ALFRED NOBEL UNIVERSITY DEPARTMENT OF THE GLOBAL ECONOMICS

QUALIFICATION WORK OF BACHELOR

"Development and ways of realization of the international investment project "Software Engineering Company in Belarus"

Fourth year student, group IER16-English in specialty 292 "International economic relations"

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DEPARTMENT OF THE GLOBAL ECONOMICS

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PROBLEMS	,	
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9	Performing the third section	
10	Drawing conclusions and	
10	recommendations	
11	Design of work, receiving feedback	
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13	Protection of qualification work	

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Summary

"Development and ways of realization of the international investment project "Software Engineering Company in Belarus"

The paper's main goal is to develop an investment project in Belarus, analyzing general characteristics of the development of Belarus' economy. Belarus' economy at a whole, with the overview of industries is examined. Belarus IT sector is investigated. The main trends in export-import activity of Belarus and its place in international economic relations are being overviewed. The analysis of international trade and foreign direct investment of Belarus are made. The attractiveness of Belorussian IT market for Ukrainian investors, as well as the potential advantages and disadvantages are investigated. The main aim of an international investment project to be started in Belarus, and forms of making an investment into it are calculated and made. The field of Software Engineering, as a main sector for an investment is analyzed. The substantiation of the investment project for the creation of Software Engineering Firm in Belarus, the assessment of the need for investment resources are being presented in the paper. The calculation of expected income and estimation of economic efficiency of investment project are done.

Key words: Belarus economy, IT sector, Software Engineering, international trade, foreign direct investment, investment climate, investment project, economic effectiveness.

Анотація

«Розробка та шляхи реалізації міжнародного інвестиційного проекту «Компанія по розробці програмного забезбечення» у Білорусі.

Основна мета роботи – розробити інвестиційний проект у Білорусі, аналізуючи розвиток економіки Білорусі. Розглядається економіка Білорусі в Досліджується білоруський IT-сектор. цілому, з ОГЛЯДОМ галузей. Проаналізовано основні тенденції експортно-імпортної діяльності Білорусі та її місце у міжнародних економічних відносинах. Проведено аналіз міжнародної торгівлі та прямих іноземних інвестицій Білорусі. Досліджено привабливість білоруського ІТ-ринку для українських інвесторів, а також потенційні переваги та недоліки. В рамках міжнародного проекту проаналізовано сферу інженерії програмного забезпечення як основного сектора інвестицій. У роботі представлено обґрунтування інвестиційного проекту про створення фірми по розробці програмного забезпечення в Білорусі, проведено оцінку потреби в інвестиційних ресурсах. Проведено оцінка розрахунок очікуваного доходу та економічної ефективності інвестиційного проекту.

Ключові слова: економіка Білорусі, ІТ-сектор, розробка програмного забезпечення, міжнародна торгівля, прямі іноземні інвестиції, інвестиційний клімат, інвестиційний проект, економічна ефективність.

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INTRODUCTION

Everyday, mankind opens new opportunities. New industries are raised from the ashes of old ones and then they evolve too. Only 50 years ago, Information Technology was just a moth on the international market. But what can be seen nowadays. It is fairly one of the largest and most influential industries worldwide. The biggest corporations are working in this sphere. Amazon, Google, Microsoft, Apple. Only a few that usually come at the top of the head. So, why not entering this field with new, revolutionary solutions?

Economic development is a very important issue when it comes to assessing today's perspectives of a mankind. Every Transnational Corporation somewhen started with a small, but perspective and evolving idea. And that is why the whole idea of creating projects, thinking of something new and progressive is on. That is why this project was developed and why it is actual, and as long as an idea is innovative and up-to-date, such papers will remain relevant.

The purpose of the thesis is to assess the prospects for the development of the IT sector and develop an investment project for opening a software engineering company in Belarus, using the analysis of the macroeconomic situation in Belarus and its investment climate.

The tasks of the thesis are:

- To research the general characteristics of the development of the economy of Belarus;
 - To evaluate structural changes in the economy of Belarus;
- To study the main trends of the Belarus IT sector and its participation in international IT market;
 - To analyze the main trends in export-import activity of Belarus;
- To evaluate the business environment and the investment position of Belarus;
- To consider the investment climate in Belarus and the degree of its attractiveness to Ukrainian investors;

- To analyze the potential of IT sector in Belarus;
- To develop the investment project for the opening of a software engineering company in Belarus and to assess the need for investment resources;
- To assess estimated income and economic effectiveness of the investment project.

The object of study is the international relations and investment climate in Belarus for foreign investors.

The subject of study is the development of international project in IT sector in Belarus.

Method. During the study, general scientific methods of cognition, analysis and synthesis, a process approach, methods of systemic, strategic, economic and statistical analysis were used.

The practical significance of the work means that it is possible to develop directions for the development of foreign economic relations in IT, as well as implement a real investment project to open a software engineering start-up in Belarus.

The first section of the paper deals with the analysis of general characteristics of the development of Belarus economy. The main industries of Belarus economy are considered. Historical events that influences nowadays economic situation are outlined. Labor market parameters are investigated.

The second section describes Belarus IT sector and its participation in international IT market. The activity of a chosen country in the international trade market with their export and import numbers is provided. The analysis of international trade and foreign direct investment of Belarus are provided. The business environment and the investment position of Belarus are evaluated. The degree of its attractiveness to Ukrainian investors, the main benefits and potential threats for a foreign investor are considered.

The third section provides a rationale for the main idea of an international investment project to implement in Belarus, the values, forms and ways of making investments. To consider these tasks, the analysis of the Software Engineering

industry as a part of IT sector in Belarus was done. The substantiation of the creation of Software Engineering Firm in Belarus, the assessment of the need for investment resources and identification of sources of their involvement are presented. The calculation of expected income and estimation of economic efficiency of investment project are done.

The conclusions and proposals contain the generalized findings of the research and development of the international investment project, the main scientific and practical results, and recommendations for practical use.

The list of references includes sources of information used in the thesis. List consists of legislative acts, regulations, domestic and foreign scientific and special literature, professional publications, electronic resources.

SECTION 1

BELARUS ECONOMY: THE CURRENT SITUATION, DEVELOPMENT TRENDS AND MAJOR PROBLEMS

1.1. General characteristics of the development of the Belarus economy over the last 10 years.

In the very beginning it is essential to know the field the investor is going to get his/her money into. Taking at least a quick research of macroeconomic situation and such parameters as country's GDP, Inflation rates, history of macroeconomic changes, and different labor market parameters, such as unemployment rate, salary levels and taxation system is very important and helpful. This is exactly what is going to be outline in the first section.

GDP

Gross Domestic Product statistics is the first thing to be outlined in this part of the investment project.

GDP-is the total monetary or market value of all finished goods and services produced within a given timeline within a country's borders. This criteria is a calculation of domestic output as a whole, and hence represents the country's economic picture. (Gross Domestic Product – GDP, 2020)

According to official World Bank reports and Trading Economics estimates, The Gross Domestic Product (GDP) in Belarus was worth 60.45 bln USD in 2019. Belarus' GDP size constitutes 0.05 per cent of the global economy of today. (Belarus GDP - Worldometer, 2020)

Belarus' Gross Domestic Product had shown the annual GDP growth rate of 1.4 per cent for the third quarter of 2019. Comparing it to previous year result, which was 0.5%, we can see optimistic dynamics in this parameter. Growth was driven primarily by manufacturing (1.2%); information and communication

(9.3%); construction (3.1%); and agriculture, forestry, and fisheries (3.1%). (Belarus Real GDP Growth [2006 - 2020] [Data & Charts], 2020)

GDP per capita value in Belarus lastly was filed in 2018, having a number of 6744 USD. The GDP per Capita in Belarus is equivalent to 53 percent of the world's average.

The per capita Gross Domestic Product in Belarus was last estimated in 2018 at 17741.86 US dollars, when calculated by purchasing power parity (PPP). In Belarus, GDP per Capita is equal to 100 per cent of the world average as measured by Purchasing Power Parity.

As for the sectoral division of Belarus GDP, in the table below there is the information given for third quarter in 2019. It is easily seen that the biggest value is added from service sector, having the amount of USD 6.5 mln, or BYN 16.1 mln in a three-month period. Manufacturing gave around USD 2.9 mln dollars, while in agricultural sector we can see the number of almost USD 2 mln. Construction, public administration, and transport sectors had given a little bit more than USD 2 mln in third quarter of 2019, having USD 0.81, USD 0.48, and USD 0.78 mln respectively. (Belarus GDP | 1990-2019 Data | 2020-2022 Forecast | Historical | Chart | News, 2020)

Table 1.1
Belarus GDP indexes 2018

Index	Value	Period
GDP	USD 59.66 bln	2018
Annual GDP growth rate	3.0%	2018
GDP per capita	6744 USD	2018
GDP per capita PPP	17741 USD	2018
GDP from agriculture	6.4%	2018
GDP from manufacturing	31.5%	2018
GDP from services	47.7%	2018

Source: Tradingeconomics.com

At the chart below (Fig. 1.1) the information about Belarus' GDP is reflected. It is seen that at the period from 2010 to 2014, as the crisis went down, the statistics tended to grow up year to year. In 2015 though, there was a rapid negative flow, which then continued in 2016 too. In this year the level of annual GDP was fixed at 47.72 bln USD, which is the lowest number in a last decade.

Eventually, Belarus' GDP started to recover ant for the last 3 years the numbers have only been highering up, reaching the level of more than \$60 billion in the year of 2019.

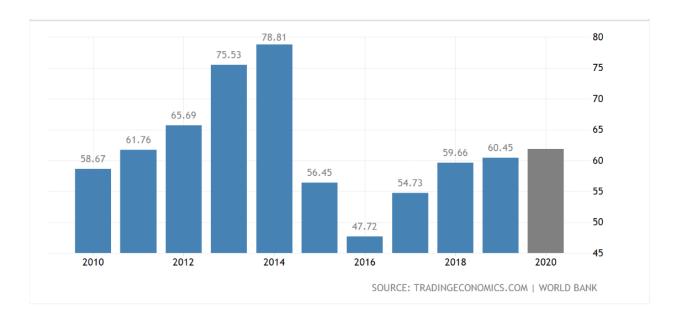


Fig. 1.1 GDP dynamics of Belarus over the last 10 years

Source: Tradingeconomics.com; World Bank

As for the sectoral division of GDP, trends in Belarus is close to any developing country.

Service sector occupies less than 50% of annual GDP for all the years between 2008 and 2018. Although, due to the IT evolution and overall service sector expansion all over the world, globalization worked on Belarus too. If in 2008 the main sector of GDP composition was an industrial one, having a slight difference in less than 1% over services (38.82% industry and 37.99% services, respectively), beginning from 2009 service sector is a leader. Also, comparing 2008 to 2018, service sector share increased to 47.72 per cent and is still growing. Maybe, in a few years, it will even outreach a half-value of all Belarussian annual GDP.

As for industry field, the situation is exactly the opposite. While being a leader in 2008, with again said value of 38.82%, from that time the level was

diminishing stadily, year-by-year. In 2018, industrial field occupied almost 31.5% in annual GDP composition.

Last one, but still important to Belarus economy is an agricultural sector. As Belarus is a developing country, agriculture is a very important part of its economy. Every year, big amount of forestry, fishery and other things are made in Belarus for both export and domestic usage. Despite that, the trends are showing that even this sector is reducing, giving its power to service sector.

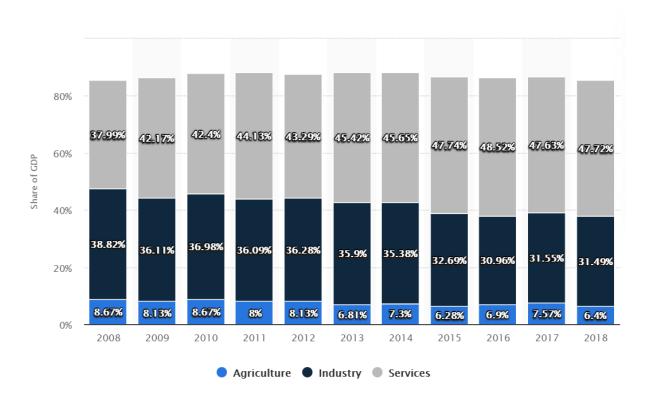


Fig. 1.2 GDP Sectoral Division of Belarus (2008-2018)

Source: Statista.com

Inflation

Over the last 10 years, Belarus' inflation rates were only lowering year-by-year. After the monetary crisis in 2011 (it will be outlined later) that resulted in devaluation of currency and big changes in Belarus ruble, in a year when inflation rate exceeded 100%, the situation was only tending to stabilize. It is seen below at the Figure 1.3.

Level of inflation in 2011 reached the peak of 108.7%, a number that is crucial in all it matter. In 2013, when Belarus began to recover from the crisis

consequences, the rate dropped to \approx 20%, and then up to 2016 inflation rates had not been changing a lot, fluctuating near 20%, but still getting smaller and smaller on a yearly basis.

One more drop was pictured in 2017, when the inflation rate was estimated at 6.1%, comparing with previous year when the level reached 11.8% of inflation.

Over the last two years, Belarus' inflation rates were stable and the borders of 4-6% was not exceeded any month. Still, as the ideal inflation rate is recognized to be under 3%, it is not possible to say that in Belarus the situation is very good, but the fact that stability has come cannot but rejoice.



Fig. 1.3 Inflation Rates (2010-2020)

Source: Tradingeconomics.com; National Statistical Committee of the Republic of Belarus

A crisis of 2011

The financial (economic) crisis of 2011 in Belarus is a complex of phenomena in the country's economy caused by the long-term negative trade balance and the costs of elements of the administrative-command system in the economy, and aggravated by the rush of foreign currency demand and the increase in wages before the 2010 presidential election of the year.

The crisis is manifested in a shortage of currency, a drop in the profitability of imports, an increase in prices and a drop in the purchasing power of the population as a result of more than 50% devaluation of the Belarusian ruble. Despite the devaluation and the introduction of anti-crisis regulation of the economy, the crisis did not disappear, and inflation exceeded forecast indicators many times over. Most independent experts believe that without structural reforms, the situation will continue to deteriorate. In addition, due to the course pursued by the country's leadership, problems arose with obtaining foreign loans.

As a result of the crisis, the dollar rate set by the National Bank for 2011 increased from 3,000 to 8,500 Belarusian rubles, the total devaluation in just ten months amounted to 189%. Due to the lack of currency in exchange offices, a black market was formed in March-April, where the dollar exchange rate reached 8000-9000 rubles by September. The free exchange rate at the exchange points (from September 14, 2011) at which you can buy cash currency and the exchange rate at the Belarusian Currency and Stock Exchange are held at about 8500 rubles, that is, three times higher than the rate at the beginning of the year. For individuals, a decree of the President of Belarus of October 6, 2011 introduced the requirement to present an identity document when buying foreign currency (canceled in May 2017).

Inflation for 2011 was 108.7%, core inflation (excluding prices for goods and services regulated by the state and seasonally changing) for January-October was 118.1%. This is the highest rate in Europe and the CIS. Prices for food products (including those controlled by the state) in 2011 increased by an average of 125%, for non-food products - 112%, for services - 64.9%, for passenger transportation - 105.6%. By November, consumer loan rates rose to 120% per annum. At the same time, the salary in dollar terms fell from \$ 500 to \$ 170-220, that is, below the level of Kyrgyzstan, Moldova, Armenia, Ukraine, and Azerbaijan (according to other sources, to \$ 260). The income level of the population fell to about 2005 levels. For the first time in a long time, strikes of workers in various sectors of the

economy and the transition of workers from state unions to independent ones began in the country.

A number of senior officials (in particular, President Alexander Lukashenko, Prime Minister Mikhail Myasnikovich, Deputy Prime Minister Anatoly Tozik) denied the existence of any crisis, recognizing only the existence of some problems. In addition, there is disagreement in government about how to get the country out of the crisis.

Below (Fig. 1.4) the information about monthly Inflation Rates is provided.

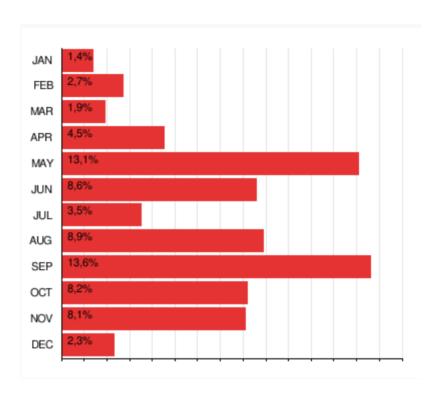


Fig. 1.4 Inflation in 2011

Source: Wikipedia.org

1.2. Belarus labor market parameters.

Unemployment. The level of unemployment in Belarus stays at the approximately the same level of around 5.5-6.0%. It worth a notice that since 2016

the level of unemployment was steadily decreasing up until 2018, when it slightly increased by 0.06%. (Belarus Unemployment Rate 1991-2020, 2020)

This number is not the ideal (3-5%), but still, having only a bit more than it, I assume that the level of unemployment in Belarus is at the stable and, even more importantly, usual level.

Table 1.2

Belarus Unemployment Rate - Historical Data

Year	Year Unemployment Rate			
	(%)			
2018	5.71%	0.06%		
2017	5.65%	-0.19%		
2016	5.84%	-0.07%		
2015	5.91%	0.02%		

Source: Macrotrends.net

Apart from the table above, more extensive information is given at the chart below (Table 1.5). The outline of unemployment rate change on a yearly basis is made.

2010 was the last year in a decade when annual change of unemployment rate was positive. After it, starting from 2011, the dynamics is only positive, having an unemployment rate dropping each and every year. Between 2011 and 2014 despite the lowering of this parameter, there were no big changes. The level was diminishing very slowly, by less then 0.1% annually.

Next line segment that can be identified is the period between 2015 and 2017 when firstly, the level of unemployment crossed 6%-level downwards and stadily, in 2017 strengthened at 5.6%.

In the next year, the rate had a huge drop of almost 0.9%, and the estimated unemployment level was 4.76%.

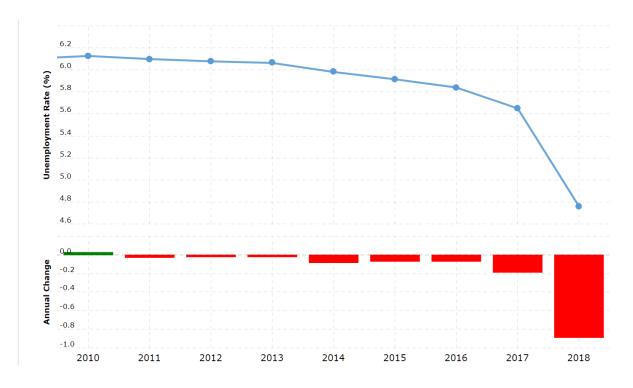


Fig. 1.5 Annual change of Unemployment Rate (2010-2020)

Source: Macrotrends.net

Salary levels

Switching to salary levels now.

The minimum salary in Belarus in 2020 is on the level of 375 rubles (USD 150). Comparing it with the minimum wage in 2019 at the level of 330 rubles (USD 132), we see that the amount of the minimum wage in 2020 increased by 13.6%. In 2019, the level of increase was 8.1%. Indexation was not made out last year, so we cannot compare it with earlier results. (Терминов, 2020)

As for the medium, in 2019 the average salary level was 1086 BYN/month. Comparing it to the previous year, we see the growth of 246 BYN/month.

Talking about the branches, the most profitable are: information technology, banking, leasing, management, and law and legislation.

In medium, the person working in IT sphere earns 1536 BYN per month, considering banking – 1232 BYN, law and legislation employees make 1273 rubles every month, while people from management usually have a wage of 1582 BYN. Individuals who lease their property make 1503 Belarus ruble each month. (Belarus, 2020)

Now switching to branches, which bring the lowest amount of money for people. Averages in Textile industry are at the level of 646 rubles per month. People who work in general labor sphere earn 768 BYN at a medium. Service industry workers get 766 BYN on a monthly basis. From Tourism/Hotel business they have an amount of 768 rubles, the same as general labor. In agriculture field, medium is 784 BYN.

Table 1.3

Average monthly salary (BYN)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
185	192	201	288	420	593	608	633	795	840	1086

Source: Paylab.Com

Taxes

It is a time to talk about taxes right now.

Corporate income tax. Starting from 2012, all businesses which are tax resident in Belarus are ordered to pay a tax on profits, calculated from the sale of products, goods, services and other assets, adding other incomes, at 18%.

As for corporate income tax (as known as profit tax) in Free Economic Zones, first 5 years entrepreneurs are not obliged with this type of tax. After this amount of time taken, it is required that PE's or other individuals pay 12% to the tax fund. (Belarus - Corporate - Taxes on corporate income, 2020)

Personal income tax. Belarus has a flat rate of 12% for its tax residents, same as for the Belarusian income of non-residents. There is no capital gains tax, stamp duty and inheritance tax for individuals. This is where it comes to one of the main advantages of investing in Belarussian IT sector. It is also can be said that it is the key selling point of the investment project as a whole. To encourage Belarus' IT sector and boost its value-added business population, the government has made the

rate lower (9%) for employees of businesses in the High Technologies Park. As it is planned in the project to work in collaboration with EPAM Systems and High Technologies Park as well, every activity and action made will be obliged with exactly this percent of tax.

Value-added tax. VAT is payable on most goods in Belarus at 20%. Here it is also a thing with Free Economic Zones, in which this value is on 10% mark. (Taxation, Belarus | Belarus.by, 2020).

Table 1.4

Type of tax	Rate
corporate income tax	18%
personal income tax	12%
Profit tax in FEZ	12% (after 5 years)
VAT	20%
VAT in FEZ	10%

Taxation in Belarus

Source: Belarus.by

SECTION 2

FOREIGN ECONOMIC ACTIVITY OF BELARUS: INTERNATIONAL GOODS AND CAPITAL MOVEMENT

2.1. Foreign direct investment activity of Belarus.

In order to analyze the country's investment climate, firstly investors have to consider the following topics: economy, political situation, business industry indicators (start of a business, the number of taxes and their percentage, analysis of the country's labor structure).

First of all, it should be said that there are multiple reasons why Belarus is an attractive place for foreign investment. It has a highly skilled workforce, a large-scale privatization program, attractive incentives, including six Free Economic Zones and a specialist High Technologies Park (HTP). And HTP is one of the main reasons here, considering that the field I have chosen to invest in is Information Technology. (Belarus - United States Department of State, 2020)

FDI information

The table below (Table 2) shows the information on different FDI parameters from 2016 till 2018 in Belarus. There was a rocketing increase of foreign capital inflows to Belarus starting from the first half of the 2000s. Despite that, they started to go down in 2008, as the economy of Russian Federation, which Belarus economy is highly dependent of, suffered difficulties, due to the global economic crisis happened in that year. Net FDI inflows in Belarus had a total of USD 1.47 billion in 2018, which is a bit higher compared to USD 1.28 billion in 2017 due to the rise in oil trade in 2017, according to UNCTAD. There was a slight growth compared with 2016, with then USD 1.24 billion. (Doing Business 2020, 2020) In 2018, FDI 's overall stock stood at USD 20.7 billion, which gives us a value of about 34.8 per cent of GDP (World Investment Report 2019). Thanks to data from the national statistical office, the Russian Federation (38.3 percent), the UK (25.7

percent), Cyprus (7.8 percent) and Poland (4.1 percent) were the largest investors in 2018. Wholesale and retail trade, transportation and storage, manufacturing and IT were the sectors that attracted more investment in 2018, Belarus (in collaboration with the company EPAM) announced that it will improve its investment conditions for IT companies to improve the digital economy situation. (Foreign direct investment (FDI) in Belarus - Investing - Nordea Trade Portal, 2020)

There is a customs union between Belarus, Russia, Kazakhstan, Armenia and Kyrgyzstan, with major oil pipeline projects, pipelines and associated services tending to be the largest in the region by volume and highly connected to hydrocarbons. There are six Special Economic Zones in Belarus, a country with access to developed energy, great openness to bordering countries and a highly qualified workforce (Belorussian IT specialists are highly valued in European IT market). Belarus ranks 49th (out of 190) in the Doing Business Report of the World Bank 2020, unfortunately the result is worse compared to 2019, when Belarus was 37th. Key progress is made on credit access, solving credit insolvency situations and paying taxes. In 2019 the National Investment and Privatization Agency outlined the long-term policy of the country's 2035 FDI. An emphasis on such sectors as high-tech and science-intensive manufacturing industries, logistics, transport infrastructure, banking, housing and utility sectors is outlined. (Dept, 2017)

Table 2.1
Foreign Direct Investment over last 3 years

Foreign Direct Investment	2016	2017	2018
FDI Inward Flow (million USD)	1,238	1,279	1,469
FDI Stock (million USD)	18,623	19,796	20,761
Number of Greenfield Investments***	11	22	35
FDI Inwards (in % of GFCF****)	8.7	n/a	n/a

Foreign Direct Investment	2016	2017	2018
FDI Stock (in % of GDP)	38.8	n/a	n/a

Source: Nordeatrade.com

In addition to the table above, there is a chart below, that reflects the foreign direct investment balance of Belarus. Shortly saying, it is mostly positive, but it is impossible to determine the golden mean, as at an annual basis it is hardly fluctuating between negative values and positive ones.

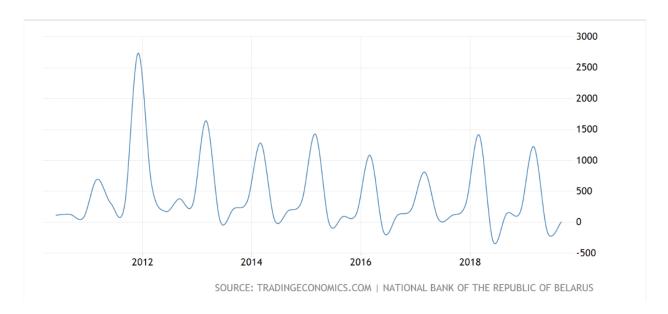


Fig. 2.1 Foreign Direct Investment balance (from 2010 till 2020) (in USD thous.)

Source: Tradingeconomics.com; National Statistical Committee of the Republic of Belarus

2.2 Import-export features of Belarus.

Belarus maintains commercial relations with more than 170 world countries. Petroleum products, potash fertilizers, vans, steel goods, farm machinery, tires, meat and dairy goods, and forestry are the most important export positions.

Energy resources (oil and natural gas), raw materials, units and ingredients (metals and products therefrom, raw materials for chemical production, vehicle components), tech equipment occupy the largest place in imports.

Belarus's main trading partner is Russia, accounting for 40.3 per cent of Belarusian exports and 55.6 per cent of imports in the first half of the year.

Russia.

The main export items to Russia (2016) (I have included only the goods which export value exceeds 100 mln USD):

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- cottage and average cheese products (676 mln dollars);
-lorries ($ 484 mln);
- dry and powdered milk and butter ($ 426 mln);
- butter (322 mln dollars);
- both fresh or frozen beef ($ 315 mln);
- farm machinery and locomotives ($ 217 mln);
- pultry meat and pluck ($ 200 mln);
-cars ($ 195 mln);
- jars made of plastic (191 mln dollars);
- vehicle and tractor equipment and materials ($ 186 mln);
- pre-condensed butter and dairy ($ 180 mln);
- certain mobilizations and parts of same ($ 160 mln);
- the fridges, the freezers ($ 151 mln);
-frozen beef ($ 149 mln);
-plaques, boards, film packaging ($ 148 mln);
- sugar ($ 145 mln);
- vehicle tires ($ 121 mln);
- cords, sealed wires (121 mln dollars);
```

- devices and crop harvesting and sawdust machinery (\$ 114 mln);

- real shoes in rubber (\$ 118 mln);

-half the ethylene test (\$ 114 mln);

- medicines (\$ 111 mln);

- -caviar, cooked or dried fish, (110 mln dollars);
- -chipboard (\$ 105 mln);
- -dry, pickled, smoked seafood, cooked in a particular way (105 mln dollars);
- -lifting, moving, packing and unpacking machines and apparatuses (\$ 100 mln).

Russia 's principal imports are crude oil and natural gas. Their sales amounted to 42 per cent of Russia's imports in 2016 (in 2014-50 per cent).

Russia 's key places for imports in 2016:

- petroleum (18.1 mln tons for \$ 3955 mln);
- shale gas (18.6 billion cubic meters for \$2,546 mln);
- cars (51 thousand units for 591 mln dollars);
- crude oil goods (\$ 527 mln);
- ferric waste and sheet metal (\$ 253 mln);
- electricity (\$ 135 mln)

In product turnover, which accounts for 27.1 per cent of Belarusian exports and a quarter of imports, the European Union takes second position. The largest export countries in the European Union with Belarusian goods are the Us, Poland, Germany, Lithuania, the Netherlands, Latvia, Belgium and Norway.

The UK.

Exports of goods to the UK were \$1,080 mln in 2016. Crude oil products (\$944 mln), bituminous mixtures (\$82 mln) and hot-laminated iron blocks (\$13 mln) are the most important export items. Imports of goods from the United Kingdom totaled \$159 mln. Piston internal combustion engines (\$50 mln), spirits (\$11 mln) are the top import products.

Poland.

Exporting goods to Poland in 2016 was \$815 mln. The most important export positions are: crude oil goods (\$168 mln), fertilizers and pesticides (\$63 mln), chipboards (\$55 mln), non - treated forest (\$39 mln), mixed mineral fertilizers (\$38 mln), fibreboards (\$32 mln), liquefied shale gas (\$31 mln) and fuelwood (\$30 mln).

Import of Polish goods amounted to \$1185 mln. The key import roles are: apple, pears, quinces (\$291 mln), pre-condensed butter and dairy (\$39 mln), other vegetables (\$31 mln).

Germany.

Exporting goods to Germany in 2016 was \$944 mln. Petroleum (\$472 mln), wood sawn lengthwise (\$46 mln), automobiles, hot-laminated iron blocks (\$33 mln each) are the most important export position, other furniture (\$27 mln), wires made of non-alloy metal (\$23 mln), twisted steel wire (\$19 mln), nitrogen fertilizers, wooden jars (\$15 mln each).

Goods imported from Germany totaled \$1333 mln (2016). The key import products are: steel high - temperature devices (\$78 mln), drugs (\$50 mln), car and tractor parts and components (\$40 mln), trailers and semi-trailers (\$32 mln).

Lithuania.

Exporting goods to Lithuania in 2016 was \$767 mln. Most valuable exported places are gasoline goods (\$190 mln), blended inorganic fertilizers (\$66 mln), hotrolled steel bars (\$36 mln), lengthwise sawn forestry (\$35 mln), unalloyed metal pipe, rapeseed oil (\$19 mln each), polished copper and alloys (\$18 mln each), forest residues (\$13 mln), farm machinery and truck wagons (\$12 mln each), aluminum sheet frameworks, chipboards (\$11 mln each), untreated wood, pesticides with nitrogen and frozen fruit (\$10 mln each).

Import of goods from Lithuania amounted to \$ 266 mln. Among the largest import items are cement, concrete or stone products (\$ 11 mln), car bodies (\$ 9 mln).

the Netherlands.

It was estimated that exports of goods to the Netherlands in 2016 amounted to \$ 927 mln. The most major export units are petroleum products (\$ 729 mln), antiknock agents, antioxidants, inhibitors, thickeners (\$ 19 mln), hand saws, saw blades (\$ 14 mln), longitudinally sawn timber (\$ 10 mln). Imports of goods from the Netherlands amounted to \$ 210 mln. The main import items are tractors and tractor units (\$ 50 mln), vaccines (\$ 13 mln).

Latvia.

The export of goods to Latvia in 2016 amounted to \$ 473 mln. The most important export positions are oil products (\$ 80 mln), antiknock agents, antioxidants, inhibitors, thickeners (\$ 26 mln), longitudinally sawn timber (\$ 29 mln), raw timber (\$ 13 mln), other paints and varnishes (\$ 10 mln). Imports amounted to \$ 70.1 mln.

Belgium.

The export of goods to Belgium in 2016 was \$ 205.5 mln. The most important export items are potash fertilizers (\$ 48 mln), tires (279 thousand units for \$ 20.7 mln), and longitudinally sawn timber (12, \$ 7 mln), polyamides (\$ 10.7 mln). Import of goods from Belgium amounted to \$ 163 mln. The main import items are styrene polymers (\$ 11 mln), drugs, amino-aldehyde, phenol-aldehyde resins (\$ 10 mln each).

Norway.

Export of goods to Norway in 2016 amounted to \$ 107 mln. The most important export items are potash fertilizers (\$ 85 mln), hot-rolled steel bars (\$ 12 mln). Import of goods from Norway amounted to \$ 162 mln. The main import items are fresh or chilled fish (\$ 87 mln), frozen fish (\$ 41 mln), fish fillet and other fish meat (\$ 25 mln).

Export to all EAEU member countries increased: to Armenia - by 43.9%, to Kyrgyzstan - by 21.0%, to Kazakhstan - by 7.5%, with the exception of a slight drop to Russia - by 0.3%.

Armenia.

Exports to Armenia were estimated at a value of \$ 22 mln (2016), the largest export position is tires (132 thousand units for \$ 5.2 mln). Imports amounted to 10.1 mln dollars, the largest position - hard liquors (381 thousand liters to 5.4 mln dollars).

Kazakhstan.

In 2016, goods worth \$ 363.9 mln were exported to Kazakhstan (in record 2014, \$ 879.4 mln). Most of the goods were exported to Almaty (81.9 mln dollars),

Astana (50.3 mln dollars), East Kazakhstan region (38.8 mln dollars), Kostanay region (38.2 mln dollars).

The most important export positions are tractors and tractor units (2399 units for \$ 35 mln), condensed and dried milk and cream (13.2 thousand tons for \$ 23.4 mln), combines (1166 units for \$ 21.3 mln) .), trucks (87 pieces for \$ 20.2 mln), other furniture (\$ 18.3 mln), tires (437 thousand pieces for \$ 15.7 mln), medicines (13.5 mln USD).

Import of goods from Kazakhstan decreased in 2011-2016 from 137 to 55.4 mln dollars. Most of the goods were imported from the Karaganda and West Kazakhstan regions (17.4 and 12.9 mln dollars, respectively). The main import positions in 2016 were crude oil (44 thousand tons for \$ 12.6 mln), coal (318 thousand tons for \$ 15.3 mln), cars (116 units for \$ 7.3 mln).

Ukraine, as a Belarus' neighbor, plays a particular role in foreign trade too. Ukraine.

Exporting goods to Ukraine was \$2845 mln (2016). The most important items to export:

- petroleum goods (4.3 mln tons for \$ 1,747 mln);
- combined organic fertilizers (\$ 113 mln);
- farm machinery and truck vehicles (6499 units for \$ 92 mln);
- organic liquidized gas (\$ 64 mln);
- -coke and bitumen made of crude oil(\$ 61 mln);
- vehicle tires (1150 thousand units for 58 mln dollars);
- -trucks (543 units for \$42 mln);
- potash fertilizers (\$ 34 mln)

Imports of Ukrainian goods totalled \$985 mln (2016). The most essential things to import:

- waste obtained from vegetable shale oil (except soybean) \$ 111 mln;
- -hot plain steel made from unabashed metal \$ 46 mln;
- both fresh and iced beef \$ 36 mln;
- soybeans \$ 30 mln;

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- sunflower oil - $ 29 mln;
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- waste from soybean oil extraction \$ 26 mln;
- certain meubles \$ 26 mln;
- -tomatoes \$ 22 mln;
- extracting Malt \$ 20 mln;
- magazine and carton boxes \$ 19 mln;
- medicines \$ 17 mln;
- -corn \$ 17 mln;
- pebbles, stones, grit \$ 17 mln;
- glass boxes \$ 13 mln;
- -ferroalloys \$ 13 mln;
- pastry of bread and flour \$ 13 mln;
- -chocolate and other cocoa goods \$ 12 mln;
- juices \$ 11 mln;
- -flat means made from other plated metals \$ 11 mln;
- -corners, shapes and special profiles of non-alloyed metal \$ 10 mln;
- sugar confectionery \$ 10 mln

Until 2014, Ukraine was a major exporter of electricity to Belarus (2.4 billion kWh for \$146.5 mln in 2014, or about 2/3 of electricity imports) and coal, but by 2016 those figures dropped to nil.

As it is seen at the table below, which provides us an information about inand-out trade in Belarus for the last 15 years, in a period from 2005 till 2018 the turnover rate grew more than twice from around \$33 bln to \$72 bln. Up until 2014 the growth was stable and comparably rapid, however after this there was a drop of more than \$20 bln in 2015. Since then, turnover is fluctuating but still growing.

The situation with exports and imports are totally the same. Also, it is reflected that in comparison with 2018, in the following year in percentage the amount lowered a bit (approximately 97% in every parameter). (Import and Export in Belarus, 2020)

When it comes to the trade balance, the situation is not very good, because it is negative.

Table 2.2 Foreign trade of goods dynamics (\$ mln)

							1 st half of	2019
	2005	2014	2015	2016	2017	2018	2019	in %
	2003	2014	2013	2010	2017			to
								2018
Turnover	32687	77180	56952	51147	63446	72135	34508	97,4
Export	15979	36392	26660	23573	29212	33726	15890	95,9
Import	16708	40788	30292	27610	34234	38409	18618	98,7
Balance	-729	-4396	-3632	-4073	-5023	-4683	-2728	

Source: http://mfa.gov.by

Apart from goods, Belarus also deals with import and export of services.

More than half of overall exports are shipping, and computing software, as well as tourism and other industry software. Belarus 's major allies in trade in services are Russia (approximately 35 percent of exports, 37 percent of imports) and the EU (34 percent of exports, 40% of imports).

Since 2005 the turnover, imports and exports of services in Belarus was raising stadily. Starting with only \$3 bln in turnover in 2005, this number grew up to more than \$14 bln in 2018.

When it comes to trade balance, it is always positive, because in service sector, there are a lot of exports from Belarus, thus they do not import a lot.

Table 2.3
Foreign trade of services dynamics (\$ mln)

							1 st half of	2019
	2005	2014	2015	2016	2017	2018	2019	in %
								to
								2018
Turnover	3483	13431	11013	11222	12616	14096	6887	102,6
Export	2342	7820	6637	6831	7839	8721	4351	103,5
Import	1141	5611	4377	4390	4777	5375	2536	100,9
Balance	1201	2209	2260	2441	3062	3346	1814	

Source: http://mfa.gov.by

2.3. Investment climate of Belarus. Advantages and disadvantages.

So, why is Belarus chosen, and in a whole, why is it worth to invest in it?

Here is the list of main advantages in Belarus state, considering investments
(be informed that some of them were already mentioned earlier):

- -Geographical location is perfect in strategic way;
- -Direct access to EEU markets (Belarus, Russia, Kazakhstan, Armenia, Kyrgyzstan);
- -Branches such as transport, logistics, and communications infrastructure are quite well-established;
 - Progressive investment law;
 - Investor and the investment itself are granted state security;
 - Business climate and taxation system are convenient;
 - Streaming policy funding in the form of grants, incentives etc. for investors;
 - Privatization possibilities;

- six free economic zones;
- Highly skilled, though low-cost workforce;
- Average life quality is at the competitive level;
- Political and economic stability.

All other sectors of the Belarus economy are available to foreign investors, but the manufacture of weapons, narcotics (in the sense of narcotic supplements), and poisonous substances. (Investment in Belarus | Belarus.by, 2020)

It is a chance to set up businesses in Belarus in some legal way with some volume of foreign investment, the potential to set up their subsidiaries and representative offices is also on. Preferences and rights which are granted by the government foster mutually beneficial cooperation. Special legal provisions are open to developers in free trade zones, small and medium sized cities, rural areas, the Hi-tech Park, etc.

Now, some disadvantages of the state:

- Belarus is strongly dependent on the economy of Russian Federation;
- -Soviet philosophy is still heavily widespread countrywide (rudely saying even the democracy is not on, due to the president's dictatorship);
- Reform process is complicated and slow, excluding IT field though, which is a plus for investors;
 - Corruption is on the high level;
 - Sanctions imposed by the US and the EU;
 - High inflation rate.

Not it is a time to switch to last but surely not the least part of this paper. It is a time to dive deeper into details of the development of an international investment project to establish a software engineering start-up in Belarus.

SECTION 3

DEVELOPMENT OF AN INTERNATIONAL INVESTMENT PROJECT TO ESTABLISH A SOFTWARE ENGINEERING START-UP IN BELARUS

3.1. Analysis of the Software Engineering market in Belarus.

Here it is to start with a little bit of a demographic information. The population of Belarus as of January 1, 2019 is 9,475,174 people, the territory is 207,595 km². It occupies 93rd place in terms of population and 84th in territory in the world. Economic situation was deeply investigated in the first section. Considering Belarus as a starting point for software engineering business – it is literally a heaven. One fact that actually all the CIS is a very good place for starting an IT business. Comparably low-cost labor, very skilled though. Climate (talking about investment one, not actual) for business of such kind is very attractive and pleasant.

A brief overview of Belarussian IT industry will be given, before coming to the part of calculations and stuff.

As a part of the global IT business, for last years, this sphere of doing business in Belarus has been rapidly developing and spreading. Numerous IT-intensive businesses have drawn interest in the country 's reputation for science and IT innovation, complemented by the dynamic labor market. The compound annual growth rate (CAGR) of the IT sector in Belarus, taking into account the prices for the last 5 years in a row, was 30%. The Belarusian IT industry's total output and sales revenues in 2015 amounted to USD 1.120 million. Also, when most economic sectors reported the downturn in values in 2016, IT was growing at the same fast rate as before.

The annual speed of Belarus' exports in software engineering sector has been growing and growing steadily, with minimum 10% growth rate per a year. The future influence of the IT sector at the nation has not yet been explored to the full

extent. IT exports from Belarus in 1995 amounted to \$0.2 million, more than \$24 million in 2005. In 2015, a large number of almost \$800 million is seen. In 13 years, there was a growth of almost 3000%.

Several Software Development firms are listed annually in the IT Magazine's 'IT 500' list of the world 's biggest product and service providers and are recognized as The Top Outsourcing 100 companies by the International Association of Outsourcing Professionals (IAOP).

Now, remember it was said about highly-skilled labor in Belarus? Once of the main reasons for successful IT industry in Belarus is recognized to be a huge and wide number of experts that are educated at local high schools and universities. Annually, more than 50 universities graduate 4,000+ highly skilled and motivated software developers. Belarus has a very well-established institution of higher education and ancient science and engineering education practices that are adequate to train trained specialists. Because of its emphasis on fundamentals, physics, and critical thought, the Belarusian education system stands out, granting its students the possession to build and design effective and productive business solutions. Belarusian students are known for winning medals at international events and championships, including ACM ICPC, for instance.

Almost 1000 firms and organizations operate on the domestic IT market of Belarus. From those, around 200 are now members of the BHTP (Belarusian High–Tech Park). The estimated number of software developers, web designers, solution architects, network administrators, devops engineers, and other technical personnel having their place in software engineering sector is around 40,000.

Typically, Belarusian IT service provider is a comparably little team of 50-100 workers. Nevertheless, there are few huge enterprises that employ from several hundred people, up to few thousands. As an example, EPAM Systems is to be given, that is a main partner of BHTP and take a brief overview on it.

Firstly, a few words from company's official website. 'Programming is embedded in our DNA, which allows us to successfully cooperate with customers since 1993 to develop key innovations, conduct digital transformation and achieve

business results. Every year we expand the geography of our presence and the range of key opportunities, including competencies in the field of business consulting, design and product development. We were among the first to implement projects that became examples of the most exciting technological transformations in the industry. Today, our story continues into the modern era of agile development of solutions, Big Data, machine learning and artificial intelligence.'

Despite now the head office of a company is locate in Philadelphia, EPAM is a biggest IT provider in CIS.

As the local IT market is not sufficiently established, Belarusian firms typically target Western customer orders, with local customers being state agencies, financial companies, banks, and corporate clients. More or less, with a wide variety of foreign customers, 90 percent of Belarusian IT firms are interested in custom software creation and IT consultancy.

The Belarusian IT industry is typically engaged in custom production and high-end software services for customers requiring low cost but highly qualified expertise in technology. Belarusian businesses are proposing the same key software languages, platforms, and technologies as their counterparts elsewhere. Furthermore, their engineers and developers are known for their precision and have a reputation for ingenuity and for solving complex problems.

Assuming there is a great idea for making a brand-new product. So, the IT firm that is going to be established in Minsk, Belarus will not be an outsourcing one, it will be product-based. More concrete, a software for analyzing the exchange market will be created. As for the target audience, it will be all the sphere of brokers and traders. Starting from individual ones, for whom it will sell the programs, and ending with big firms that specialize on exchange market trade.

The soft will do the analysis and research of most up-to-day results on every differentiation in exchange rates (assume it will use top 100 currencies in those trade markets) on a minute basis. All the consumers will be provided with most recent trends in exchange market, with forecasts, linear graphics of how everything

was changing etc. etc. The particular soft will do both operations on backend part and UI/UX on frontend, assuming this, it is most likely that from 2 to 4 different programming languages will be used in our project development. The company will not concentrate on local Belarussian market, so the potential customers can be from all over the world.

So, going closer to the opening of a firm now. It was already written that from the very beginning it is crucial for us to become a resident of BHTP. Let us have a view on how exactly the things will go. (High Tech Park, 2020)

- 1. Make sure that our field of work fits the law "About High-Tech Park". As I overviewed the field of our projects, everything is right. This startup fits all the requirements and I made in full accordance with the law of Republic of Belarus.
- 2. Develop the business plan. After the exact business project with all the calculations, right formalization etc. is made register it as a resident of the High-Tech Park.
- 3. Next step is to submit documents for registration as an HTP resident. In order to register as an HTP resident, in addition to a business project, the applicant must also submit an appropriate package of documents. Here is the list of documents required:
- -a business project that is proposed to be implemented as a resident of the HTP;
- application in the form approved by the Decree of the Council of Ministers of the Republic of Belarus of March 27, 2006 No. 403;
- -copies of all charters available to the organization (memorandum of association for a commercial organization operating only on the basis of a memorandum of association);
 - certificate of state registration of legal entity.
- 4. After first three steps are made, it is only a time to wait. Within 40 work days, the administration of High-Tech Park reviews the request. The administration of the HTP considers the submitted documents and sends them with

its conclusion on the appropriateness or inappropriateness of registering the applicant as a resident of the High-Tech Park for consideration by the Supervisory Board. The decision on registration (on refusal of registration) of a legal entity as a resident of the High-Tech Park is taken by the Supervisory Board taking into account the importance and significance of the presented business project for the development of new and high-tech spheres.

3.2. Substantiation of the investment project for the creation of software engineering firm, assessment of the need for investment resources and identification of sources of their involvement.

From now on it is a moment to start the calculation part.

Here it is best to start with the part of salaries. The average salary for a Software Engineer in Belarus is BR 25,500 on a yearly basis (converting it to USD – around \$10,000 - 11,000).

The decision about what programming languages to use is made. There will be .NET on a backend part of developing and JavaScript on frontend one. Why so? First of all, these languages are one of the best to combine. There are lots of positions that combine one part from JS and other from .NET in the requirements of work (e.g. Full-stack Software Developer). Another reason is that both are very widespread, liked by engineers and daily developing. Now, giving a brief info on both of them.

The .NET Framework is a software platform released by Microsoft in 2002. The platform is based on the Common Language Runtime (CLR), which is suitable for different programming languages. CLR functionality is available in any programming language that uses this environment. (.NET Framework, 2020)

JavaScript (JS) - multi-paradigm programming language. Supports objectoriented, imperative and functional styles. It is an implementation of the ECMAScript standard. JavaScript is commonly used as an embedded language for programmatically accessing application objects. It is most widely used in browsers as a scripting language to give interactivity to web pages. The main architectural features: dynamic typing, weak typing, automatic memory management, prototype programming, functions as objects of the first class. (JavaScript, 2020)

There will be 8 titles and 13 positions at the beginning. All the hiring process will be done through personal search and selection and with the help of BHTP. It is preferable that at least most of our positions will be closed with people from Belarussian High-Tech Park educational programs and partners. From the point of view, here is the list of positions that are required to be occupied at the very start:

- Middle .NET Software Developer (4 people)
- Senior/Lead .NET Software Developer (1 person)
- Middle JavaScript Software Developer (3 people)
- Senior/Lead JavaScript Software Developer (1 person)
- UI/UX Designer (1 person)
- Support Engineer (1 person)
- Site Reliability Engineer (1 person)
- Manual Quality Assurance Specialist (1 person)

The office will be working on a common schedule: 9am-6pm, Monday-Friday, with lunch break being up to 1 hour, shifted. All national holidays are going to be day-offs. We will provide our employees with 7 days of sick leave without medical certificate + 20 working days of vacation per year.

Having this amount of people, it will be able to begin with creating our product. Let us now calculate the payroll that is going to be spent to cover employee wages.

First position is Middle .NET Software Developer. People who will be hired for this position are going to be responsible for the backend part of the soft. All calculations for different currency exchange rates, predictions and other info are to be done on a server side. It is a time to calculate the salary of Middle .NET Developer. On average, in Belarus the wage of such specialists ranges between \$1,500 and \$2,500 per month. In this startup it will be in this range for sure.

It is made a decision to calculate annual wage in the following way:

 $Wx_1/yearly = Wx_1/monthly x 12$

$$Wx_1/yearly = $2,000 \times 12 = $24,000$$

It will be four people working as a .NET Developer, so yearly it is \$24,000 x 4 = \$96,000 to spend on their salaries.

Second position - Senior/Lead .NET Software Developer. This person is responsible for the same stuff as Middle .NET Software Developer (all calculations and programming in backend part, etc.), but also this is a team leader, mentor, so to say. He decides in which way something is to be done and actually manages a team of Middle Software Developers. On average, in Belarus the wage of such specialists ranges between \$2,500 and \$3,200 per month. Again, meeting the standards.

Now, calculate annual wage in the following way:

 Wx_2 /yearly = Wx_2 /monthly x 12

 $Wx_2/yearly = $2,900 \times 12 = $34,800$

As there will be only 1 person with such title at the beginning, the calculation is done.

Next one - Middle JavaScript Software Developer. People with this title are hired to provide the needed services for our frontend stuff. Interface making, and let us say the right interior for the site, applications and programs. As Glassdoor says, in Belarus the average salary of such specialists is in the range between \$1,800 and \$2,400 per month.

Calculating annual wage in the following way:

 Wx_3 /yearly = Wx_3 /monthly x 12

 $Wx_3/yearly = $2,200 \times 12 = $26,400$

There will be three people working as a JS Developer, so yearly it is \$26,400 x 3 = \$79,200 to spend on their salaries.

Senior/Lead JavaScript Software Developer. Person on this position is responsible for all frontend task division, outline. Team lead of frontend developers. In Belarus, the average salary of such specialists is in the range between \$2,700 and \$3,500 per month.

A decision to calculate annual wage in the following way is made:

 Wx_4 /yearly = Wx_4 /monthly x 12

 $Wx_4/yearly = $3,000 \times 12 = $36,000$

As there will be only one person with such title at the beginning, the calculation is made clear.

So, the part with developers is at the end, let us consider other employees and calculate their wages.

User interface/user experience designer. Remember it was said that frontend developers are responsible for how our site and apps will look like. Partly true, but exactly the UI/UX Designer will decide how it will look. Developers will then make it real. In Minsk, the average salary of such specialists is in the range between \$1,000 and \$1,300 per month.

Calculating annual wage in the following way:

 $Wx_5/yearly = Wx_5/monthly x 12$

 $Wx_5/yearly = $1,200 \times 12 = $14,400$

On a yearly basis the investor will have to spend 14,400 USD on the wage of User interface/user experience designer.

Development and design parts are very important, but there are no IT firms which can be reliable without the proper support. Servers should be protected and supported to work in a correct way and here where it comes to support roles.

Support Engineer. It is exactly the specialist which protects and supports server side. In Minsk, the average salary of such specialists is in the range between \$1,200 and \$1,500 per month.

Investor calculates annual wage in the following way:

 $Wx_6/yearly = Wx_6/monthly x 12$

 $Wx_6/yearly = $1,300 \times 12 = $15,600$

The end of this part is coming and last but one is Site Reliability Engineer. Among the responsibilities of this specialist there are site support, proper assurance of working.

Calculate annual wage in the following way:

 $Wx_7/yearly = Wx_7/monthly x 12$

$$Wx_7/yearly = $1,100 \times 12 = $13,200$$

Last, but not the least. Manual Quality Assurance Specialist, or Manual Tester to be shortish. Making manual testing, finding bugs and blots in the code, coming from the point of view of the final customer – this what manual tester does. In Minsk, the average salary of such specialists is in the range between \$800 and \$1,150 per month.

The annual wage is calculated in the following way:

 Wx_8 /yearly = Wx_8 /monthly x 12

$$Wx_8$$
/yearly = \$1,000 x 12 = \$12,000

Surely, there should be people who run business processes, make agreements with customers, and actually see the business from the very start to coming up with the solution and making it real. Usually, such specialists as Business Analytics, Project Managers, Delivery Managers, etc. are making this job. But as it is going to be established a startup with restricted amount of money at the very beginning, hence the wages of such specialists are very high – assume the team of investors have a sense of how things have to be done in this field and they are going to superpose their positions of CEO, COO, CTO etc. with positions listed above.

To sum up, it is good to calculate the final amount of money that is needed to be spent on all the salaries of the employee team.

 $(Wx/yearly_1 \times 4) + Wx/yearly_2 + (Wx/yearly_3 \times 3) + Wx/yearly_4 + Wx/yearly_5 + Wx/yearly_6 + Wx/yearly_7 + Wx/yearly_8 = ($24,000 \times 4) + $34,800 + ($26,400 \times 3) + $36,000 + $14,400 + $15,600 + $13,200 + $12,000 = $301,200$

This is the amount there is to be spent on wages at the first year. Considering that the salary will be paid in BR, but the amount will be calculated in USD – there will be no changes in wages in the following year as well.

All values are given in gross amount. All the employees will be obliged by income tax of 9%, because of having a residency in HTP.

Employee wages

Total payroll		13	14 700	25 100	301 200
	Specialist				
8	Manual Quality Assurance	1	1,000	1,000	12,000
7	Site Reliability Engineer	1	1,100	1,100	13,200
6	Support Engineer	1	1,300	1,300	15,600
5	UI/UX Designer	1	1,200	1,200	14,400
•	Software Developer	1	3,000	3,000	30,000
4	Developer Senior/Lead JavaScript	1	3,000	3,000	36,000
3	Middle JavaScript Software	3	2,200	6,600	79,200
2	Developer Million Land Suring St. Co.	2	2 200	6.600	70.200
2	Senior/Lead .NET Software	1	2,900	2,900	34,800
	Developer				
1	Middle .NET Software	4	2,000	8,000	96,000
		yees	h	th	
		emplo	USD/mont	USD/mon	USD/year
№	Job position	#	Wage	Total	Total

Let us consider other things that will be invested from the very beginning:

So, first of all, a place to establish the office is needed. As investors are not working in service sector or something close to it and for them the flow of clients and their physical evidence at the office is not important at all, the place should be somewhere not in the center of Minsk, but still someplace with good traffic intersection, in order for employees to be convenient with their transport. Average

rent cost per hour is around \$12 per hour in the center of the city, but outside it is believed the value will be at the level of \$10 per/h.

Calculation of rent cost on a monthly basis will be the following: $(\$10 \times \$h) \times 20d = \$1600$ per month.

To begin with doing things investor have to order office equipment (13 employees + 2 employers in an office = 15 workplaces are to be fully equipped). For each, there should be a table, and a chair. With the price of \$110 per table and \$155 per chair, calculating office equipment cost with the following formula:

$$(\$110 + \$155) \times 15 = \$265 \times 15 \approx \$4000.$$

Every working place should be provided with proper equipment (laptops, mice, headphones, stationery, etc.), and consequently every device has to have right soft on it (design apps for UI/UX Designer, coding apps for Developers, etc.). Let us assume the purchase of 15 laptops with the price of \$1000 each. All accessory will cost around \$330 in calculation per one personal laptop. Right soft - \$1000 per month.

$$(\$1000 + \$330) \times 15 = \$1330 \times 15 \approx \$20\ 000 + \$1000$$

Providing it is required to have servers on which our apps will be laying and supported, there is a need of a proper hardware for it (starting with 2 powerful PC's). Each with price of around \$3500 – purchase them for \$7 000 at a whole.

Heading up from equipment to cleaning. They surely need some people to clean up our office on a daily basis, so investors will refer to some cleaning provider and sign a contract. \$25 per 2 hours of cleaning every day 20 days a month. Total cost - \$500/month.

Investor will need some marketing to penetrate the market. Although, the target will be niche, they need to stay up front. Despite most of marketing will be done by themselves, it is pretty recommended to use some help of a marketing specialist at least at the very start. \$1 000.

Bills for water/electricity – the office will be around 400 m², so assume that it will be around 300 USD per month to cover those bills.

Previously, it was said that to enter FEZ and to become resident of HTP you need to provide documents, with proper registration. In order to do that you will most likely need to use the help of specialists. Name that business consulting and give it a cost of \$3 000 per their services.

Last thing amongst initial cost is first month wages. Everything from this topic was clearly overviewed earlier, so here is just a final number – \$25 100 per month.

Let us now calculate all the initial costs that have to be invested at the start of establishing software engineering company in Minsk, Belarus.

Table 3.2

Initial costs

Sphere of investment	Price, USD		
Rent of working space	1 600		
Office equipment (tables, chairs)	4 000		
Software licenses	1 000		
Cleaning services	500		
Hardware purchase (for servers, etc.)	7 000		
Laptops with accessories	20 000		
Marketing expenses	1 000		
Bills	300		
Business Consulting	3 000		
1 st month wages	25 100		
TOTAL	63 500		

Continuing the topic of expenses, it is required to calculate monthly expenses and then bring it out to the yearly amount. Those of them, that was already underlined previously it will not be considered in details. There is the list of ones mentioned earlier:

- -Rent \$1 600
- -Wages \$25 100
- -Licensing \$1 000
- -Bills \$300
- Cleaning \$500

Actually, they are left with not a lot. As most of software engineering firms do, the start-up will provide its employees with daily snack as a little bonus of working for investors. Fruits, cookies, bars will cost us around \$200 per month. Also, the office has to be provided with water gallons on a daily basis: 15 people of personnel – three 10 liter gallons of purified spring water everyday – close to 300\$.

Last thing – contingencies. It will be right to have a level of around \$2000 a month.

Yearly expenses = monthly expenses x $12 = \$31\ 000\ x\ 12 = \$372\ 000 +$ amortization $\$1\ 000 = \$373\ 000$

Monthly expenses

Indicator	Price, USD		
Rent	1 600		
Wages	25 100		
License prolonging	1 000		
Daily water supply	300		
Daily snacks for employees	200		
Bills	300		
Cleaning services	500		
Unforeseen costs	2 000		
TOTAL	31 000		

It is a time to calculate the income.

As this start-up is going to not only become a resident of HTP, but also start the business in Minsk Free Economic Zone, for first 5 years there will be free from income corporate tax environment.

First of all, let us get to the revenue. From the very start it is crucial to make an agreement with 1-3 firms, dedicated to exchange market activity. Saying that they agreed on supplying our software to around 4000 employees of those companies. Having a price with the discount of 50% per one unit of equipment (laptop, pc, etc.) they will sell 4000 units of our software with \$50 price per unit. In a year, these deals will give \$200 000.

Apart from the deals with firms, the app is to be sold in free access. The price of subscription is \$100 per annum, or \$10 per month. Planning to sell \approx 1000 units of yearly subscription + \approx 7000 units of monthly subscription in a first year. All of it will bring (1000 x 100) + (7000 x 10) = 100 000 + 70 000 = \$170 000 in a first year.

So, total 1st year is calculated to be on a level of \approx \$370 000

From it, they pay 1% of tax to HTP. So, in conclusion they will have \$370 000 - \$3700 = \$366300

As it can be seen, for the first year it will not bring any net income. Calculating the income using very easy formula below:

Income = Revenue – Costs =
$$\$366\ 300 - \$373\ 000 = -\ \$6\ 700$$

It means that most likely it is to be close to or even reach the break-even point, but will not profit yet.

In spite of it, given a brief outline of future plans and some numbers will be given, but not too very detailed. So, investors are not planning to change any costs, they will just edit them a bit, taking the inflation into account.

It is predicted that in 2021 there will be 4.50% inflation rate in Belarus. Simple as that, our expenses will grow respectively.

$$$373\ 000\ x\ 1.045 \approx $389\ 740$$

Now, having that in mind – here is our forecast on sales in 2021. They will still have an agreement with 1-3 firms, dedicated to exchange market activity, but are going to use their proven track record at that time to make new ones. The discount rate for them is still 50%, but planning to have 1000+ new customers from this kind of cooperation. Suddenly, we have 5000 units of our production to sell. Having a price with the discount of 50% per one unit of equipment (laptop, pc, etc.) it will be sold 5000 units of software with \$50 price per unit. In a year, these deals will give \$250 000.

Moreover, they will still sell the soft apart from the deals with firms, in free access. The price of subscription will be the same \$100 per annum, or \$10 per month. Planning to sell much more, than at the first year, ≈ 1400 units of yearly

subscription $+ \approx 8500$ units of monthly subscription in a first year. All of it will bring $(1400 \times 100) + (8500 \times 10) = 140000 + 85000 = 225000 in this year.

So, total 2^{nd} year revenue is calculated to be on a level of \approx \$475 000.

From it, again pay 1% of tax to HTP. So, in conclusion investor will have $$475\,000 - $4\,750 = $470\,250$.

Income: $$470\ 250 - $389\ 740 = $80\ 510$.

Last year to give information about is 2022.

Counting the expenses with inflation influence. Let us assume, the rate will be around 4%.

 $$389740 \times 1.04 = $405000.$

Revenue. Assume they will have attracted 1500 new software sales to enterprises, meaning in is around 6500 units sold with the price of \$50 = \$325 000. Free access market sales: 1700 units of yearly subscription + 9000 monthly = $(1700 \times 100) + (9000 \times 10) = 170 000 + 90 000 = $260 000$ in this year.

Total turnover - $$325\ 000 + $260\ 000 = $585\ 000$.

From it, pay 1% of tax to HTP. So, in conclusion they will have \$585 000 - \$5850 = \$579 150

Third year income = \$579 150 - \$405 000 = \$174 150.

The deposit rate in the country reaches 8%. The inflation rate is 4.5%. Risk correction 10%. (Belarus Overnight Deposit Rate | 2000-2020 Data | 2021-2022 Forecast | Historical, 2020)

Calculating the discount rate:

Discount Rate = $(1+Deposit Rate \times 1+Inflation Rate \times 1+Risk Correction) - 1$

Discount rate = $(1 + 0.08) \times (1 + 0.045) \times (1 + 0.10) - 1 = 0.140$

Now it is needed to determine if the project is effective.

3.3. Estimated income calculation and assessment of the economic attractiveness of the investment project.

Investment efficiency

Indicators	Year				
	0	1	2	3	
Investments, USD	63 500	-	-	-	
Annual revenue, USD	-	366 300	470 250	579 150	
Annual costs, USD	-	373 000	389 740	405 000	
Net income, USD	-	- 6 700	80 510	174 150	

Proceeding with calculations, let us calculate the discount rate:

Discount rate for the first year: 1/(discount rate + 1)

Discount rate for the first year: 1/1,140 = 0.88;

Discount rate for second year: $1/((discount rate for the 1^{st} year + 1) x Risk$ Correction)

Discount rate for second year: 1/1,254 = 0.80;

Discount rate for third year: $(1/(discount rate for the 2^{nd} year + 1) x Risk Correction)$

Discount rate for third year: 1/1,379 = 0.73.

Now, calculate cash flows:

Cash flows = depreciation + net income.

Cash flow for the first year: \$1,000 + (-\$6,700) = -\$5,700;

Cash flow for second year: \$1,000 + \$80,510 = \$81,510;

Cash flow for third year: \$1,000 + \$174,150 = \$175,150.

Discounted cash flows = cash flows x discount rate

Discounted cash flow for the first year - $$5,700 \times 0.88 = -$5,016$

Discounted cash flow for second year: $\$81,510 \times 0.80 = \$65,208$

Discounted cash flow for third year: $$174,150 \times 0.73 = $127,130$

In order to determine whether a project is effective, it is necessary to calculate its net present value (NPV), payback period and profitability index.

NPV = the amount of discounted cash flows of the Investment.

$$NPV = ((-\$5,016) + \$65,208 + \$127,130) - \$63,500 = \$123,822$$

Since NPV> 0, then, according to this indicator, the project can be recommended for investment.

Now it can be calculated the profitability index (PI), which characterizes the efficiency of investment. The higher this figure, the more appropriate the project is.

Profitability index is a discounted cash flow divided by investments:

$$PI = $187,322 / $63,500 = 2,95$$

PI> 1, therefore, this investment project should totally be accepted.

The very last thing left to calculate is Payback Period.

Payback period (PP) = is an investment divided by the average annual discounted cash flow.

$$PP = \$63,500 / (\$187,322/3) = 1,01 \text{ years.}$$

It means that this business will pay back in a little bit more than a year.

After doing all needed calculations it is a time to say that opening a software engineering company in Minsk, Belarus is a very profitable and reliable project.

CONCLUSIONS AND PROPOSALS

To conclude, it is crucial to say that before making a decision, whether to make an investment or no, it is essential to do a very specific and unfolded research.

Overall, Belarus is a developing country and every main parameter show it (GDP, Inflation, etc.), but considering the chosen field to invest in – Information Technology there is on a competitive level at least. After overcoming the crisis in 2011, after the devaluation of currency and all the consequences this country suffered from, in the end they managed to proceed with developing and improving at their best.

As for Belarus – it is a very good place to invest in. Especially, taking into account IT field of industry. Belarussian state is, let us be fare, not sinless, but when it comes to the support of IT field – it is one of the best in the world, and it is meant. High-Tech Park, Free Trade Zones, different kind of support and help in developing your own business on their territory. It means a lot for foreign investors.

The country is doing everything possible to promote international investment, as this is additional funds to the budget. Here, most taxes are absent, fairly simple and understandable rules for doing business, despite corruption that corrodes Belarussian government, there are almost no such term when it comes to investing in software or hardware engineering. It is a reliable and wealthy place in which at least once the investor dreamed of carrying out his activities.

Coming to the evaluation of foreign activity, in the paper the information about Foreign Direct Investment and import-export activity of the country was investigated. Despite mostly Belarus deals with goods in the international trade markets and biggest share of it comes to different types of machinery and agricultural products, the level of involvement of it in the international IT market is on an affordable level. The moving of capital goes on, thanks to globalization.

Students and graduates from Belarus worth a separate mention. Not only they are a very good and highly skilled motivated specialists in their field, but also pretty humble in most cases. When it is said of software specialists, one of them in Arkady Dobkin, who 27 years ago created a small IT firm in the USA, where he had recently moved and named it Effective Programming for America. Now, these 27 years later it is the biggest outsourcing software engineering firm in CIS, EPAM. And he didn't forget his motherland, EPAM is a resident and one of the greatest sponsors of HTP, more and more developers are hired from HTP universities to this company, moreover it has its own EPAM University where developers-beginners study hard to improve their coding skills.

Summing up, without any further ado, underline the main thing which comes from this paper - it worth a try to open IT business in Belarus. Totally worth it.

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