need of development and modernization. This task was given to the Finnish Funding Agency for technology and played a significant role during the 1980s and '90s in Finnish technological development. Thus, by the end of the 20th century, the government had earmarked almost one-third of its total spending for research and development.

After having contracted sharply due to the international financial crisis and the Eurozone crisis, foreign direct investment (FDI) flows to Finland have recovered in recent years (Foreign direct investment (FDI) in Finland - Investing - Nordea Trade Portal, 2021).

During 2019, the value of foreign direct investment in Finland increased from EUR 62.9 billion to EUR 76.4 billion. As financial transactions, net investments in Finland amounted to EUR 10.1 billion. Of the investments, EUR 8.0 billion were debt items, i.e. capital flowed to Finland from foreign direct investors, mostly in the form of loans.

The value of direct investment abroad from Finland increased from EUR 112.5 billion to EUR 130.4 billion. Most of the increase is due to a change in valuation items of EUR 13.8 billion and reinvested earnings of EUR 3.8 billion. As financial transactions, investments abroad amounted to only EUR 0.6 billion (Fig.2.7).



Fig.2.7. Foreign Direct Investment portfolio in Finland, 2004-2019 Source: Statistics-Finland (2021)

Examined by country group, investments in Finland came mainly from the EU, which together accounted for 82% of the investment portfolio at the end of 2019. The euro area accounted for 45% of the direct investment portfolio in Finland. Correspondingly, direct investments from Finland abroad were mostly directed to the countries of the EU (80%) and euro area countries (51%) (Fig.2.8).



Fig.2.8. Foreign Direct Investment to Finland, by top countries Source: Statistics-Finland (2021)

During 2019, income returns from foreign direct investment in Finland were at a top of EUR 12.2 billion (credit) since 2014. The return on direct investment in Finland to foreign owners was also at a historically high level of EUR 7.4 billion (debit). This asset income is recognized in the primary income item of Finland's current account and its net effect on Finland's current account was EUR 4.8 billion in 2019 (Fig.2.9.).



Fig.2.9. Returns on Foreign Direct Investment in Finland, 2006-2019 Source: Statistics-Finland (2021)

Considering the investments by sector, the biggest invested industries are manufactures (25.5%), information and communication (18.1%), real estate enterprises (11.2%), financial and insurance enterprises (11%).

One of the main directions in the state economic policy pursued by Finland is the provision of appropriate conditions for maintaining investment and entrepreneurial activity in the country. At the same time, the practical steps taken are closely linked with the deepening of the internationalization of domestic companies and assistance in attracting foreign capital to the country.

In Finland there is no special legislation regulating the issues of foreign investment in the country. Foreign companies and entrepreneurs, when making investments in Finland, are granted national treatment with exemptions provided for in the relevant intergovernmental agreements, as well as taking into account a small number of restrictive provisions contained in a number of Finnish legislations. The procedure for regulating the entrepreneurial activity of foreigners in the country in accordance with the current legislation makes it possible to determine the actual volumes of their capital investments and the results of its application, ensuring complete anonymity of both foreign and domestic legal and physical investors. At the same time, restrictions on the scope and size of foreign ownership have been lifted, with the exception of the defence industry. The main state bodies and organizations regulating foreign business activities are the Ministry of Trade and Industry, the Bank of Finland, and the National Council of Patents and Registration. In accordance with EU regulations, the system of state support for economic development in the country provides domestic and foreign investors with equal conditions for their entrepreneurial activities.

Most of the investment programs in Finland are aimed at helping to attract investment in economically less developed regions of the country. Support for the development of these regions is carried out by providing investors with financial subsidies, loans, tax privileges, guarantees for transactions and financing of personnel training from government sources (Dalmana and Ruotti, 2009).

2.3 Assessment of Finland's investment climate and the degree of its attractiveness to Ukrainian investors

Table 2.1

The country's strong points:	The country's weak points:				
• High rate of political stability;	• Geographic location might become a				
• A strategic geographic location lets	vulnerable spot;				
Finland to expand new markets;	• A decrease in industrial competitiveness;				
• Considered to be one of the least corrupt	• Fragility of the banking sector;				
countries in Europe and in the world;	• A small internal market;				
• Expertise in green technology,	• A multicultural population;				
manufacturing, health and IT;	• Dependence on trade with Russia.				
• Has a heavily industrialized economy;					
• Has a high work productivity.					

Strong and weak points of Finland

While talking about the investment climate of Finland, it is referred to criteria for investment attractiveness of countries identified by the U.S. Chamber of Commerce. Among them are: characteristics of the local market, availability of market, quality of labour, currency risk, repatriation of capital, protection of intellectual property, trade policy, state regulation, tax rates and possible benefits, political stability, macroeconomic policy, infrastructure development and support services.

The **characteristics of the local market** needed to assess the country's investment climate attractiveness listed such criteria as: country's trade policy, export and import, GDP, structure of the market, unemployment rate, % labour force of total population, salary level, currency stability, inflation rate, etc.

Quality of labour. Finland has adopted a strategy for the implementation of the Scandinavian welfare state model. The model is based on knowledge and skills development, innovation and productivity improvement; at the same time, the state is assigned an important social role. Important components of the program are improving the quality of working life, encouraging employees to extend their working life, developing working capacity and promoting labour protection. The development of occupational health and safety services is included in the overall strategy for the development of social services and health care. A high level of safety, health and wellbeing in the workplace should be an important outcome of such a policy. The strategy is aimed at implementing the updated legislation, constantly improving working conditions, ensuring safety, health and well-being in the workplace.

An important feature of the Scandinavian countries is the so-called consensus society, which is characterized by solidarity, mutual responsibility and a willingness to reach agreement on the development of the world of work and society as a whole. In the labour market, these principles are implemented in the process of social dialogue, including collective bargaining, collective agreements and tripartite cooperation. All OSH strategies and programs are developed and implemented within the framework of tripartite cooperation.

Weaknesses in the Finnish OSH system relate to dynamic changes in the world of work, the heterogeneous nature of enterprises, fixed-term labour contracts, and poor coverage by occupational health services for small businesses and self-employed workers (Finland's employment rate continues to grow, but the labour productivity is declining – experiences of overloading from work remain unchanged -, 2019).

In addition to analysing the OSH system itself, it is also important to consider its economic aspects. Research data indicate a positive economic effect that good working conditions provide. The Finnish pension system, accident insurance and occupational health systems are characterized by a well-developed system of benefits and incentives. State programs for the development of the labour sphere provide for the development of modern production while ensuring the safety and health of workers.

The globalization and increasing internationalization of the Finnish labour sphere is forcing the country to become more actively involved in international cooperation in the field of labour protection. To be ready for such cooperation, the country must conduct active research work, organize training and participate in international programs, especially in the framework of the ILO, WHO and other intergovernmental organizations, as well as in EU programs in the field of labour protection (Kyyra and Pesola, 2018).

Currency risk. The inflation in Finland remains low, the investor is always exposed to currency risk. The basis of effective risk management is that the investor should always minimize the currency risk of the portfolio. This is based on the fact that the investor becomes a speculator at the stage when he seeks to assess or predict exchange rate developments. As a result, an investor should always take advantage of currency hedging when investing (Vaihekoski, 2021).

Protection of intellectual property. Patenting in Finland is not limited to a generally known procedure. Realizing the progressive role of introducing the advanced achievements of mankind, the country seeks to provide the green light for innovation, rendering them every assistance.

Since 1971, the Finnish Inventions Foundation has been operating in the state to provide legal support and financial assistance in research and patenting. Important recommendations and advisory services come from it, an assessment of the market and commercial potential of developments, which helps researchers assess the future perspective and determine the next steps. The Foundation that provides material support to intellectual property, if it considers it appropriate. The amount of funding depends on the nature of the innovation and its potential - and can reach from 1,500 euros to 100 thousand.

Finland, which is one of the countries of the European Patent Convention, works according to its rules, which provides for the payment of annual fees for extending the patentability of an object. Compliance with the stipulated norms and regulations - ensures the harmonious coexistence of Finnish and foreign innovations (Finland - Protecting Intellectual Property, 2020).

Trade policy. Finland is a member of European Union and European Monetary Union. The EU is firmly committed to the promotion of open and fair trade with all its trading partners and has multilateral agreements and bilateral agreements trade agreements with several countries. The Finnish commercial policy, as seen by the WTO.

State regulation of industry and services in Finland is based on the relevant EU directives. Special attention is paid to improving the business climate and reducing state regulation of entrepreneurial activity. Some measures are also being taken in order to stimulate certain branches and industries of particular importance to Finland's economy.

The Ministry of Employment and the economy is responsible for regulating economic activities. This section is devoted to general prerequisites related to business management, such as business freedom, trade register, as well as systems for protecting corporate financial statements, regulation and industrial property (Regulation of business operations - Ministry of Economic Affairs and Employment, 2021).

Tax rates and benefits. All individuals and enterprises that are subjects are obliged to pay for duties in full. The individual is considered to be a taxpayer, if for a specific reporting period it held more than 183 days within the republic. Companies pay fees from all types of income obtained both in the country and abroad, the same concerns ordinary citizens.

Taxes in Finland for salary and profits in 2018 are divided into direct and indirect:

• **Direct**: duties on wages and income, on the transfer of assets, donation or inheritance. Additionally, charge church and municipal fees.

• **Indirect**: VAT, customs fees and excise taxes (Tax rates Finland, 2021).

Income taxes in Finland are higher than those for many other industrialized countries, with the taxation of above-average incomes especially heavy (Table 2.2).

Table 2.2

Taxable income (EUR*)			
Over	Not over	Tax on column 1 (EUR)	Tax on excess (%)
18600	27900	8	6
27900	45900	566	17,25
45900	80500	3671	21,25
80500		11023,5	31,25

Income tax in Finland

Source: Tax rates Finland (2021)

Finland's value-added tax is among the highest in the European Union. The VAT calculation is carried out on three types of rates:

- 24% the main one;
- 14% for food and public nutrition services;
- 10% on transport, medicines, media and so on (Löf and Virolainen, 2021).

Political stability. After entering the EU, Finland has signed a number of international treaties and liabilities, which include the obligation to take measures to combat corruption in the public sector. Since 2001, according to the reports of the non-governmental international organization Transparency International, Finland has become the first country in the world in the absence of corruption in government bodies.

Despite the fact that the quantitative indicator of political stability in Finland has decreased in recent years, the country still occupies a high position in the ranking among other countries (Fig.2.10).



Fig.2.10. Political stability index (-2.5 weak; 2.5 strong), 20012-2019 Source: Statistics-Finland (2021)

Macroeconomic policy. Finland's economy is highly developed. For Finland, regional economic policy is extremely important because of its peripheral position in the North of Europe, long distances, the lowest population density in the EU, a harsh climate, and limited natural resources. The challenges of our time associated with globalization and the rapid aging of the population pose new challenges for regional policy. Achieving the national goals of strengthening international competitiveness and improving the country's well-being in modern conditions is impossible without improving the efficiency of regional development management so that each region of Finland is able to fully utilize its economic potential. Therefore, Finland's regional economy focuses not only on developing the poorest areas, but also on improving the economic behaviour of each region and is thus a key element of the government's economic and social strategy.

Only for 2005-2010 GDP per capita in Finland increased by 3 thousand euros - up to 29.96 thousand. The average national level of GDP per capita is about 15% higher than in the EU. Therefore, even the lagging province of Kainuu (20.16 thousand euros per capita) with an indicator of 77.5% of the EU average level confidently bypasses some other countries.

The coastal southern and southwestern regions of Finland have historically been more developed than the rest of the country. They had milder climatic conditions for the life of the population and a favourable geographical position for relations with developed European countries, which are important for Finland as markets for specialized products and sources of raw materials and necessary finished products.

Globalization processes also create a new framework for regional development. Companies are solving the problem of cost optimization through further internationalization of their activities. Less productive labour-intensive production flows from Finland to other countries where labour is cheaper (Finland - Macroeconomic Policy, 2021).

Infrastructure development and support services. There are many high-speed highways and motorways equipped with junctions, places for recreation and information scoreboard. Along with the networks supported all year, dirt roads are widely developed

between the cities of the motorways. In large cities there are cycling paths. The length of public roads in Finland is 78.17 thousand km, of which the improved coating is about 18 thousand km. (23% of total length). There are more than 13.5 thousand bridges on the roads, 59 cable ferries and 4 autonomous ferries. Illuminated areas of roads - 8 thousand km. There are also no paid roads in Finland.

The thick network of bus routes associates almost all settlements, serves as the basis of intra-city transport and connects the country with Russia, Norway and Sweden. It is possible to do long routes as from Helsinki in Oulu (about 9 hours) or from Turku in Rovaniemi (about 15 hours) by bus. From Helsinki every day there are more than 300 express buses, where you can get to the most distant and isolated parts of the country. Monthly lines schedule are composed so as to ensure maximum consistency of bus transportation with rail, sea and air transport

The length of the Finnish railways is 5,794 km, of which are provided with electricity 3,047 km. Railway network tightly covers the whole country. The rolling stock fleet consists of 502 diesel locomotives and 130 electric locomotives, most of which are equipped with a system of alert based on satellite location technology (Transport network - Väylä, 2021).

CHAPTER 3. DEVELOPMENT OF AN INTERNATIONAL INVESTMENT PROJECT TO ESTABLISH AN ECOVILLAGE

3.1 Modern concept of ecovillages

Community spirit, the social economy, various housing services and forms, and an ageing Finland have been featured in the media recently, and not in favour. Most people need some kind of community around them. Communality has taken on new forms with social media. Often, communities are also formed today in the workplace and in hobbies. The commonality of the place of residence is not a matter of course, even in rural areas, although communality has begun to raise its head again. Village associations have been revived and new ones established. Also, in cities, the community is created in districts and housing associations. The surrounding community is an important support network and neighbourly aid, as well as helping with great traditions that should be cherished. The community concept offers a unique approach to living, learning and entertainment in one complex. These offerings provide high standards to meet the requirements of spiritual development, physical and practical skills in today's controversial world.

Ecological housing is housing based on an awareness of the unsustainability of current lifestyles and a desire to find an alternative that re-integrates human activities more closely into natural processes and cycles. The first idea of ecological living takes many back in time to an agricultural society where construction, food production, and lifestyles, in general, operate in a sustainable way. Social relationships in the immediate living environment were strong and the individual was tied to a community network, creating security and local identity, but also socially controlling the individual. The above-mentioned way of living, cultivating, and caring for many of the essentials among the community is the same as that of modern ecovillages, whose popularity rose in the 1990s and continues to this day. There is no clear difference between the agrihood and ecovillages mentioned earlier, as there is no equally clear definition of an ecovillage and the ecological goals of agrihoods also vary. In general, an ecovillage is perceived as a village-like group of detached houses with ecological and often also social goals, but

ecological principles can vary greatly between different ecovillages and can also be communities operating in an urban environment, such as apartment communities. However, all residential communities classified as ecovillages are, in principle, striving for sustainable development and taking into account the four different areas of sustainability, social, cultural, ecological and economic (Global Ecovillage Network, 2019). In ecovillages, the ecology of buildings, the energy sources used, and carbon neutrality are often stronger themes compared to agrihood, whose main themes are clean farming, local food, community, and a healthy living environment.

In its activities, the cooperative strives to realize the goals of social entrepreneurship, as well as to support and develop organic and biodynamic agriculture. The cooperative's activities are aimed at promoting the rational use of the environment and minimizing damage to health and the environment. The cooperative's mission is to improve the quality of life in rural areas and diversify economic activities.

The ecovillage will use technological and social innovations that are beneficial for the development of rural areas not only in Finland, but also in other EU countries and beyond. In the coming period, the ecovillage should work in partnership with all rural developers, farmers, rural businesses, social entrepreneurs, educational institutions, politicians and others. Ecovillages can serve as training and research centres for sustainable development of society. Best practices from eco-villages can be used to introduce new forms of natural farming, green building using local materials, using local renewable energy sources, treating local biological wastewater, and building village communities.

Table.3.1

Strengths	Weaknesses
biodynamic farming	• access to investors and financing
• community	• finding skilled farmers
• diversity	• high investment needs
• diverse expertise of members	• support policy

SWOT analysis of ecovillage

Table 3.1 Continued

location, transport connections	
• development / repair opportunities for	
production buildings	
Opportunities	Threats
• creation of social jobs	• people's commitment
• revitalization of rural areas	• getting funding
• rural housing	• pioneering
• diverse social structure	• support policies
• creation of employment and livelihood	• prejudices
opportunities, different business models	• bureaucracy (including building
• cooperation with educational and	codes)
research organizations	
• pioneering work	
• development of new and renewable	
forms of energy	

3.2 Analysis of the ecovillage market in Finland

By the time of the creation of the World Network of Ecovillages, in some countries, in particular, Iceland, Scotland, USA, Sri Lanka, etc., ecovillages had already appeared. The inhabitants of the settlements were united by common spiritual values and worldview. Ecovillages are formed by the desire of people to reduce their ecological footprint and increase their sense of belonging. Eco-villages are beginning to gain attention as practical role models for sustainable living and places to inspire the general public. The Global Eco-Settlement Network was established in 1995 to support the creation and conservation of human settlements through the sustainable development of the social and natural environment. Despite the fact that Sweden and Russia win in the Baltic Sea countries, the more quantitative and populated, however, the "oldest" settlements are observed in Finland, which underlines the fact that the country was one of the first to start thinking about ecology. Rihmasto, operating in Finland, is a Finnish

network of communities, eco and community villages. The network serves as a community forum and information channel. The Rihmasto website contains information about communities and a presentation of communities operating in Finland. The mycelium is based on the Finnish Sustainable Lifestyle Association. There are many types of communities and ecovillages in Finland, which are mostly diverse in their activities. The most famous Finnish ecovillages are Livonsaaren yhteisökylä, Gaijan Luomukylä and Keuruu Ecovillage.

The Livonsaaren community is an eco-village under construction in southwestern Finland, about 35 km from Turku. Currently, the community is home to about 30 adults and 20 children. The land area is about 60 hectares, some of which are fields and rocky forests. Livonsaaren is an island with access to the sea. There are several new homes for people to live in. There are also three old buildings for shared living and several shared saunas. One of the public buildings, the old school, also has a common room for meetings and other events. A total of 20 houses are built on this land.

Gaijan Luomukylä is located in Ähtäri on the shores of Lake Oulujärvi. Ten acres of land is home to a large stone main building, several wooden houses, gardens and fields for growing, as well as many pastures for animals. At the end of the plot, near the beach, there is a place for a campfire and a sauna. Currently, 45 people live in the community, including children. The settlement has a cooperative where people receive various organic products for residents and guests.

Keuruu Ecovillage is an international community located in the heart of Finland. It was established by a group of environmentally friendly people in 1997. Currently, 40 adults and 15 children live here. On a larger scale, there are about 150 members who live outside the ecovillage, but visit it regularly. The ecovillage has 54 hectares of land, of which 24 are biologically cultivated, and the rest is a natural forest. There are about 30 different buildings located on the shores of the beautiful Lake Kivijärvi. The oldest buildings date back to the early 18th century and are a typical example of Finnish countryside.

42 but as a

The aforementioned eco-villages in Finland were not seen as competitors, but as a prototype for sustainable homes. When choosing a place to establish an ecovillage, I paid attention to many factors, first of all, such as climate and temperature, soil fertility, transport and air connections. Lahti is a modern industrial city located 100 km from Helsinki, an hour's drive from Helsinki-Vantaa International Airport. It is located in the southern part of Lake Vesijärvi and is a kind of "gateway" to the wonderful world of Finnish lakes. This is where many tourist water cruises start. The fact is that Vesijärvi is connected via the Väaksu canal with Lake Päijänne, the second largest body of water in Finland. Among Finnish cities and municipalities committed to developing innovative solutions in the circular economy. Lahti is a leading example of integrated waste management, not only in households. farms, but also at the industrial level. If all goes according to plan, Lahti's incineration and garbage disposal will stop by 2050. Moreover, the Päijät Häme region, to which Lahti belongs, published in 2017 the first regional roadmap for a circular economy. This environment attracts all kinds of clean technology companies. In addition to the circular economy, some Finnish cities and municipalities are also pioneers in the development and implementation of natural solutions in response to the challenges of climate change. There is not a single ecovillage in the city yet and it is an excellent option for building an ecovillage.

3.3 Substantiation of the investment project for the creation of ecovillage, assessment of the need for investment resources and estimated income calculation

The Ecovillage concept was used as the basis for defining the steps in the process:

Stage I - Fact-finding mission to better understand local priorities and resources and prepare for the next phase;

Stage II - feasibility study for the development of the capacity of local stakeholders; Stage III - implementation.

The fact-finding mission consists of the following tasks:

• Understanding local priorities through site visits and meetings with authorities and other key stakeholders.

• Discussion of the components of the concept of a village with local leaders. Businesses and academia have a better understanding of the local market, current practices and constraints, and facilitate access to information.

• Identification of potential instruments or funding bodies that could support the development and implementation of the eco-village.

It is planned to attract organizations and stakeholders, such as local authorities' investors from Ukraine, the Minister of the Environment, Energy and Housing, Urban Planning Agency, Finnish Water Utilities Association and General Company for Electricity and Renewable Energies.

Thus, we have chosen the city of Lahti to build an ecovillage. It is suitable for climatic conditions, location, as well as the fact that many tourists come there and the presence of the lake. Since the existing settlements are quite small, I am planning to create a larger settlement for up to 70 people, of 15 private houses for families and single people as well as 1 big shared house for ecovillage residents' needs, guests and tourists. The first important step is to find land available for sustainable homes. Good, reclaimed land of 47 hectares was found in Karhulantie, Nastola-Uusikylä, Lahti at a price of 580,000 euros. The selected land is located 30 km from the nearest settlement and the expansion of the ecovillage can be considered in the future.

Once the building plan has been prepared, a building permit must be obtained from the Finnish municipal authorities. In order to obtain a permit for the construction of an ecovillage in Finland needed:

• The building license (according to building legislation) from the municipality is based on urban land use planning.

• An environmental permit, which is usually issued by regional environmental authorities, certifies that planned activities are in line with environmental values and investigates violations for neighbours.

A separate water permit is required for any use of natural bodies of water.

Obtaining all the necessary permits is quite simple, this and the construction itself will be handled by the local Finnish company Omatalo, specializing in the design and

construction of houses. The following table provides calculations for 15 residential buildings and 1 community building proposed by the company.

Table 3.2.

№	Name	1 private house 50m2	15 private houses	1 shared house 400m2	Total (15+1)
1	Construction (registration, construction plan, permit, connections, financing)	€ 8 422	€ 126 326	€ 67 374	€ 193 700
2	Management and procurement (scaffolding, waste charges, project management)	€9150	€ 137 250	€ 73 200	€ 210 450
3	Construction works	€ 10 000	€ 150 000	€ 80 000	€ 230 000
4	Frame, facades and water catchment rooftop	€ 25 650	€ 384 750	€ 205 200	€ 589 950
5	Basement	€7850	€ 117 750	€ 62 800	€ 180 550
6	Solar panels and their installation	€ 2 319	€ 34 785	€ 18 552	€ 53 337
7	Pit sewer system	€ 787	€ 11 805	€ 6 296	€ 18 101
8	Water (Well, rainwater collection tank, purifier and connection)	€ 4 800	€ 72 000	€ 38 400	€ 110 400
	TOTAL	€ 68 978	€ 1 034 666	€ 551 822	€ 1 586 488

Investing costs

Construction will take place under close quality control while keeping costs to a minimum with the help of volunteers and natural building techniques. All administrative operating costs will be minimized using a lean management method and financial reviews will be carried out monthly. The use of building materials significantly affects the quality of the living environment, especially in the interior of buildings. Based on the principles of building biology, building materials and furniture are selected according to the following requirements:

- consist of natural materials or close to natural compounds;
- do not emit toxic gases, particles harmful to health;
- have a neutral or pleasant odor;
- maintain room humidity in an acceptable range;
- create a neutral electrical atmosphere (do not create electrostatic charges);

- have good acoustic properties;
- do not cause large changes in the natural magnetic field;
- capable of recycling;
- do not cause overexploitation of natural resources;
- thermally balanced.

Optimization of energy consumption is the main criterion used in the design and construction of ecovillages. Thus, I will use alternative energy sources in its production, operating on the energy of the sun, water, wind and geothermal energy, and the accumulation of rainwater, in order to achieve maximum conservation of natural resources and minimize negative impact on the ecological state of the biosphere. Houses in the settlement will actually not depend on the city communications of water, heat, power supply, as they are provided with autonomous life support systems. 15 houses without interior decoration will be put up for sale through advertisements in Finnish and international networks of eco-communities, as well as real estate databases. Potential residents must meet the requirements of the ecovillage and be ready to invest 2-4 hours per week in community service based on skills, interests and abilities. Maintaining a healthy lifestyle in the territory of settlements is a prerequisite. The use of alcohol, tobacco, and profanity is prohibited. Tempering, physical and spiritual practices are practiced to maintain sustainable development and a healthy lifestyle. The common home will serve as a space for meetings, offices, education, and more. Additional initial costs will be the renovation of the common house, 50 chairs in the meeting room for all members of the eco-community, a computer, as well as the purchase of necessary items for permaculture. Water demand averages 100 liters per hectare daily, rainwater and groundwater will be used. Initially, it is planned to use 10 hectares for permaculture and build 10 greenhouses for winter planting. For 1 hectare of open ground, 350g of plant seeds or 250 tree seedlings (biennial) are required. Since the trees will reach their maximum productivity only after 3-4 years, it was decided to plant 1 hectare of apple trees and 9 hectares of various annual vegetables, such as tomatoes, cucumbers and

others, for the first stage. In the following years, seeds will be harvested naturally. By simple calculations, we get the following costs:

Table 3.3.

N⁰	Name	•	Price/unit	Amount	Total
1	Land		€ 580 000	1	€ 580 000
2	Buildings construction and associated costs	Private House	€ 68 978	15	€ 1 034 666
		Shared House	€ 551 822	1	€ 551 822
3	Water tank 3001 and Rainwater Collection System		€ 1 120	20	€ 22 400
4	Overhaul of shared house		€ 28 000	1	€ 28 000
5	Chair		€ 29	50	€1450
6	Composter 5501		€ 779	7	€ 5 453
7	Apple tree		€ 32	250	€ 8 000
8	Seeds (in kg)		€ 3 000	3,15	€ 9 450
9	Greenhouse 100м2		€ 9 595	10	€ 95 950
10	Solar panels		€ 666	15	€ 9 990
11	Computer		€ 2 048	1	€ 2 048
	TOTAL				€ 2349229

Buildings construction costs

The governing bodies of the cooperative are the assembly of the cooperative, the board of directors and auditors. The general meeting of the cooperative is the supreme decision-making body of the cooperative. The decision-making power of members of large cooperatives may be exercised on behalf of the cooperative's meeting by a representative council elected by the members. The task of the board is to take care of the management and operations of the cooperative, such as accounting and financial control. The current Law on Cooperatives entered into force on January 1, 2002, has been updated over the years, and the last amendment entered into force on January 1, 2013. The Cooperative Act regulates the activities of cooperatives. It is expected that a board consisting of one member of the ecovillage community cooperative will be elected. The board will also elect one of the most active members of the community as chair. Meetings of the cooperative will be held regularly. The meeting decides on the approval of the income statement and balance sheet, measures caused by a surplus or loss in the balance sheet, the powers of the Board of Directors, and the CEO, as well as on other issues related to the meeting of the cooperative. The values and principles of working together in

principle guide the cooperative with regard to ethical and social responsibility. The cooperative must prepare financial statements in accordance with the Accounting Law and the Cooperative Law. The auditor must issue an audit report for each audited financial year. The audit report must include a statement that the financial statements and the report of the Board of Directors contain sufficient and correct information about the performance and financial position of the cooperative. Financial statements include a balance sheet, income statement, cash flow statement and notes. The balance sheet shows the financial position at the reporting date. Despite the fact that the residents of the ecovillage will actively participate in the development of the village, the hiring of professional workers in the agricultural industry is also considered. The following table presents salary costs including Social Contribution of 24.4%.

Table 3.4.

N⁰	Position	Number of people	Wage/month	Social Contributions/month	Total
1	Board of Cooperative	1	€ 2 500	€ 610	€ 3 110
2	Chairperson	1	€ 2 700	€ 659	€ 3 359
3	Auditor	1	€ 2 700	€ 659	€ 3 359
4	Farmer	4	€ 2 000	€ 488	€9952
5	Selectionist	1	€ 2 300	€ 561	€ 2 861
6	Handyman	2	€ 2 000	€ 488	€4976
	TOTAL PAYROLL				€ 27 617

Payroll costs

Continuing about expenditures, the depreciation deductions should be noticed. According to the accounting policy, the service life of such equipment as a computer is 3 years, while solar panel's 6 years. The depreciation method for calculations is straightline. Thus, the monthly amortization cost is EUR 455.

Table 3.5.

N⁰	Name	Units	Price	Amortization
1	Computer 3 years	1	€ 2 048	€ 57
2	Solar Panel 6 years	43	€ 666	€ 398
	TOTAL			€ 455

Depreciation

Summarizing all the expenditures, the inflation is taken into account. As a forecasting horizon for the formation of the financial model of the project, a period of 3

years from the start of implementation was chosen, during which the project reaches stable self-sufficiency indicators. It is forecasted the inflation of 0.2% in both 2022 and 2023.

Table 3.6

N⁰	Name	EUR/month	1st year	2nd year	3rd year
1	Salary	€ 27 617	€ 331 404	€ 332 067	€ 332 731
	Services (Removal of sorted waste that				
2	cannot be composted or reused, etc.)	€ 200	€ 2 400	€ 2 405	€2410
3	Depreciation of Equipment	€ 455	€ 5 460	€ 5 471	€ 5 482
4	Other Costs	€ 500	€ 6 000	€ 6 012	€ 6 024
	TOTAL	€ 28 772	€ 345 264	€ 345 955	€ 346 646

Expenditures

It is not difficult to come up with goods and services that an ecovillage can be engaged in. Below will be given only a part of the sources of income and way of life, respectively. In the future, it will be possible to consider additional services, such as various activities, depending on the skills of residents (for example, yoga, spiritual practices); educational services, forestry and gardening services, café and restaurant services, volunteering, etc. Non-members can also use the services of the cooperative in the manner established by the board. The concept of Ecovillage is to provide spiritual and educational courses that incorporate a tranquil environment in Ecovillage in Lahti for entertainment and activities, bringing together a comprehensive knowledge from all areas of human life. The vision is an international network of consciously evolving communities that continually serve to preserve the environment and together establish new paradigms. However, it is planned to make the production and sale of agricultural products (grown according to the principles of permaculture) to the local people, markets and supermarkets the main and leading source of income.

Table 3.7.

N⁰	Name	Price	Units	1st year	2nd year	3rd year
	Sale of					
	private					
1	houses	€ 155 000	15	€ 2 325 000	€-	€-
	Tomatoes (in					
2	tons)	€ 3 500	160	€ 560 000	€ 561 120	€ 562 242

Income

Table 3.7 Continued

	Cucumbers					
3	(in tons)	€ 3 100	30	€ 93 000	€ 93 186	€ 93 372
	Carrots (in					
4	tons)	€ 3 000	80	€ 240 000	€ 240 480	€ 240 961
	Cauliflower					
5	(in tons)	€ 6 000	78	€ 468 000	€ 468 936	€ 469 874
			15kg/tree - 1st year;			
	Apples (in		35kg/tree -2nd year;			
6	kg)	€6	90kg/tree - 3rd year	€ 22 500	€ 52 605	€ 135 541
	TOTAL			€ 3 708 500	€ 1 416 327	€ 1 501 990

Cooperatives such as ecovillages are independent taxpayers. Income is taxed as cooperative income. Taxable income is calculated as the difference between taxable income and deductible expenses. Income tax is 31.25%.

Table 3.8.

N⁰	Name		0	1st year	2nd year	3rd year
1	Investment	€	2 349 229			
2	Revenue			€ 3 708 500	€ 1 416 327	€ 1 501 990
3	Expenditures			€ 345 264	€ 345 955	€ 346 646
	Profit before					
4	taxation			€ 3 363 236	€ 1 070 372	€ 1 155 344
5	Income tax (31,25%)			€ 1 051 011	€ 334 491	€ 361 045
6	VAT (24%)			€ 37 200		
7	VAT (14%)			€ 193 690	€ 198 286	€ 210 279
6	Net Profit			€ 2 081 335	€ 537 595	€ 584 020

Profit

On the next stage I calculate the discount rate using the most commonly used formula

 $i = (1+Hn)^*(1+\prod)^*(1+rk)-1$, where:

i - the discount rate;

Hn - minimum guaranteed real rate of return in constant prices (deposit rate for legal entities);

 \prod - inflation;

rk - risk-adjusted

By inserting the given data, the following is obtained:

i(1st year) = (1+0.07)*(1+0.0021)*(1+0.1)-1 = 1.07*1.0021*1.1-1 = 0.1795

i(2nd year)=(1+0.07)*(1+0.002)*(1+0.1)-1 = 1.07*1.002*1.1-1 = 0.1794 i(3rd year)=(1+0.07)*(1+0.002)*(1+0.1)-1 = 1.07*1.002*1.1-1 = 0.1794 While, the discount index will be 1st year=1/(1+0.1795)=0,8478 2nd year=1/((1+0,1795)*(1+0,1794))=1/(1,1795*1,1794)=1/1,3911=0.7188 3rd year=1/((1+0,1794)*(1+0,1794))=1/(1,1794*1,1794)=1/1,3910=0.7189 For better visualization, the results presented in the following table:

Table 3.9.

Discount Rate and Index

Name	1st year	2nd year	3rd year
Discount Rate	0.1795	0.1794	0.1794
Discount Index	0.8478	0.7188	0.7189

As well as discounted value:

Table 3.10.

Discounted value

							Discounted
			Amorti		Discount	Discounted	Value:Cash
Years	Investment	Net Profit	zation	Cash Flow	Index	Value:Investment	Flow
0	€ 2 349 229				1	€ 2 349 229	
1		€ 2 081 335	€ 5 460	€ 2 086 795	0,8478		€ 1 769 185
2		€ 537 595	€ 5 471	€ 543 066	0,7188		€ 390 356
3		€ 584 020	€ 5 482	€ 589 502	0,7189		€ 423 793
TOTAL	€ 2 349 229	€ 3 202 950	€ 16 413	€ 3 219 363		€ 2 349 229	€ 2 583 334

On the final stage of assessing the project's effectiveness, I use different methods:

1) Valuation by net present value – (NPV – Net Present Value)

$$NPV = \sum_{k=1}^{n} \frac{P_k}{(1+i)^k} - I$$

(3.1),

where

n - the number of years of implementation of the international project;

k - years of implementation of the international project (1, 2, 3..., n);

Pk - income (cash inflow) to k-th implementation of the international project;

i - discount rate, shares of unit;

I - the amount of one-time investment (cash outflow).

<u>Result</u>

Since NPV> 0, the international project should be accepted, because the value of the project will increase, and the stock price will increase.

2) Index of return (yield) International Investment – PI (profitability index)

$$PI = \left[\sum_{k=1}^{n} \frac{P_k}{(1+i)^k}\right] / I$$
(3.2)

<u>Result</u>

Since PI>1 - the international project should be accepted.

3) Payback of international investments – PP (payback period method)

$$PP = \frac{I}{P_k}$$

where

I – value of single investment funds;

Pk - annual (average) net income from the international investment

<u>Result</u>

The project will pay off in less than 2 years. The project should be accepted.

For better visualization, the results presented in the tables below.

Table 3.11.

(3.3),

Results on p	oroject's	attractiveness
--------------	-----------	----------------

Year	Net Profit	Discounted Value
0	-2 349 229	-
1	€ 2 081 335	€ 1 769 185
2	€ 537 595	€ 390 356
3	€ 584 020	€ 423 793

NPV	234 105
PI	1,099651646
PP	2,20

CONCLUSIONS

Finland is indeed one of the most comfortable countries for living and working as it combines many factors which affect human life. Unemployment rate is low, salaries are rising and the economy is growing stable, while the country also remains the most ecologically clear in the world. These and many other factors truly show why Finland has become one of the best countries for working and living, not only in the EU, but in the world. The main trends in Finnish economy were properly studied.

Starting a business is a big task and requires a lot of familiarity. In addition, setting up a community-based business requires members to be willing to work together for the benefit of all, in addition to their common interest. Trying together is rewarding but challenging. Finding a common vision and creating common rules of the game is important when establishing a community. The values of the members should meet in order for the community to become functional. Transparency and clear practices help to succeed. A new kind of thinking and open-mindedness is needed in ecovillage's members, so that the Finnish countryside remains alive and productive. Different communities and community entrepreneurship tend to develop new ways to keep the countryside vibrant and attractive. Such a project has been found to be a great way to develop rural business. Various actors, such as the authorities, have taken decisions and developed strategies for rural development, but words on paper alone do not take things forward. Such a project as this one will have the will to take things to the concrete level. Well-being is becoming an attractive factor in rural areas and the core of business development.

The urgent rhythm of people's lives and the pressures of globalization are driving people to want peace and security around them. The countryside has space and peace for those who want it, and there are also business opportunities through, among other things, well-being and the utilization of renewable natural resources. Welfare, broadly embracing; from food to food - provides future business opportunities in rural areas. The countryside is a source of renewable resources. The processing of natural resources into food and renewable energy provides a good starting point for doing business. In addition to these, it is possible to use nature and the rural environment as a source of well-being.

The ecovillage is an example of a sustainable city, fully supported by the idea of SDGs achievement. In turn, SDGs are examples of soft law, which identifies the global interest, attracting governmental support, volunteers and investors. Despite the importance of technological progress, with the help of this paperwork, I would like to draw the attention of the influencers to the closure of the basic needs of mankind. Due to the fact that the climate and the environment are rapidly changing, especially in recent years, for the worse, it is high time for countries to begin their adaptation and reduce their impact on global changes.

The calculations obtained for the international project were as realistic as possible. Thus, the international investment project "Ecovillage" in Finland:

- Since NPV> 0, the international project should be accepted, because the value of the project will increase, and the stock price will increase.

- Since PI>1 the international project should be accepted.
- The project will pay off in 2,2 years. The project should be accepted.

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