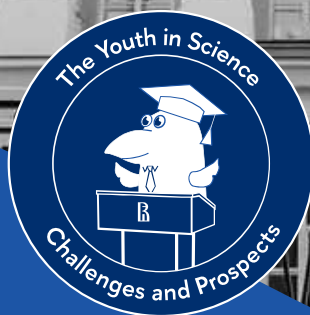


HSE University
School of Foreign Languages



The Youth in Science: Challenges and Prospects

Proceedings of the IIIrd scientific student conference

Moscow, 2023

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Analysis of factors affecting the sustainability of sphere of the tour operators in Russia

ABSTRACT.

COVID-19, being a sudden worldwide negative shock, has had a great influence on numerous spheres of life, especially medium enterprises. In relation to recent events, it is reasonable to carry out analysis of the impact occurred and determine the extent to which the stability has faltered. The question of whether COVID-19 had the primary role in such deterioration is fair to occur. The key methods of this research are descriptive statistics, data visualization, analysis of financial reports and existing bankruptcy models up until the present moment. This way, the financial statements of tour operators have been examined and results are presented in the convenient form of illustrative graphs, diagrams and tables. The anticipated result is to obtain substantial proof for COVID-19 having been the strongest shock to destabilize the mentioned sphere. It is also expected to present a set of recommendations for companies' managers to maintain the recovery process from such a negative shock.

Keywords: *medium enterprises; pandemic; coronavirus; sustainability; economy; tour operators.*

The COVID-19 pandemic has been one of the most significant shocks in recent years. Governments all over the world have directed all their efforts towards minimizing the damage, including the international level measures, and have implemented restrictive measures in order to resolve the issue as quickly as possible.

One particular category that has been the most affected by this crisis is small and medium-sized businesses. Despite their significant contribution to the country's GDP, these firms are still the least prepared for crisis situations and, therefore, the most vulnerable.

In scientific studies analyzing COVID-19 and its economic consequences, a tendency of rank distribution of sectors of small and medium-sized businesses that have been most deeply affected by the pandemic is the following: food, tourism/hospitality and retail respectively [9]. Despite the belief that the restaurant industry has suffered the most, this study is focused on analyzing the tourism industry's sector of tour operators. This choice is driven by the following reasons:

Firstly, the format of running a restaurant business allows for greater flexibility, which many entrepreneurs took advantage of during the pandemic [4]. This means that their losses could be minimized in a relatively short period of time, which cannot be applied to tour operators [3].

Secondly, the restaurant business is strictly based in one geographical location, whereas activities of tour operators involve various types of international migration, which significantly increases political risk.

Thirdly, the losses incurred by other industries in the theoretical model are statistically insignificant, hence can be removed from the sample researched.

The relevance of this topic is determined by the relatively high significance of the tourism industry for the Russian economy:

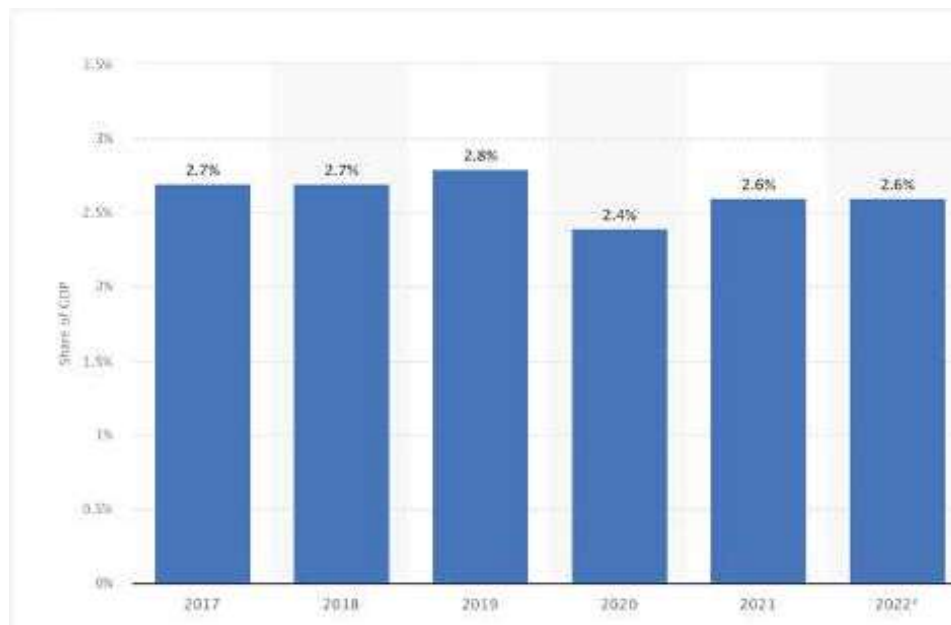


Chart 1. "Share of tourism gross value added (GVA) in gross domestic product (GDP) of Russia from 2017 to 2022"

Source: Share of tourism gross value added (GVA) in gross domestic product (GDP) of Russia 2017 to 2022 // Statista; URL:

<https://www.statista.com/statistics/1115768/tourism-gross-value-added-gdp-share-russia/>

As the chart suggests, the share of the tourism industry in GDP fluctuated around 2.5% throughout the period under review.

Hence, the hypothesis is the following: the COVID-19 pandemic had a significant impact on the stability of tour operators and thus became its main destabilizer. The novelty of the study involves a deeper dive into a specific industry through comprehensive analysis of the shock that occurred and bankruptcy forecasting via appropriate models. The practical significance of the work is the fact that conducting research on the topic "Analysis of the stability of travel agencies in Russia during and after COVID-19" will allow for a more detailed study of the impact of COVID-19 on the state of tour operators operating in Russia, identify weak points among companies in the sample, and propose solutions to address them. The results are to be used for further observation of the dynamics of the stability of tourism companies, as well as for developing optimal ways to solve existing problems in the company's structure.

The main goal of the given research is to answer the key question regarding the degree of influence of the COVID-19 pandemic on the sustainability of the selected tour operators. To achieve this goal, the list of targets to meet is established; they are as follows:

- analyze existing models for analyzing business stability;

- identify the most optimal models for analyzing the tourism industry;
- calculate financial indicators, analyze their dynamics;
- select the optimal bankruptcy forecasting model and, if it is not applicable, propose an alternative assessment method;
- based on the application of selected models, draw conclusions and confirm or refute the hypotheses put forward.

As a result, the main reasons for the current state of companies will be identified and a set of management recommendations will be formed to mitigate the serious consequences or maintain stability of companies' activities.

The literature review used, which is used as a theoretical foundation during the research, is based on the 5 targets outlined earlier. The key targets that require theoretical support and justification would be the first three, whereas the last ones have a quite applicable character. Therefore, the presented literature review is to be formed around the first three theses.

R. F. Brenes, A. Johannsen, and N. Chukhrova [2] provide a detailed analysis of all existing methodologies that are capable of predicting company bankruptcy. The authors highlight the one-factor model by W.H. Beaver and the multi-factor model by E. Altman, both of whom have become the front ones in the bankruptcy forecasting research sphere. The authors consider the need for the correct choice of a variable that characterizes the concept of "company bankruptcy" in order to classify existing theories. This research paper will focus on some of the key theories taken from there, and a further assessment of their applicability to the Russian case is to be ensued.

The prerequisites of the tourism industry necessary for financial analysis are described in detail in the textbook by V. Bogolyubov, "Financial Management in Tourism and Hotel Business: Textbook for Universities" [1]. The author mentions such aspects as the predominance of short-term items in financial reporting (in liabilities and assets) and a high percentage of borrowed funds allocated to trade credits (which implies the need for clear distinction of accounts payable arising from these credits and liabilities to other creditors). Later, these theses will become theoretical support motivating the use of a particular model.

T. Teplova [7] provides an analysis of methods for assessing company success and sustainability. She emphasizes the importance of establishing a system of interconnected and balanced financial indicators. While conducting this research, a number of terms and indicators were used, such as the projection of current efficiency, solvency and liquidity. With the help of this conceptual framework it will be possible to motivate the use of efficiency and liquidity ratios.

V. Zhdanov and I. Zhdanov in their book "Financial Analysis of Enterprises Using Ratios and Models" [10] analyze MDA, logit, scoring, and rating models applied in foreign, Russian and CIS practice. Based on the specificity of calculations in each region, numerical constraints on the sample selection from bankrupt and non-bankrupt enterprises and a number of other specific factors, the authors provide recommendations for the sample size and industry for which the model will predict bankruptcy with the highest probability.

M. Romanova and I. Kulgachev in their article [5] highlight various types of risks in the tourism industry. The focus is mostly on types of risks in areas of entrepreneurial activity: production, commercial, financial and insurance ones. Based on the classification and further manifestation of risks, an attempt will be made to formulate recommendations for maintaining stability in activities.

A prototype analysis of the sustainability of a travel agency was conducted in the article [6] by V. Smolkin, in which he analyzes the planning of the VolgaTour LLC travel agency, comparing it with its closest competitors. The author identifies the main reasons that can lead to bankruptcy or destabilization of such companies' activities. This theoretical knowledge will help

to identify and analyze the main problems of travel agencies and establish ways to solve them in the context of the COVID-19 pandemic.

Presumably, the results of the conducted research will fill the vacant niche of industry-level research in the activities of tour operators and present a set of recommendations for maintaining the sustainability of enterprises in the Russian market in a more generalized format unlike presented in the former studies.

For the study, the data sample was compiled from the following 10 travel agencies:

1. Ambotis Tour Service
2. Alean
3. Dolphin
4. TEZ Tour
5. Coral Travel
6. Sunmar
7. Anex Tour
8. Biblio Globus
9. Intourist
10. Pegas Touristik

The main criteria for selecting observations were the following conditions:

- presence in the Russian market;
- prolonged period of activity;
- availability of financial reporting.

The following chronological reference for the selected period is appropriate:

- 2018 – reflection of the pre-COVID situation in the company, its functioning under ordinary conditions;
- 2019-2020 – the actual period of the pandemic;
- 2021 – the period of gradual return to pre-COVID indicators.

By adhering to this temporal gradation, the authors of this article assume the most profound analysis of the degree of COVID-19 influence on the selected industry.

As a result of horizontal analysis, the dynamics of assets of each company in the sample were traced. Based on this, the companies were divided into three groups:

1. Companies with positive asset dynamics throughout the period under review (“Coral Travel”, “Dolphin”);
2. Companies that reached in asset quantity in 2020 (“TEZ Tour”, “Intourist”, “Anex Tour”);
3. Companies that reached a minimum in asset quantity in 2020 (“Ambotis”, “Biblio Globus”, “Sunmar”, “Alean”).

The most representative companies from each group were "TEZ Tour", "Alean" and "Dolphin", so their indicators will be described further.

The positive dynamics of assets in the first group can be explained by several reasons. Since tourism companies mainly have short-term asset and liability items in reporting, it is assumed that, with other equal conditions, the increase in current assets contributed to the growth of total assets. Such an increase can be interpreted positively due to the increase in accounts receivable: it is assumed that companies have developed an efficient scheme for selling services, adapting to external global shocks.

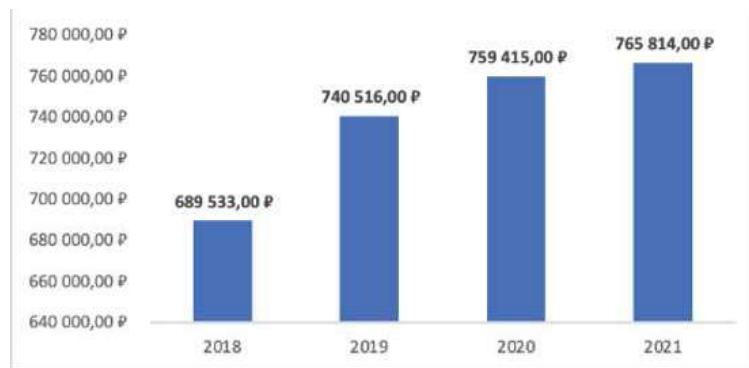


Chart 2. Asset dynamics in “Dolphin” in 2018-2021

Source: SPARK

Regarding the second group: the sharp increase in assets of those companies may have been due to massive government financing during the pandemic period, which have helped to ensure their further activity. Nevertheless, the decrease in assets in 2021 among all group representatives occurred simultaneously with a decrease in revenue; it is possible to assume that the economic activity of those companies slowed down, which is a predictable negative aspect.

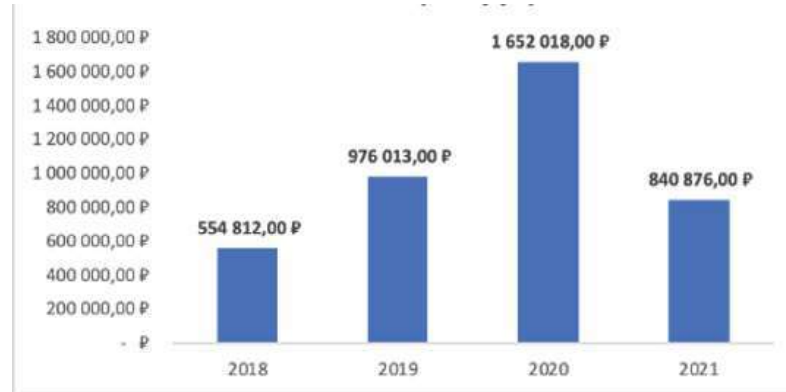


Chart 3. Asset dynamics in “TEZ Tour” in 2018-2021

Source: SPARK

Finally, the sharp decline in asset volumes may have been caused by the spread of the coronavirus. Companies had fewer opportunities to carry out their activity, so more funds aimed at ensuring the stability of tour operators and mitigating risks were utilized. Along with the negative revenue trend coupled with accounts receivable, such a decrease in performance could have been caused by an ineffective investment policy. In particular, this could have led to the bankruptcy and liquidation of the tour operator “Alean”.

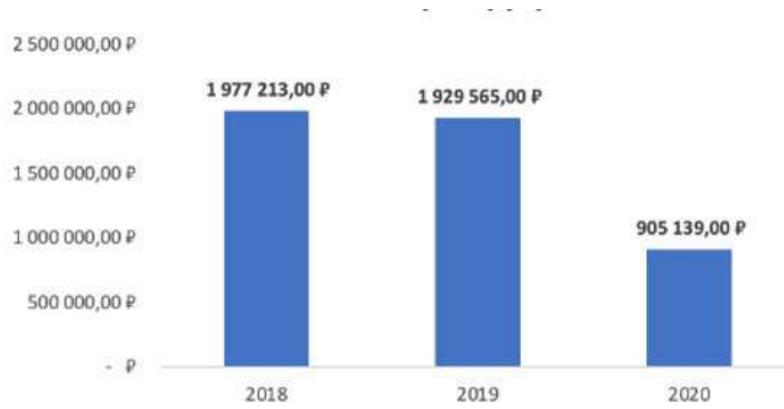


Chart 4. Asset dynamics in “Alean” in 2018-2020

Source: SPARK

Based on the results of vertical analysis, the previously selected three companies have the following distribution of liabilities and capital:

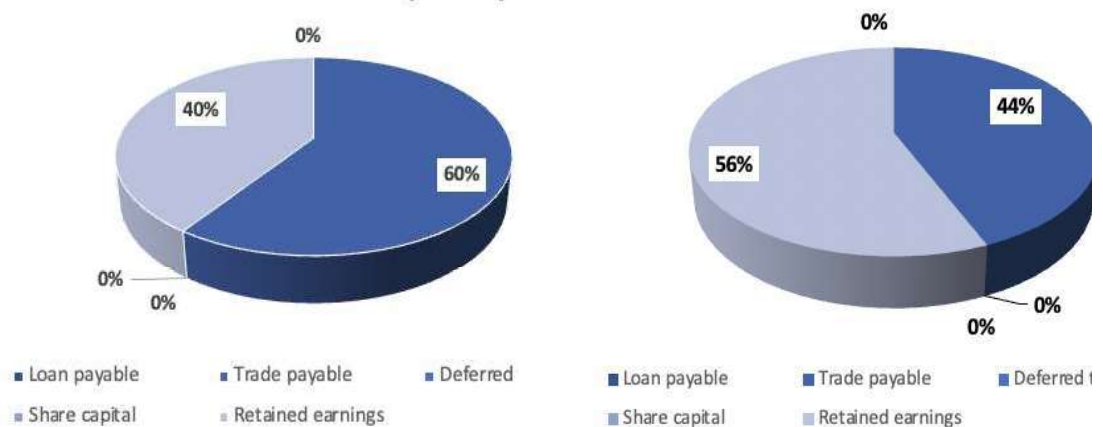


Chart 5. Equity and liabilities ratio of “TEZ Tour” in 2018 & 2021

Source: SPARK

It can be noted that the ratio of credit debt has shifted towards a greater share over the three years, indicating an increase in borrowed funds. Taking into account the epidemiological context, this was probably caused by a lack of their own funds to carry out activities at the level of previous years.

2018

2020

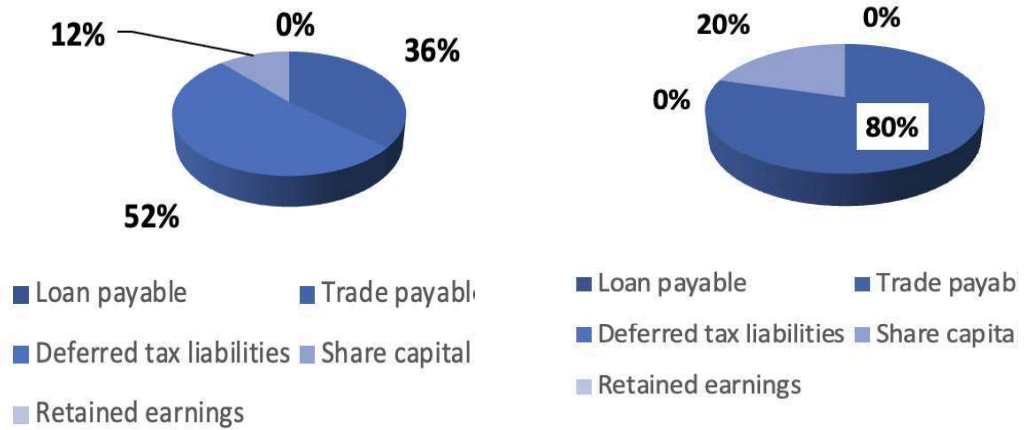


Chart 6. Equity and liabilities ratio of "Alean" in 2018 & 2020
Source: SPARK

"Alean" underwent more significant changes. If borrowed funds and undistributed profits accounted for a large share in the first year, by the end of the period, 80% of the share was taken by undistributed profits. This is likely to be explained by an ineffective investment policy that led to zero borrowed funds in conjunction with a lack of revenue, which subsequently led to the bankruptcy of the tour operator.

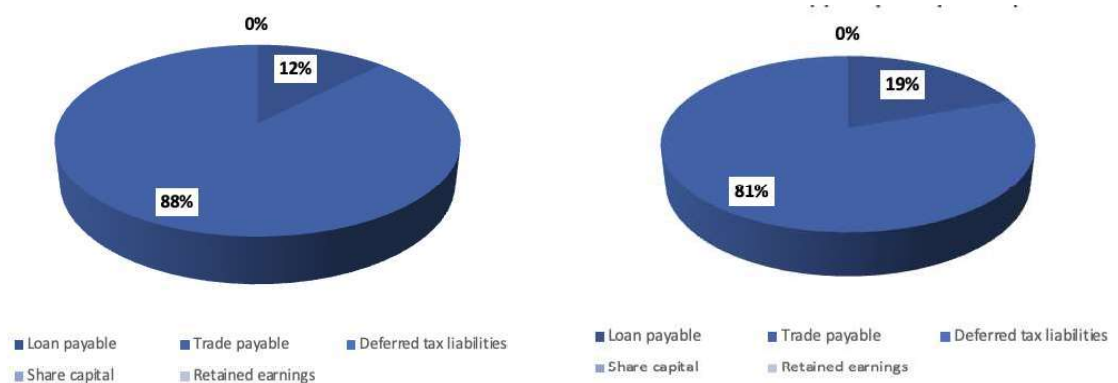


Chart 7. Equity and liabilities ratio of "Dolphin" in 2018 & 2021
Source: SPARK

"Dolphin" did not have any significant structural changes, which indicates a relatively stable activity for the tour operator that was able to adapt to the pandemic and implement an effective investment policy.

Furthermore, a coefficient analysis was conducted based on applicable metrics for the tourism industry. Seven coefficients were calculated with conditional formatting applied to represent deviations of the resulting values visually.

	2018	2019	2020	2021
	current ratio	current ratio	current ratio	current ratio
Ambotis	1,23	1,48	2,66	1,42
Alean	1,58	1,60	4,89	-
Dolphin	0,05	1,05	1,06	1,27
TEZ Tour	1,68	1,83	1,64	2,50
Coral Travel	1,14	1,12	1,11	1,10
Sunmar	1,02	1,00	1,01	1,01
Anex Tour	1,00	1,00	0,97	0,97
Biblio-Globus	1,42	1,00	0,79	0,87
Intourist	0,46	0,37	0,53	0,27
Pegas Touristic	2,07	2,04	1,50	1,35

Table 1. Current liquidity for the sample firms during 2018-2021
Source: authors' calculations

Current liquidity is essential in assessing liquidity. According to the Russian scale [9], values less than 1 (highlighted in light red in the table) indicate critical insolvency, and the number of such values does not exceed 30% for all years studied. Values from 1 to 2 (light orange color) indicate a low degree of solvency and are predominant in the sample. Highlighted values ranging from 2 to 3 (light yellow color) indicate satisfactory solvency. The only light green value indicates high solvency or an unstructured capital, interestingly attributed to Alean which went bankrupt the following year.

	2018	2019	2020	2021
	quick ratio	quick ratio	quick ratio	quick ratio
Ambotis	1,23	1,48	2,66	1,42
Alean	1,58	1,60	4,89	-
Dolphin	0,05	1,05	1,06	1,27
TEZ Tour	1,68	1,68	1,64	2,49
Coral Travel	1,13	1,11	1,10	1,10
Sunmar	9,25	1,00	1,01	1,00
Anex Tour	1,00	1,00	0,97	0,97
Biblio-Globus	1,41	1,00	0,78	0,87
Intourist	0,45	0,36	0,53	0,27
Pegas Touristic	2,05	2,03	1,49	1,34

Table 2. Quick liquidity for the sample firms during 2018-2021
Source: authors' calculations

The quick liquidity shows the company's solvency in the short term. When fluctuating around the 0.8 [9] indicator (light green color), an optimal level of financial stability is supposed; this phenomenon was noticeable in 2020-2021 for Biblio-Globus. A value of 0.6 to 3 (orange color)

demonstrates a high degree of solvency; presumably, almost all the companies were solvent in the short term. Values marked in light red above 3 suggest an irrational capital structure. Only two values appear in the table, and one of them belongs to the bankrupted Alean.

The white-colored values are not included in the ranges and cannot be explained.

	2018	2019	2020	2021
	Total liq.	Total liq.	Total liq.	Total liq.
Ambotis	1,23	1,48	0,74	1,40
Alean	1,96	2,05	2,44	
Dolphin	0,05	1,05	1,06	1,27
TEZ Tour	0,96	0,99	0,95	1,51
Coral Travel	0,60	0,57	0,57	0,56
Sunmar	4,68	0,52	0,51	5,02
Anex Tour	0,53	0,51	0,49	0,50
Biblio-Globus	0,95	0,70	0,46	0,45
Intourist	0,25	0,20	0,28	0,16
Pegas Touristic	1,30	1,19	0,88	0,76

Table 3. Total liquidity for the sample firms during 2018-2021

Source: authors' calculations

The total liquidity ratio shows the ability to pay off short-term and long-term obligations with assets. According to normative values, it should be greater than 1. The higher the value is, the higher the company's ability to pay off its obligations is; however, excessively high indicators may reflect the inability of the company to manage assets effectively and rationally.

For the company "Ambotis," the values of the current ratio are the most favorable. Only in 2020 did a decline occur due to the shock of the pandemic, but by 2021 the situation had stabilized. The tour operator "Alean" also entered the "green zone," but the values were by two or more times higher than the norm, indicating an irrational asset management, which could have been one of the reasons for the company's bankruptcy. Other companies mainly had a current ratio value of 0.5 and maintained it throughout the entire period under study.

	2019	2020	2021
	leverage	leverage	leverage
Ambotis	0,34	0,640	0,30
Alean	0,37	0,795	-
Dolphin	0,14	0,14	0,19
TEZ Tour	0,40	0,39	0,515
Coral Travel	0,13	0,09	0,08
Sunmar	0,00	0,01	0,01
Anex Tour	0,00	-0,02	-0,025
Biblio-Globus	0,00	-0,26	-0,136
Intourist	-1,422	-0,817	-2,431
Pegas Touristic	0,576	0,449	0,36

Table 4. Leverage for the sample firms during 2018-2021

Source: authors' calculations

The leverage ratio shows the proportion of borrowed funds in the overall capital structure and determines the extent to which debt capital influences the financial leverage effect. Optimal values are in the range of 0.5-0.7. As values increase, financial risks also increase. If the amount of borrowed capital is less than 50%, the enterprise misses the opportunity to increase profits.

Thus, inefficiency in the use of borrowed capital was identified among the tour operators "Anex Tour", "Biblio-Globus", and "Intourist". The indicators for "Ambotis" and "Tez Tour" are the most favorable overall, although may not always be optimal. The company "Alean", which went bankrupt in 2021, showed a tendency to attract borrowed funds, which it was likely to fail to handle. The other tour operators in the sample hardly resorted to borrowing, which hindered their activities.

	2019	2020	2021
	FSR	FSR	FSR
Ambotis	0,34	0,64	0,30
Alean	0,37	0,795	-
Dolphin	0,14	0,14	0,19
TEZ Tour	0,40	0,39	0,52
Coral Travel	0,13	0,09	0,08
Sunmar	0,004	0,01	0,01
Anex Tour	0,004	-0,023	-0,025
Biblio-Globus	0,000	-0,259	-0,136
Intourist	-1,421	-0,812	-2,430
Pegas Touristic	0,58	0,45	0,36

Table 5. Financial stability ratio for the sample firms during 2018-2021
Source: authors' calculations

Financial stability ratio reflects the ability to sustainably finance the production process in the long-run perspective. The recommended indicator value is around 0.8-0.9. A decrease in this value reduces the ability to timely pay off short-term obligations and increases the risk of bankruptcy.

According to Table 5, "SANMAR", "Anex Tour", "Biblio-Globus", and "Intourist" are the companies that are least able to pay off their obligations. Interestingly, "Alean", which was dismantled in 2021, shows very good values. It is likely that the ability to pay off short-term obligations could not guarantee such a possibility in the long term.

In addition to conducting preliminary analyses of financial statements, several models were selected to describe the economic reality in the tour operator industry with further attempts at application. The following were chosen [4]:

- Altman model;
- Beaver model;
- Fulmer model.

The Altman model, despite relying solely on financial statements, does not include market-based evidence of the probability of bankruptcy, which makes it unsuccessful and ignorant of taking into account the realities of the industry.

The Beaver model neither provides an opportunity to derive a final bankruptcy indicator and interpret the results obtained, nor does it reflect industry-specific features.

The Fulmer model is the most optimal in this particular case as it incorporates the advantages of both previous models. Therefore, this study attempted to apply it to the sample with subsequent comparison of results with the actual state of companies.

Table 6 presents the results of calculating the Fulmer model assessment with subsequent explanation of the result.

Travel agency	H	Interpretation
Ambotis	0,5863501734	not bankrupt
Alean	3,009286752	not bankrupt
Dolphin	0,9216096096	not bankrupt
TEZ Tour	1,14	not bankrupt
Coral Travel	-1,086962785	bankrupt
Sunmar	-3,729474075	bankrupt
Anex Tour	1,92634672	not bankrupt
Biblio-Globus	4,058487495	not bankrupt
Intourist	-9,71046833	bankrupt
Pegas Touristic	-0,3709733489	bankrupt

*Table 6. Fulmer H-score for sample firms during 2018-2021
Source: authors' calculations*

Comparing the results of other analyses and the reality with the results of the Fulmer model calculations, there are significant differences observed. For instance, according to the Fulmer model, "Coral Travel", "SANMAR", "Intourist", and "Pegas Touristik" are most likely to become bankrupt in the foreseeable future, while financial analysis showcases their comparative favorability in terms of deviations from normal values unlike Anex Tour and Biblio-Globus. "Intourist" is among the three outsiders in terms of indicators, but in reality, the company continues to generate profits. Meanwhile, it cannot be applied to "Alean", which was declared bankrupt, but was not marked as one by the Fulmer model. As for the other companies presented in the sample, they are not in the risk zone of bankruptcy, which is confirmed by the model.

Given the thoroughly discussed theses, the following conclusions can be established:

- COVID-19 was not always the primary cause of the decline in company performance;
- However, denying its negative impact on the companies in the sample is irrational: "Anex", "Biblio-Globus", and "Intourist" are cases in point.

Given that the Fulmer model was not fully applicable to this study, it is rational to propose some alternatives to achieve the research goals set:

- Choosing other models as the key theoretical ones: MDA, logit, scoring, and rating models (after having taken into account regional specifics);
- Revising the Fulmer model by taking into account industry risks after their assessment with the help of the newest methodologies.

In addition to recommendations for further scientific research, a set of recommendations for company executives is also to be formulated as follows:

Firstly, they are advised to reduce the share of borrowed capital in the total amount of funds raised. According to leverage, most firms have a relatively small proportion of their own funds and are heavily dependent on creditors, which is a big risk to their stability.

Secondly, they might want to revise an investment policy for the company after acknowledging previously neglected risks. Special attention should be paid to forming reserves for unforeseen expenses, which will help to mitigate sudden risks.

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Economic dilemma: money cannot buy happiness

ABSTRACT.

Many individuals expect an increase in happiness as their income rises, a notion partially supported by micro-level literature. Also, it is believed that countries with the largest GDP are the happiest. However, the discussion surrounding this issue gives rise to the well-known "Easterlin Paradox," which suggests that personal happiness remains on a particular level after reaching a certain income bracket and does not change over the lifecycle (or better "which suggests that once a person reaches a particular social status their happiness level becomes stable and doesn't significantly change over their lifespan"). This article delves into the causes and refutations of the validity of the Easterlin Paradox, supported by the research based on the latest reports and polls on this topic. One part of the research includes the analysis of happiness and GDP per capita correlation among various countries. Another part of the study includes the individual data of correlation between relative income and personal life satisfaction. The results of the research are significant for happiness economics, as they highlight the importance of promoting population well-being beyond economic wealth. Moreover, it allows people to understand that money is not the only source of happiness, and wealth is not always equivalent to well-being.

Keywords: *income; utility; happiness; Easterlin paradox; adaptation.*

Introduction

The relationship between happiness and income has been an intriguing and widely discussed topic for several decades, continuing to captivate the interest of many researchers. They strive to examine whether the Easterlin paradox is observed in different countries and worldwide. They explore the underlying assumptions behind this phenomenon and seek further justifications. Moreover, they endeavor to identify the ideal governmental policies to enhance the happiness of their citizens. As widely recognized, life satisfaction positively influences a country's economy, development, and attractiveness to others.

A pivotal breakthrough in this field, igniting genuine interest and serving as the basis for subsequent research, was Richard Easterlin's article published in 1974, where the author concludes that changes in income lead to happiness shift at a given point in time. However, cross-sectional and intertemporal analyses of happiness among countries and even people cohorts do not confirm this trend [7, pp. 118-120]. Furthermore, subsequent studies have indicated that an individual's happiness ceases to increase beyond a certain income threshold, a finding that will also be supported in this article.

There are several explanations for this paradox:

1) **adaptation.** One of the main reasons for the lack of a positive correlation between happiness and income is the ability of individuals to adapt to new life circumstances. As shown in Figure 1, a sudden income shock leads to an increase in happiness, but soon, even with a stable income, life satisfaction returns to the baseline [1; 2].

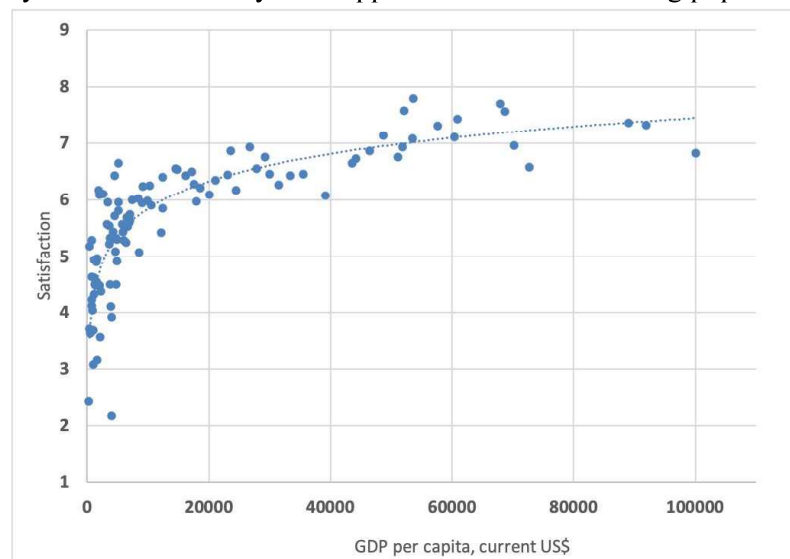
2) **aspirations.** Another important aspect, partially related to adaptation, is that *«people at any given point in the life cycle typically believe that they will be better off in the future than they are at present, and that they are better off today than they were in the past»* [8, p. 471]. In other words, when reaching a new income level, we expect to become happier (moving from point 5 to point 6 in Figure 2, but in reality, our aspirations and goals change, leading us to point 7 (with a different income but the same level of happiness).

3) **relative income.** Each individual compares themselves with others or with their past/future versions on a daily basis, and this significantly influences their level of happiness. Despite receiving a certain amount of money, a person's happiness will not increase if others in the market are earning more [3, p. 14], or if peers or individuals with similar traits are wealthier [5, p. 40]. The importance of higher social status and earning more can be also found in Vablen (1967) work. However, there is the other side of this coin - social comparison can help some individuals become more successful due to additional motivation, so peers' income levels cannot only decrease life satisfaction but also raise it.

In this paper an attempt to do research of correlation between welfare and income using modern data will be made. The second section will discuss the existence of the 'paradox' in the modern world. Then, in section three, this paper observes the key ideas for political development of countries for improvement of population life-satisfaction, and attractiveness for other people. Finally, the section four concludes¹.

Statistical research of income and happiness correlation

The first objective of this research, which will be extensively examined in this article, is a meticulous analysis of recent surveys on happiness and income among populations. This analysis



aims to investigate the existence of the Easterlin paradox in the present day, as countries, on the whole, have become wealthier and the hypothesis regarding post-World War II issues is no longer objective. Additionally, the study assumes that in the modern world, an increasing number of individuals are becoming more self-oriented and are gradually detaching themselves from income dependency. To examine the global relationship between income and happiness among 106 countries, the data is derived from the World Happiness Report 2021 – within the scope of

¹ It is also important to underline, that in this paper the words 'happiness', 'well-being' and 'life-satisfaction' will be used as synonyms, nevertheless, in some articles they are considered as different terms, but this question is also very discussing and pretends to be another topic for discussion.

the Gallup World Poll, according to which happiness is assessed on a scale from 1 to 10. For measuring income of these countries, the data on GDP (in current US\$) from the World Bank Open Data is analyzed. Figure 3 illustrates the correlation between happiness and income across countries. The logarithmic scale demonstrates that there is an initial positive relationship between wealth and the well-being of the population. What is more, the correlation coefficient between these variables is comparatively high – about 0.75, which underlines positive high correlation. However, once the GDP per capita exceeds \$400,000, the association becomes less pronounced, and the wealthiest countries cease to be the happiest. This finding supports the hypothesis put forward by Clark and Frijters [3] that in relatively less affluent nations, individuals with higher incomes experience happiness due to their elevated status and relative opportunities. However, as the overall income of a country increases, their satisfaction derived from wealth diminishes, further highlighting the role of relative income. What is more, it can be predicted that because of free access to the Internet and the dissemination of information among richer countries, people cannot only compare their financial status with a similar group but also observe individuals from different countries who appear more "attractive" to them. They can analyze their salaries, well-being, quality of life, and, in some cases, their happiness levels. In such situations, their level of happiness may further decline, and they may cease to derive satisfaction from their work, among other aspects. In the context of these reflections, the issue of workforce turnover and intellectual emigration arises (as described in [3, p. 52]), which underscores the importance of state support to retain the most talented individuals and to prevent a general decrease in the workforce. The further specification of this problem will be also discussed in Section 3.

Figure 3. Lifesatisfaction and GDP per capita, current US\$, 2021

Another part of the study is aimed at individual metrics of people utilized in the European Values Study, where happiness is also evaluated on a scale from 1 to 10, and income is measured as low, medium, or high on a relative scale. The analysis confirms that individuals with medium relative income tend to be happier compared to those who are wealthier or poorer (see Figure 4). The lack of happiness among poor individuals can be attributed to their limited material resources and inability to afford leisure activities or even basic necessities, which is the widespread case in developing countries. Nevertheless, the situation for individuals with above-average income is more complex. In addition to the previously mentioned factors, issues such as changing aspirations, comparisons and desires for higher earnings, psychological and sociological problems may also arise. Factors such as lifestyle choices, stress levels, and social determinants of health play significant roles in shaping overall well-being. Furthermore, another social problem exists, which was highlighted in the studies by Diener and Seligman [6], who have emphasized the significance of social relationships, demonstrating that individuals with close relationships and social support networks experience higher levels of happiness and life satisfaction. It can be hypothesized that extremely wealthy individuals often have many competitors or are surrounded by people who envy them, which may contribute to a decrease in their happiness levels. The highest happiness rate of people with medium income also can be described by idea of Hirschman [11], according to which high income, earned by others, can serve an information for one's own future prospects. On the one hand, that does not affect the utility of wealthy individuals but, on the other hand, it only exerts a negative influence on the happiness of the poor (who merely harbor envy towards the wealth of others).

Therefore, contemporary data partly confirm the Easterlin Paradox, as the wealthiest individuals are not necessarily the happiest. However, a direct correlation between income and happiness is evident, as people's opportunities increase with higher income (at a certain point in time). However, as individuals' consumption grows and their aspirations change, they tend to return to their previous level of happiness.

Political changes for happiness improvement

This paragraph will address macroeconomic issues and the policies that can improve the happiness of the population. The importance of increasing the well-being of the country's residents has already been emphasized, as it enhances devotion to their nation and helps to prevent migration problems and a decrease in the workforce. Regarding migration, the brain-drain phenomenon [12] can be identified, whereby highly intelligent individuals realize that they can achieve a similar status in another country and leave due to its attractiveness. Conversely, others may migrate due to low consumption in their home country and, despite having a lower social status in the receiving country, consider themselves better off when comparing themselves to their former cohabitants. Policies should strive to make their country appealing to Type I migrants while minimizing the outflow of Type II residents. Overall, the government's approach should focus not on maximizing profits but on increasing the national happiness index, which can be achieved through political processes involving people's participation and by increasing available opportunities and benefits [10, pp. 7-10]. Furthermore, the quality organization of work structure and maintaining a balance between work and leisure are extremely important, regulated by various labor protection laws that establish minimum and maximum working hours, as well as enhancing the incentives of living in the country, such as access to healthcare, education, and benefits.

There are various obvious ways mentioned above for governments to increase people's life satisfaction. Additionally, numerous factors, namely the Gini coefficient, unemployment rate, inflation, Gross Domestic Happiness and others, measure habitants' well-being in a country directly or indirectly. Unfortunately, many policymakers still rely on GDP or GNP as indicators of success, which is incorrect. A notable illustration is China in the 1990s when a sharp increase in GDP was accompanied by a significant decline in the population's satisfaction. However, as soon as the government paid attention to social safety net and labor regulation, the level of happiness began to rise [9]. Similar examples can be found in Japan, India, and Western European countries such as the UK, France, Germany, and the Netherlands. The only country with a positive correlation was Italy, but possibly only because it was much poorer than other European countries at the start of research [3, p. 2].

Overall, it is necessary to draw government officials' attention to examples from other countries, statistical information including migration data, reports on assistance from law enforcement and healthcare agencies, and research. They should start paying greater attention to the well-being of residents, their aspirations, motivations, and happiness levels. Such politics will be much more efficient than relentlessly pursuing high GDP and national income growth.

Conclusions

In conclusion, it is particularly important to emphasize a direct correlation between happiness and income, and the existence of the "Easterlin paradox", as the wealthiest individuals are not necessarily the happiest. Furthermore, beyond a certain income threshold, the relationship between well-being and income approaches zero, which can be explained by adaptation, changes in expectations and aspirations, as well as social comparisons and relative income. All data is considered over a range of one to several years, as earlier studies have confirmed that the positive income shock increases happiness, the effect is barely visible in the context of a lifetime.

In addition to the microeconomic analysis, a brief examination of macroeconomic studies on this topic has revealed that focusing solely on a country's income does not lead to increased happiness. In particular, money undoubtedly plays an important role in a person's life as it provides access to many amenities; however, it is not a primary source of human happiness. People prioritize being healthy, feeling secure, and deriving pleasure from life. Nevertheless, the question of whether "money can buy happiness" remains subjective and still open as it requires the development of more precise and individualized surveys and metrics that can at least partly identify the key metrics of happiness and ways to enhance it.

Appendix

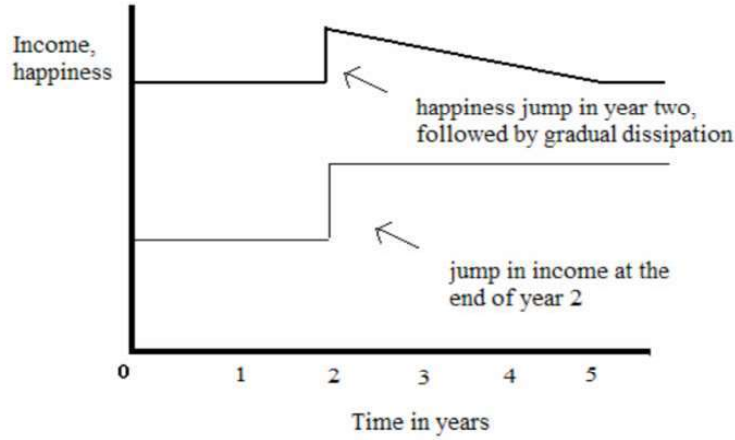


Figure 1. Change in Happiness following an Income Shock

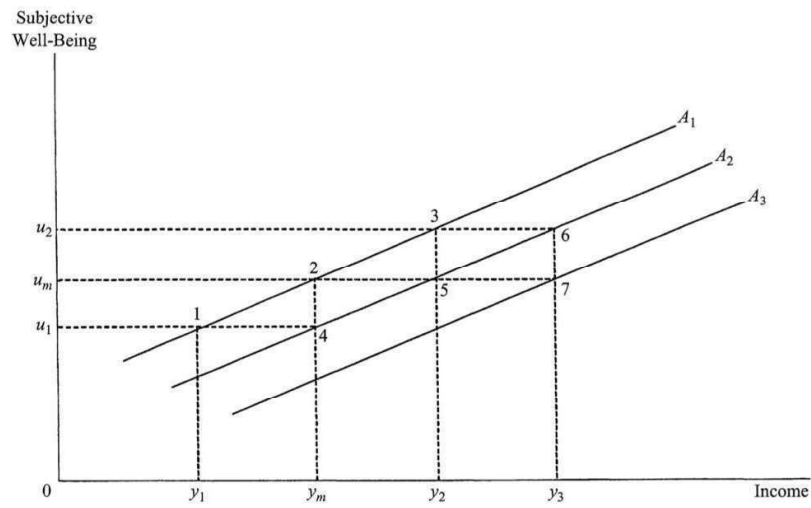


Figure 2. Subjective Well-Being $[u]$ as a Function of Income $[y]$ and Aspiration Level $[A]$ [R. A. Easterlin, "Income and Happiness: Towards a Unified Theory", p. 473]

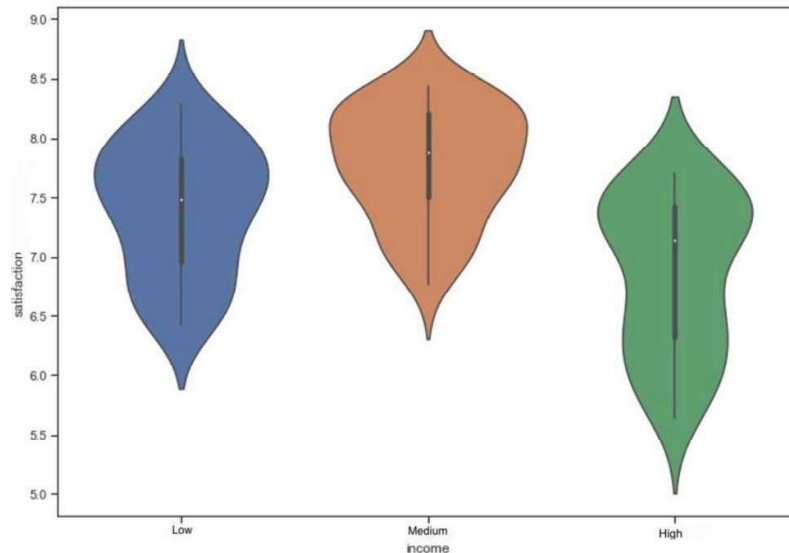


Figure 4. Income and satisfaction distribution, 2021

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Brand value as a market capitalization factor for ecosystems

ABSTRACT.

The assessment of the impact of brand value on the capitalization of ecosystems in the Russian market is necessary due to the widespread presence of this business model and the increasing interest in brand development. The value of a brand within an ecosystem holds substantial significance for company management and investors, serving as a crucial communication channel with customers and effectively conveying the value proposition. Hence, the hypothesis arises that the value of a brand directly impacts the market capitalization of companies. To delve deeper into this relationship and its implications within ecosystems, this research aims to ascertain its existence and determine the extent of its influence. The research findings support the hypothesis and, through extensive factor analysis, demonstrate that ecosystems with strong brands outperform their competitors with weaker brands in terms of economic performance indicators. This study emphasizes the crucial importance of robust brands within ecosystems and provides a solid rationale for increasing investments in brand management. As a result, it is anticipated that there will be a greater emphasis on brand development and the expansion of communication channels to accommodate the growth of ecosystems.

Keywords: *ecosystems; capitalization; brand value; the impact of brand value on capitalization; economic efficiency of ecosystems.*

Introduction

The market capitalization of five American IT ecosystems has exceeded \$7 trillion, and by 2025 ecosystems may account for approximately 30% of global GDP, which amounts to around 60 trillion US dollars [9]. This number is larger than the GDP of the 16 G20 countries combined. What is meant by the term "ecosystem" in Economics, and why is that model that efficient?

A business ecosystem is a purposeful business arrangement between two or more entities (the members) to create and share in collective value for a common set of customers. Every business ecosystem has participants, and at least one member acts as the orchestrator of the participants. All members in a business ecosystem, whether orchestrators or participants have their brands present in the value propositions [10].

Large IT companies have the resources to succeed by implementing that business model. They obtain a vast amount of data, have profound network effects, and, frankly speaking, unlimited financial resources for their innovative development and global expansion. The brand's value holds significant appeal for company management and investors due to its role as a highly influential communication channel with customers and its ability to effectively convey the value

proposition. Therefore, the following hypothesis has been identified: brand value directly influences the market capitalization of companies.

The purpose of this research is to determine the existence and impact of the relationship between brand value and market capitalization within ecosystems.

The following tasks were included for consideration:

1. Analyzing the capitalization and brand value of Russian companies.
2. Identifying the relationship between brand value and market capitalization.
3. Considering the unique characteristics of business ecosystems in the Russian market.
4. Conducting statistical calculations to validate the hypothesis.

Platforms and ecosystems

The transition to a platform economy, observed almost worldwide at present, is a natural consequence of several factors. These factors include accumulated technological changes that have made a qualitative shift from the breakthrough stage to practical implementation, the demand for change and the removal of geographical barriers from the demand side, and the exhaustion of possibilities for traditional business models, primarily in terms of business profitability and generating conventional revenue growth for shareholders.

The characteristics of the platform business model, leveraging both technological and behavioral changes, can lead to a substantial restructuring of businesses. A classic example of this is the experience of Uber, which "disrupted" the taxi market and laid the foundation for the so-called gig economy—an economy based on independent contracts (instead of direct employment) and network effects.

An important characteristic of an ecosystem is the creation of a unified "customer profile," which involves consolidating information about all customer transactions within the ecosystem and using this data to offer targeted products and services to the customer.

Ecosystems in Russia

Russia is one of the few countries with strong national ecosystems presented on the local market that effectively compete with transnational companies. One of Russia's particular features is the leading role of the financial sector in ecosystem creation. Russian technology companies are also moving towards an ecosystem direction, expanding their range of services, including starting to offer financial services to their customers [2].

By many measures of digitalization, Russia is among the leading countries. Innovations and online services are in high demand among the population, and there are technological and infrastructure conditions for their accelerated development. Today, several national companies in Russia are leaders in the competitive environment, building platform and ecosystem business models, while a significant number of smaller platforms operate in the market. Another notable aspect in Russia is the substantial role of the financial sector in shaping ecosystems, with major banks actively moving in this direction. Simultaneously, technology companies are integrating financial services into their ecosystem product line.

Progressive financial organizations are undergoing a transformation into technology companies, building ecosystems of financial and non-financial services around them, and engaging in collaborative projects with internet companies.

On the Russian market there are six recognised ecosystems: Sber, Tinkoff, MTS, VTB, VK, Yandex.

Yandex [13] started as a search engine and has grown into a major technology company with a successful ecosystem. It initially focused on media products like search, email, and news, earning revenue through contextual advertising. However, in recent years, Yandex has expanded into offline services and developed a wide range of technologies. Users can now use voice commands for services like navigation and music. Yandex also explores the "Smart Home" concept, integrating various devices through its voice assistant, Alice. This transformation has made Yandex a leading innovator in Russia's digital technology industry, while search and

marketing services remain its core business. The company continues to develop startups, contribute to the digital infrastructure, and engage in educational activities.

VK [12] describes itself as an "ecosystem of ecosystems" with the goal of optimizing its various divisions and creating synergies among projects by leveraging shared infrastructure and service products. The group comprises VKontakte, Odnoklassniki, MY.GAMES, Mail.ru, and media projects. Recent additions include Delivery Club, Yula, Pixonic, and BOOM music service, while also holding stakes in educational platforms GeekBrains and Skillbox, and partnering with Citymobil. Each project maintains its unique identity and value. The collaboration within VK enhances the effectiveness of solutions and aims to accelerate existing services and develop new products. Noteworthy partnerships include Alibaba Group for e-commerce and Sberbank for O2O platforms in food tech and mobility sectors.

MTS [5] has outlined a new strategy that centers on building a product-driven ecosystem around its core telecommunications business, enabling seamless transitions between services. The key elements of this ecosystem will involve customer identification, utilizing extensive data and shared sales channels, as well as effectively managing customer loyalty and communications. Initially, MTS aims to expand the ecosystem beyond its core business by focusing on fintech and TV, with plans to gradually introduce other entertainment-related offerings. MTS holds a unique position in the market as a content provider, boasting a diverse portfolio of delivery channels including satellite, IPTV, cable, mobile, and OTT2 platforms. As part of its strategic vision, MTS is aiming to venture into content production, which would place the company's ecosystem on par with industry giants like Netflix, Apple, and Amazon.

Ecosystems and brand

One of the crucial factors of ecosystems' rapid development is a strong brand. It makes customers loyal to new products within ecosystems.

The American Marketing Association gives the following definition of a brand: a name, term, design, symbol or any other feature that identifies one seller's goods or service as distinct from other sellers [1].

The term "brand" means, on the one hand, the object which is forming a certain impression, and on the other hand, the process of forming this impression. A brand in the modern sense is an image in the consumer's mind, a set of impressions and associations, and this image allows the consumer to distinguish and choose a particular product.

According to statistics, an average three-year-old recognizes about 100 brands. Over time, not only does the number of familiar brands increase, but also the depth of associations linked with them. Thus, the brand becomes one of the significant assets of companies.

The initial unprofitability of new platforms is often a deliberate strategy to quickly attract both consumers and sellers. Subsequently, the emergence of network effects and economies of scale allows for the implementation of monetization mechanisms, leading to profitability in platform businesses. This factor is factored into the stock price and contributes to high evaluations of a company's prospects by investors. Such examples of favorable evaluation by investors stimulate competitors (which comprise the vast majority of companies with publicly traded stocks or those negotiating business sales) to explore the possibility of leveraging platform solutions in their respective industries.

For instance, the market capitalization of Ozon and Uber continued to grow despite their negative profitability. At the same time, their brand values increased, and so did market capitalization. The example of these companies presents the idea that some firms prefer brand rather than profitability in the short run. Moreover, the brand becomes one of the main factors of the company's success. These trends are also relevant to the Russian market.

Nevertheless, the characteristics of platform business models, such as a focus on rapidly acquiring a customer base to activate network effects, customers' inclination to stay within the ecosystem, economies of scale, the collection and analysis of large customer data, and their utilization for marketing and product promotion (including expanding into new segments), create

a robust foundation for their market power, even to the point of dominating the markets in which they operate. As noted in the report "Competition in the Digital Economy" prepared by the European Union [2], a large customer base possessed by a company employing a platform business model provides significant competitive advantages, stimulates the development of the ecosystem, and makes it nearly impossible to displace from the served markets. Accordingly, the role of platforms and ecosystems in resource redistribution within the economy is growing, leading to the phenomenon of "platformization."

Empirical evidence

To test the hypothesis, a sample of 50 Russian companies with the highest brand value was compiled. The information on brand value and market capitalization was provided for 19 of them which provided enough information for further analysis. In order to ensure that the statistical aggregate is appropriate for further calculations, the three sigma rule was applied. As a result, the following analytical grouping was built, based on data from 16 companies:

Brand Value, mln rubles	Number of companies, units	Average intra-group market capitalization, bn rubles
15000 — 25000	2	167,22
25000 — 45000	7	193,35
45000 — 95000	2	502,44
95000 — 180000	5	471,37
Total	16	...

Table 1. The linkage between brand value and market capitalization, 2021

Based on that data, the values of intra-group and total variance were calculated. Knowing them, the calculation of the empirical coefficient of determination became possible. It shows the impact of the brand value on the company's market capitalization. The result indicates that the brand value determines the market capitalization of the company by 21.6%.

Based on the empirical coefficient of determination, the correlation ratio was also calculated, which made up the result in the range of $0.3 \leq n < 0.5$, therefore, according to the Cheddock scale, a moderate linkage is detected.

The results are relevant for diverse corporate forms but are especially interesting when considering ecosystems, due to their nature. Ecosystems are beneficial for both supply and demand. The largest ecosystems develop a wide range of services, often built around a single brand, in order to meet the most basic customers' needs.

The brand allows to ensure the loyalty of consumers to new products within the ecosystem, reduces the elasticity of demand, and increases the market differentiation of the product. That is the explanation of specific interest in expanding and developing brands and the reason why such phenomena as Ozon and Uber exist.

In order to validate the results, I decided to evaluate the economic efficiency of the Russian ecosystems and compare them with the brand value rating. According to open data provided by the Russian ecosystems MTS, VK, and Yandex, a multivariable analysis was produced in order to determine the most efficient ecosystem in 2021. Balance sheets and reports of financial results of companies were used for calculations. As a result, the following indicators were calculated, which formed the basis for multivariable analysis.

Ecosystem	Yandex	MTS	VK
Cost revenue ratio	0,001	0,605	0,001
Net assets per assets	0,777	0,432	0,687
ROA	0,000	0,065	0,000
ROM	0,452	1,070	0,363
Current Ratio	4,139	0,425	2,928
ROC	0,173	0,173	0,031

Table 2. Economic efficiency indicators, 2021

Ecosystem	K1	K2	K3	K4	K5	K6	K (Mean)	Rank
Yandex	1,000	1,000	0,000	0,178	1,000	0,997	2,043	1
MTS	0,000	0,309	1,000	1,000	0,011	1,000	1,822	2
VK	0,654	0,782	0,000	0,115	0,501	0,032	1,444	3

Table 3 Economic efficiency indicators ranking, 2021

According to the results presented in Table 3, the most effective Russian ecosystem is Yandex, followed by MTS and VK. The ranking corresponds with the brand value positioning of these companies. That indicates an alignment of the brand and the economic indicators of ecosystems.

Conclusion

The research yielded the following findings: The hypothesis suggesting that brand value impacts a company's capitalization was confirmed. Furthermore, through multiple factor analysis, it was revealed that ecosystems with strong brands exhibit higher economic performance indicators compared to their competitors with weaker brands.

This study highlights the critical significance of robust brands for ecosystems and provides justification for increased investments in brand management. Consequently, it is expected that there will be a heightened focus on brand engineering and the expansion of communication channels in response to the growth of ecosystems.

The study has the potential for further expansion. In future research, there are plans to assess brand value and capitalization indicators over time and make comparisons between the Russian ecosystem market and foreign markets.

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The main directions and tools in modern Japanese print media

ABSTRACT.

In recent years, as the position of print media in Japan has changed dramatically due to the widespread use of the Internet, television and radio broadcasting, the task of studying the print media system has gained special relevance. The article presents an analysis and identification of the structure and features of the main directions and tools in modern Japanese print media as a mechanism for forming public opinion with the creation of online course for students studying the culture and history of Japan. The selected methods applied in the research are the following: hypothetical-inductive collection of linguistic material, distributive analysis, logical comparison and analysis. As is shown, the process of formation of Japanese writing was interrelated with the formation of Japanese media at the initial stages and with the tools of the Japanese press of the 21st century, which is represented by news agencies, press clubs, the Association of Publishers and Editors of Newspapers of Japan (NSK) and keiretsu and by a range of linguistic techniques. The popularity of the print press has declined; however, the digital versions satisfy diverse interests of the public. Printed publications can be classified according to several criteria. The outcomes of the study contribute to cross cultural research since the analyzed linguistic and non-linguistic techniques are relevant materials for future research in the field of linguistic-related disciplines. The created online course can be used for teaching the culture and history of Japan.

Keywords: *journalism; national culture; print media; public opinion.*

The relevance and practical aspect of this study are connected with the necessity of examination of the system and distinctive features of the primal directions and methods in modern Japanese printing as a system of development and shaping public opinion since the media institute represents cultural, political and economic objectives.

With the development of an online course for students studying Japanese culture and history (JCH students) in linguistic and non-linguistic faculties, such as media communications and global economy, the objective of this study is to describe the structure and characteristics of the main directions and key tools in contemporary Japanese print media as a mechanism for influencing public opinion.

The following tasks should be addressed to achieve this goal:

- analysis of primary sources;
- identification of the historical context of the current state of print media in Japan;
- identification of the key foci and instruments of the Japanese print media;

- the development of a new initiative with the goal of exhibiting the characteristics of Japanese print media to university SSCHOJ in linguistic and non-linguistic faculties.

The object of the research is the print media of Japan while the subject of the research is the main directions and tools in modern Japanese print media.

The novelty of the study is associated with the inclusion of a thorough analysis of the primary strategies and resources used by contemporary Japanese print media, as well as the subsequent development of an online major course in linguistics and other disciplines for college JCH students.

The hypothesis of the study is the primary methods and frameworks of contemporary Japanese print media emerged simultaneously with the adoption of writing in the country, as well as the fact that this process was significantly influenced by China and the United States.

Literature review

Studies by Kamei-Dyche [4] and Kacza [5] have their focus on Japanese press. These studies generally examine different types of Japanese mass media and writing system, contexts in which main tools and directions are found, and history of development. Nevertheless, domestic and foreign studies have significant discrepancies describing the initial stages of the formation of the media institute in Japan. Russian experts on Japanese mass media mainly concur that the Meiji Restoration in the 1860s was the beginning of the country's mass media history. Domestic researchers' view the "Sayo zassi," the "Koko Shimbun," the "Tyugai Shimbun," and other newspapers and magazines that were published in Japan prior to that time as translations of foreign media [2]. However, the "kawara-ban" tablets, which were disseminated starting at the beginning of the XVII century in the biggest towns of Kyoto, Osaka, and Edo (modern Tokyo), are referred to as the first mass media in Japan by media history specialists: A. Haruhara, K. Morita, and others. They covered natural calamities, as well as local crime stories [ibid].

Simultaneously, they do not look into Japanese methods for influencing public opinion. Study of Vityazeva [10] examines the fundamental tenets and layers of contemporary Japanese press. Her research demonstrates that despite the popularity and accessibility of television and the Internet, Japanese press continues to be in demand and is distinguished by a high level of development of the system which is founded on traditions and national customs. Generally, people are considered to demonstrate a high level of trust.

At the same time, a study by Ovchinnikov [8] demonstrates an in-depth study of methods of state influence on the press and suggests that as a result of these processes, the practice of tracking the information flow appears, which allows controlling information that is perceived by the population without the introduction of censorship. Moreover, the scientist asserts that these processes affect the entire media system. In contrast, Zouave [11] focuses on the significance of lexical unit selection when implementing language manipulation taking into account these phenomena when covering North Korea's condition in Japanese publications. Regarding the way Japanese newspapers exploit ambiguity in their reporting, she presents two key results. Most of the time, reading retention strategies are employed. It was discovered that manipulations are particularly prevalent in print media which manifests itself in the categories of assessment and judgment. Bouchnak [1] also investigates the phenomenon of speech manipulation in media with a focus on the use of cognitive processes to introduce particular preferred models. He shows that journalists favor secondary discourse over primary discourse because there is more control over speech and more freedom in how information is reformulated. The author emphasizes the significance of language techniques that are typically implicit at all discourse levels, such as positive self-presentation and negative opponent presentation. However, their research disregards the nation's cultural and historical heritage. Showkat [9] emphasizes a pivotal role of media in the spread of everyday culture practices, thereby reflecting norms and values of human society due to an inextricable connection with culture. The study also discusses how cultural values might shape mass media messaging when content creators have a stake in accomplishing

particular societal objectives. He believes that the press is one of the media outlets that is tied to the local culture.

It is still unclear how cultural components, tools, and contemporary Japanese print media advances relate to the academic community in Russia. Despite the directions of Japanese press and typical for any press instruments which influence it, have broad coverage in academic environment, the study of Japanese cultural characteristics as they are expressed through printed text is a unique phenomenon that can give JCH students the theoretical groundwork they need to study both linguistic and non-linguistic aspects of Japanese culture. Therefore, further research into this subject is a worthwhile endeavor.

Research methodology and description of data

To investigate the main directions and tools of modern print media in Japan and to create an online course program and implement it into the curriculum, we employ a mixed method research design including content analysis. Content analysis is applied to study existing materials devoted to identifying the historical background of the current situation of print media in Japan, as well as the main directions and tools. Based on the information received and analyzed, an online course is created.

Results achieved

As a result of the conducted research, it can be recognized that the modern print media of Japan is a unique phenomenon in world culture, the formation of which began in the Middle Ages with the so-called "illustrative journalism". It is important to note that the first prototypes of print media appeared with the development of writing. Further development of printed publications was closely connected with the political processes of Japan as a constructive participant in international relations. Currently, strict laws in Japan have a significant impact on how media operates. Freedom is now limited in Japan at the start of the 21st century, and the country is subject to a high degree of censorship that is imposed by Japan's ruling party [7]. As a result, the study's hypothesis—that the fundamental components and themes of contemporary Japanese print media emerged from the moment writing took root in Japan and that this development was profoundly affected by China and the United States of America — was validated.

At the moment, a number of reasons have led to a decrease in the popularity of the print press as evidenced by a decrease in circulation. It is important to note that this phenomenon does not imply a decrease in the interest of the population in the information product provided by publications since many publications have a digital format that is of great value to the audience [3].

The creation of a vast array of various information products that meet the political, economic, social, and other interests of the public is a key feature of contemporary Japanese print media. Printed publications can be classified according to several criteria: geographical, subject-thematic orientation, purpose, time of publication, periodicity. A number of information products are one of the key aspects that makes print media so popular and demanded in Japan [10].

Having analyzed the tools of Japanese media, we claim that the main tools of modern Japanese media are news agencies, press clubs, the Association of Publishers and Editors of Newspapers of Japan (NSK) and keiretsu [6, p. 256]. The participants of the media process in consideration provide information to the media that are impartial and reliable and allow the media system to create an information product ready for the audience. The most significant tool of media that influences public opinion is the reception of speech influence implemented through language. This process includes a range of lexical and grammatical techniques that are actively used to present neutral information from one perspective or another.

In order to identify the needs of the target audience to create a relevant online course, a survey was conducted within the framework of this study.

The Higher School of Economics' linguistic and non-linguistic JCH students constitute our target audience. The focus of our study is on the JCH students taking one to three courses

because they are at different stages of learning about Japanese history and culture and are therefore more aware of the effectiveness of the methods being currently used in Russian institutions. The created survey is distributed through social networks (VKontakte, Telegram), namely through study groups of which the target audience of this study consists.

According to the data obtained as a result of the survey, it can be stated that the majority of respondents (53.8%) are ready to devote 1-2 hours a week to the course which will consist of no more than 5 lessons (68.3%). It is preferable to start taking an online course from the 2nd year of study at the institute (43.3%), followed by adding the grade to the current grade in the discipline devoted to the history and culture of Japan (60.6%). The most attractive task format is the tasks presented by the test (68.3%), the less popular are written tasks with the teacher's assessment (56.7%) and written tasks with the assessment of classmates (33.7%). The majority of respondents are interested in studying the features of modern Japanese print media in the country's media landscape (78.8%). The general wishes for the course include an in-depth study of the history of the development of the media institute in Japan.

Based on the acquired data, the most relevant topics for JCH students were highlighted (more than 50% of respondents' responses and interviews):

1. The history of the development and formation of the Institute of Print Media in Japan;
2. Features of modern Japanese print media in the country's media landscape;
3. The main directions of Japanese print media;
4. Linguistic tools of print media.

Next, an online course plan was developed which included 4 modules of the same name. Each module includes a movie that is freely accessible online, a test with only one correct response, exercises, questions with presumed thorough answers, a real-world task, and a block with more information on the subject.

Conclusion

The study identifies the main directions and tools of modern print media in Japan. Modern tools and trends in press of the country were formed as the entire media institute in Japan developed. The first prototypes of media appeared during the formation of writing; however, they are not considered to be full-fledged media. Print publications' popularity has declined, but online newspaper versions have taken their place since they offer a wide variety of content that satisfies the audience's wants and needs. There are several linguistic and non-linguistic tools available to editors in contemporary print media for the creation of information products.

While working on the practical part of the study, an online course on the peculiarities of Japanese print media was created. JCH students of higher education institutions with linguistic and nonlinguistic faculties can benefit from taking this course. To accomplish these goals, a variety of tasks were carried out: analysis of the theoretical materials that served as a foundation for the primary themes and instruments of contemporary Japanese media, a target audience survey, creation of a plan for the development and implementation of an online course for JCH students pursuing studies in Japanese history and culture.

The results of the study also contribute to the field of linguistics since the analyzed tools are relevant educational materials for various language schools and can be applied in the field of writing texts for various purposes.

A further prospect may be the expansion of the audience since this topic is interdisciplinary, which indicates the possibility of interest in this course from people who are interested in conducting interdisciplinary research.

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Structural semantic features of online film reviews

ABSTRACT.

In the twenty-first century, the significance of digital space is constantly growing which triggers the uprise of new ways and forms of communication. This article deals with the language of the internet genres, specifically the language of the film reviews published on the websites and platforms created for evaluating and recommending films. The paper represents a closer examination of online film reviews written by internet users. The main function of this genre is evaluation that affects the linguistic level and the structure. The purpose of the research is to identify the structure and the language of the genre and trace its changes by comparing the texts of two different periods. The semantic groups, lexical, syntactic and stylistic features were identified during the study. A few methods were applied, including the method of comparative analysis which made it possible to identify a number of differences between the texts of two periods. As a result, the conclusion about the lexical-semantic and structural peculiarities is made.

Keywords: *digital genre; review-aggregation websites; online film review; internet users; structural features; lexical- semantic groups.*

The appearance of a new phenomenon, namely the Internet, and its development influences the communicative space of the digital environment. Hence, a new form of language has appeared that was identified as a "Netspeak" by David Crystal [2, p. 17].

Nowadays, cyberspace is becoming a fertile ground for research, and especially digital genres draw scientists' attention. One of these is online film review that is highly popular in the present time due to the increasing variety of streaming platforms (Netflix, HBO Max, Disney+ etc.) and review-aggregation sites (IMDb, Rotten Tomatoes etc.).

A big number of streaming services and websites allow the audience to evaluate and recommend films and TV series. Professional film reviews have been replaced by online film reviews, as it is not necessary to have a degree in film studies or in journalism.

Online film review is a subtype of film review that is adjusted to a new media environment and as researcher Galiullina O.R. notes, it is gaining great popularity due to the technical development of media space: an instant registration system, the lack of professional content editing and the constant updating of specialized sites [3, p. 151-153].

Creating online reviews does not require professional writing skills, a high degree of reasoning and objectivity. This type of film review is a convenient format for representing a personal opinion of a reviewer. Therefore, the texts of online film reviews are characterized by

subjectivity, emotionality, and evaluation. Writing a non-professional film review, the author can remain anonymous, which contributes to a more vivid expression of their self-presentation.

The relevance of this study is determined by the growing interest in the study of Internet genres and media texts, film reviews in particular. A significant number of scientific works by Garanina E. Yu., Brezhneva D. D., Galiullina O. R., Lyakhova I. N., Tyazhlov Y. I., Vanko T. R. and others prove this fact.

The novelty of this research lies within the material of the study: the texts of non-professional film reviews of different periods and their structural and semantic features were analyzed.

The object of the research is the online film reviews written by internet users.

The subject of the study is the structural and linguistic features of the online film reviews.

The purpose of the work is to determine the structural and linguistic peculiarities of English-language online audience film reviews and to identify common patterns for this genre by comparing texts published in different periods.

The objectives of the study are to examine online film reviews written by internet users in the process of its development, identify structural and lexical-semantic features.

The main research methods are the method of continuous sampling, the method of scientific observation, the comparative method, as well as the method of contextual and quantitative analysis.

The material of our study was 350 online film reviews written on American TV series *Twin Peaks*. The reviews were taken from IMDb, Rotten Tomatoes and Metacritic websites and written in the period of 1998-2002 and 2017-2022, consequently.

The virtual genre is a form of speech activity in the process of communication with distinctive content and formal characteristics that are determined by online space and communication there [4, p. 154-155].

E. I. Goroshko identifies the following essential indicators in the digital genre: virtuality, interactivity, hypertextuality, creativity and anonymity. The online genre is also influenced by the technical capabilities of the Internet, where the transfer and updating of information, the creation of creolized texts is included [6, p. 14-15].

The figures of the author and the addressee also influences the digital genre. The role of the author and addressee is crucial, especially when it comes to online film reviews. The author's self-presentation is one of the incentives for writing the text of the film review itself [1, p. 36-38].

Among other factors influencing the digital genre, there are hypertextuality, dynamism and the possibility of non-linear reading, that are typical features of Internet communication. Other features include emoticons as a means of compensating for emotional contact [8, p. 130-132].

Film review most vividly represents the transformation of the conventional genre, which occurs due to the characteristic features of the Internet space: interactivity, hypertextuality of the environment, the possibility of creating creolized texts, one-way and two-way communication [9, p. 143-148].

Film review is a kind of review, which provides a critical assessment of a motion picture, i.e. a movie. Researchers identify a number of functions of this genre, among which the most important are informative and evaluative functions. With the transformation of the genre, its development on the Internet and the growing popularity of amateur film reviews, the evaluation function becomes the main one [5, p. 29-30].

While conducting research, we noticed that the texts of the reviews published in 2017-2022 are shorter in terms of the volume of those written in 1998-2002. The average number of words in reviews written in 2017-2022 is 148 words, whereas in the texts of the 1998-2002 the mean number is 167 words.

The analysis of the texts' structure was conducted, which revealed the following:

- 1.178 texts reviews (178 texts) have headlines;
2. 68 film reviews contain an introduction in its structure. In most cases, in this part, reviewers write about their attitude to David Lynch's work, the general impression of watching

the series etc. It is worth noting that the viewer's experience in the introductory part of the film review is most clearly expressed in texts published between 1998 and 2002. Reviewers emphasize that Twin Peaks was an integral part of their childhood and that the series influenced them:

I watched Twin Peaks on TV when I was just a child. It had a big impact on me (Belial, 9 October 1998).

In 1990 when I first saw this series I was in Primary 7 in a Cumbernauld primary school. I'd never seen anything like it and I don't think I'll see anything like it again (chilin, January 5, 1999).

3. 280 film reviews out of the total number of texts have an evaluation-analytical part in their structure. This part can be the entire text of the review or most of it along with the introduction and conclusion. The size of the evaluation and analysis block can vary from 1-2 sentences to 2-3 paragraphs with a detailed assessment of each aspect of the series (acting, script, musical accompaniment, etc.) or each episode / season:

So crushingly disappointing! This had nothing to do with the original Twin Peak! It didn't even belong to the same world!<...>(January,24 2022)

I still love it. Here's my rating of each of the first seven episodes: 1 = A- 2 = A 3 = A 4 = A- 5 = A- 6 = A- 7 = A. Not bad for TV! <...> (mmintz, August 29, 2002)

4. 64 reviews have a conclusion, which gives a final assessment of the series or a recommendation to other users, calling for viewing or, conversely, warning against it.

The Structure of online film reviews	
Headline	in 178 texts
Introduction	in 68 texts
Evaluation-analytical part	in 280 texts
Conclusion	in 64 texts

Table 1. The Structure of online film reviews

A comparative analysis revealed that 53% of film reviews written between 1998-2002 have a more distinctive structure with elements of an introduction, conclusion, while the texts from the later period (2017-2022) are less organized. In addition, 31% of film reviews have introductory and final parts. The content of online film reviews is becoming more concise, focused on the evaluation and analysis of the series.

Morphological analysis showed that the usage of the adjectives is wide-spread in the texts. That is quite natural, since evaluation is the main function of film reviews, which has also been preserved in the Internet genre.

In the course of our study, it was possible to determine that adjectives were used in 322 texts (92%). A particular attention should be paid to the superlative form of adjectives, this form occurs 122 times in the film reviews.

The best thing ever made for TV<...> (May 23, 2020)

The first 17-18 Episodes were the most daring_and original in Television history <...> (gordon_cole, May, 31 2001)

THE BEST TV show that has ever been created<...> (September, 17 2017)

The saturation of texts with superlative forms of adjectives can be explained by the reviewers' intention to express an extreme degree of emotion (delight). From the above examples, it is clear that Internet users were trying to give a general assessment of the TV series or individual episodes. You can also notice that the form of the adjective good—best has become the most common form of superlatives.

The personal pronouns of the 1st and 2nd persons are also quite common in the texts of online amateur film reviews. Thus, the personal pronoun of the first person, singular I, occurs in the texts of amateur film reviews 311 times, where one third of the total number (158 times) is presented in reviews written from 1998-2002. This tendency can be explained by the unique experience of the viewers of those years when *Twin Peaks* was shown on TV screens across the country, and the series was an integral part of childhood and adolescence.

I was taken out of whatever mood I was in, and I hated it...but I can't help my reaction <...> (Tehmeh, May 24, 2017).

I did not ever watch this series when it was on prime time, except for one episode which made no sense to me at the time. But years later I saw the first few episodes on cable and went out and bought the entire series (29 episodes) on video cassette. I loved every minute of it! I have now watched it from beginning to end 5 times <...> (Flashbac, April 28, 1999).

I was a fan of Twin Peaks as a town, as a show, with it's quirky inhabits and surreal subplots. I think the return went a little too off into the deep-end for me personally and left me unsatisfied. The pretentiousness of other fans when I try to voice my opinion <...> (SamW, April 12, 2022).

Due to the use of the personal pronoun of the first person singular, the text of an online film review is more subjective, which is more typical for film reviews written by non-professionals. The reviewers express their opinion or try to convey their experience of watching the series. It can be noticed in the texts written by users Flashbac and SamW.

An evaluative statement implies the presence of several components — the subject, the basis and the object of evaluation. The object of evaluation in our case is the TV series "*Twin Peaks*" and its components (plot, characters, dialogues, etc.). It is practically impossible to recognize the advantages or disadvantages of a film, TV series or other product of the film industry without professional vocabulary, i.e. special terms (so-called film terms).

Traditionally, professional film critics or film experts use cinematic terms. In the course of the study, it was found out that non-professional online reviews quite often contain not professional vocabulary, but commonly used one that is related to the theme of movies and TV shows. It was revealed that online film reviews written by internet users are dominated by rather simple thematic vocabulary related to television, series, plot and characters.

Avid fan of the first 2 series but this one does nothing for the show <...> (jetSetWilly, July,7 2017).

It is, to be pointless categorical, like a surreal soap opera with a strong flavour of its own. There are so many great scenes, moments <...> (HenryHextonEsq, December, 11 2000)

The most common vocabulary of the online film reviews is represented in the table below.

Thematic vocabulary connected with films and TV shows	Usage (number of times)
Show	288
Season	248
Series	197
Characters	165
TV	115
Movie	72
Story	67
Plot	57
Soap opera	45
Scenes	32
Music	30
Actors	17
Acting	17

Table 2. Thematic vocabulary connected with films and TV shows in the online film reviews

The object of evaluation cannot be only a product of the film industry — a film or a series, but also a director, producer and the cast. It is impossible to estimate a director's or actor's work without using even the minimum number of proper names. That is why the next group, covered in the course of the study, is associated with anthroponyms, toponyms and filmonyms.

Among anthroponyms, the most common one (397 times) is associated with TV series director David Lynch. In user film reviews, you can find the mention of the director's name and surname: *Lynch, Mr. Lynch, David Lynch*.

I can only hope that David Lynch has some master plan to right the ship before its too late but truly doubt that he can <...> (terrywinc, May, 29 2017)

I'm not gonna say that this is what the whole show is about, because firstly it's probably not even what Lynch was getting at (who knows but the man himself), and secondly there's a lot of things about the show <...> (vaultoverseer_15, March, 11 2021)

Characters and actors' names of the series occupy a special place in the texts of online film reviews. Most of all, users mention the protagonist of the series FBI special agent Dale Cooper (mentioned 47 times), played by American actor Kyle MacLachlan, who is often called as Kyle or MacLachlan in the reviews (28 times). Reviewers quite often mention only the name of the main character Cooper or his position (Agent Dale Cooper / Agent Cooper / Special Agent Cooper).

You also had Agent Cooper coming to town and being awestruck by the natural beauty, staring in childlike wonder at the trees, <...> (lincolnhawk-87377, September, 2 2020)

And that is Kyle MacLachlan in the role of Dale Cooper. I had never seen him before <...> (palmwild, October, 23 1999)

Among the toponyms, the most widely-used is Twin Peaks (339 times), the name of the town where the main action takes place. And as regards the filmonyms, the reviewers mention David

Lynch's films such as *Blue Velvet*, *Inland Empire*, *Mulholland Drive*, *Elephant Man*. It was revealed that the total number of such mentions is 21 times.

Colloquial and obscene language, lexicographic abbreviations, shortenings are common for amateur film reviews. Mostly, such vocabulary was found in texts published in the period of 2017-2022, which indicates changes in the lexical structure of the genre.

None of this show is eerie, none of it correlates to Twin Peaks and none of it is interesting enough to keep watching it <...> (frehley-21102, June, 6 2017).

I was stoked about the return of TP <...> (cindysandiego, July, 1 2017)

*D*mn you David Lynch, you got me again <...>* (December, 17 2017)

As for the lexical expressive means, it is worth noting here that epithets, simile, metaphors are common for the texts of both periods.

Lexical expressive means	Usage (number of times)
Epithet	106
Simile	67
Metaphor	28

Table 3. Lexical expressive means and their usage in the online film reviews

I'm torn between satisfaction at a superb final episode, and tenterhooks over what is a stark cliffhanger ending <...> (HenryHextonEsq, December, 11 2000)

A Show Like No Other (vaultoverseer_15, March, 11 2021)

David Lynch is my Buddha (Daniel B, August, 4 2017)

The evaluative statements become more expressive, and from the point of view of meaning, more detailed. The evaluation also acquires an emotional and expressive nature because of the emotionally colored vocabulary, which includes evaluative vocabulary in most cases. In the course of the study, it turned out that evaluation is mostly marked at the lexical level and is expressed primarily by qualitative adjectives. In the texts of amateur film reviews, there were 802 adjectives of quality. However, all of them are heterogeneous in meaning, so all units were divided into two groups: adjectives with a general valuation (general assessment) and adjectives with a private valuation (private assessment).

General evaluation adjectives	Private evaluation adjectives
Good	Beautiful
Bad	Horrible
Great	Eye-catching
Marvelous	Disappointing
Genius	Touching
Perfect etc.	Stupid etc.

Table 4. Types of evaluation in the online film reviews

Reviews written in the late 90s and early 2000s are characterized by general evaluation predicate adjectives with an abstract positive meaning. The most wide-spread are *good*, *brilliant*, *perfect*, *excellent*.

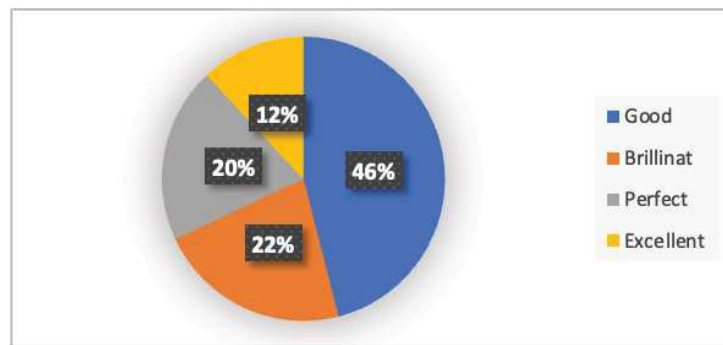


Figure 1. General evaluation adjectives in the texts of 1998-2002

Twin Peaks" messes with your mind and that is why it was so good! <...> (cat-48, September, 27 1998)

All actors are super, but there is one actor that I think is the main reason why this brilliant show became the BEST<...> (palmwild, October, 23 1999)

Kyle Maclachlan was perfect in the role of Cooper, he was just bizarre enough to fit right into <...> (moraine2002, February, 10 2001)

One of the typical features of the texts of film reviews 2020-2022 is private evaluation predicate adjectives that are expressing an assessment of various criteria (psychological, aesthetic).

The most beautiful soundtrack and song selection <...> (emailmadhurimasen, May,16 2021)

It's as strange, surreal and oddly compelling as the original, and you can't turn away once you're hooked. David Lynch's acting role is hilarious <...> (Robert B, August, 12, 2017).

Some of the dialogue is a bit weird, but that's Lynch for you! (Kansler, May, 22 2017)

Allusions to other David Lynch's films are common for the texts of the 90s early 2000's (36%). It testifies to an increased level of intertextuality in the texts of this period, which is not prevailing in reviews of the 2017- 2020s (25%).

I don't think the X-Files would have done as well as it has if Twin Peaks had not set the stage <...> (Flashback, April, 28 1999)

David Lynch has always been on the cutting edge of eclectic storytelling, as evidenced by "Blue Velvet", "Eraserhead," and other films with the Lynch signature on it <...> (EMHMARK8, June, 4 1999)

It combines the mundane (Andy Griffith Show, which by the way is one of the greatest shows ever made) with the supernatural (Twilight Zone, Outer Limits), suspense (Alfred Hitchcock) and crime drama (The Fugitive) that I have ever seen <...> (pozy, March,24 1999)

Season 1, most of season 2, Fire walk with me, and season 3 The return work together to make one of the most unique shows of all time, a show that will keep you thinking, reading, and re watching <...> (ghallonefive, April,14 2022)

It also has odd characters, supernatural elements, and prime time soap opera story arcs making it a murder mystery mixed with Northern Exposure, Dark Shadows and Knots Landing <...>

Among the syntactic constructions, the most common are interrogative, exclamatory and imperative types of sentences, as well as complex and compound sentences. However, comparative analysis shows that rhetorical exclamations (30%) are mostly common for the reviews of the late 1990s and early 2000s:

This great, iconic series ended on a killer cliffhanger! (newnoir, July, 20 2000)

It is smart, scary, unforgettable! (aurelyossi, November, 23 2001)

Log Lady forever!!! (MinusMikey, December,5 2002)

It is worth mentioning that rhetorical questions (20%) are used in the texts of reviews of the 2020s.

But its supposed to be one of the best shows? <...> (suvechhabose, December, 5 2020)

How if there's a whole part that is terrible? <...> (vaultoverseer_15, March, 11 2021)

Among syntactic stylistic devices, we distinguished parcellation, climax and syntactic parallelism, that are typical for online film reviews. The revealed characteristic syntactic features create a so-called perlocutionary effect.

Syntactic stylistic devices	Usage (number of times)
Parcellation	47
Climax	25
Syntactic parallelism	19

Table 5. Syntactic stylistic devices and their usage in the online film reviews

Hurts. Physically hurts <...> (andrisbriedis, September,16 2017)

Already my favourite season. Best show ever <...> (Bob P, May, 24 2017)

Weird and strange with lots of hidden meaning about life, death, time, space, good, evil, past, future, consciousness, dreams, beauty, gore, music, light, and Coffee <...> (ranjan04rajeev, September, 4 2017)

It is not a Tv show, it is not a movie, it is just a piece of art! <...> (aurelyossi, November, 23 2001)

Parcellation has been used in the texts written by andrisbriedis and Bob P. In such sentences, the number of words is minimized, their main function is to convey the reviewers' impression and their assessment.

The text written by ranjan04rajeev is the example of using negative form of climax. The nouns (life, death, tie, space, music, dreams, light etc.) are arranged in descending order. The gradation goes from the largest and most significant topics to minor ones.

The author, known as aurelyossi, highlights the series' originality, denying its similarity to TV series and movies, calling it a piece of art. Parallelism together with exclamatory sentences emphasize the emotionality of the statement and highlights the object of evaluation.

Conclusion

The conducted research allows us to say that the online film review has undergone a number of changes regarding structural, lexical and syntactic features. It has become clear that the reviews of 1998-2002 are more structured than texts published in the period of 2017 to 2022. In addition, the vocabulary of a general positive assessment prevails in the reviews of an earlier period, while in the texts of 2017-2022 there is vocabulary with a private, both positive and negative assessment. Also, an important point in the development of online amateur reviews was the use of abbreviations, colloquial and obscene vocabulary, which is typical for reviews of the late period. There have been changes that have affected lexical and structural identity in amateur online film reviews.

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Constructivist identity of Yekaterinburg: defining potential opportunities

ABSTRACT.

The main objective of this paper is the reassembling of industrial heritage in Yekaterinburg's architectural identity. Yekaterinburg has recently become one of the most recognisable Russian million-strong cities due to the initiatives of its citizens. Despite the variety of the city's recognizable brands, there is no definite identity. That makes connected studies relevant and even urgent in many ways. In this research some of the ideas about Yekaterinburg's branding potential were considered. Entering the context of the city's heritage, the importance of architectural structure, which is the most viewed part of the city itself, was outlined. As a result of theoretical research and the interpretation of today's media sources, it was postulated that the reappearance of constructivist buildings is the main component of the city's urban-authenticity discourse. This architectural stream entered its pure era in 1920 — early 1930s and developed the appearance of the majority of Russian cities overall, which makes the study even more considerable. The methodology of this paper is also provided with a specially designed sociological survey. As a result, it was suggested that the connection between constructivist objects and the mass view on the point of their potential in terms of identity should be investigated.

Keywords: *urban studies; city identity; constructivist architecture; Yekaterinburg's brand; architectural heritage in Russia.*

Introduction

Modern Yekaterinburg is quite a typical example of an industrial city that has managed to enter the niche of the most interesting and recognizable Russian million-strong cities through the efforts of initiative citizens and large companies. The few attempts to brand the city or at least create a chain of associations with it were obviously not very successful. The only official brand (the Yekaterinburg logo) is not actually based on any component of the city identity, and it is for this reason that Yekaterinburg residents and other Russians perceive it rather as a meaningless inscription.

Speaking of identity, we are dealing with the problem of finding the solutions that are mandatory to take as soon as possible. In this context, we formulate a hypothesis that simultaneously serves as the main topic of the study. It seems that the heritage of constructivism and the associated functionality could be a good basis for further development of the image of the city. This is evidenced by a number of prerequisites of a different nature.

The Sverdlovsk practices of constructivist construction are closely connected with the formation of the city as a mining center. The practices in question owe their appearance to the active influx of population and the development of industrialization; Sverdlovsk at that time was

positioned as a concentration of cultural, social and industrial functions of the region, its satellite. In the early 1920s, urban construction in it underwent a significant decline, however, from 1922 until the early 1930s, the history of the city was marked by mass construction, keeping pace with its deliberately forced urbanization. As a result, the phenomenon of unique Urals urban planning has developed, functioning in close connection with the needs of Soviet society.

At the moment, many of these buildings are simply living out their century, although 30 years ago they were in active use by citizens. There is some deformation of the relations established in this field of interest: on the one hand, constructivism is now under big discussion and seems to be important in modern media, on the other hand, local and regional administrations, apparently, remain excluded from this discursive circle. One way or another, the attention received from administrative officials to such remarkable objects of the urban space is undeservedly small. At the same time, many of the buildings still have a chance for a new life, and those that do not can be preserved in a historical form by the forces of the mayor's office. In this context, the issue of popularization of the phenomenon is important both in order to form the foundation for further branding, and to concentrate useful initiatives around heritage sites.

In this regard, further research pursues a number of goals:

1. Determine the directions of the researches and papers on the subject of city's associative connections;
2. Interpret the survey results and draw a number of conclusions based on them:
 - 2.1. Study the representation of the above series of associations in the public consciousness;
 - 2.2. Study the respondents' attitude to various practices related to heritage sites and their functions, appearance and history;
3. Formulate existing approaches to the preservation and reinterpretation of the constructivist heritage, as well as to describe its potential.

Contextualization of associations in the city space

To study the particular question, it is important to have an idea of some of the concepts used in the research field. So, we have already mentioned identity and branding; since we do not follow the goal to delve into the methodology of the city branding in this paper, we will limit the research to using only the first term.

Within the framework of this study, the identity of the city is understood as an identity spontaneously constructed for some time, consisting of opinions shared by the public about the "character of the place" [1, p. 271]. The identity of the city partially echoes the concept of authenticity, which also does not have a single definition, but is actively used in urban studies. At very least, we should remember that "the identity of the city is always authentic" [8]. Authenticity is understood by some researchers as a dynamic process of interactions between citizens, determining further production, use and competition for spaces; we will adhere to the same opinion [6, p. 155].

Architectural research on this topic eventually leads only to a more philosophical understanding of the issue; for example, to the concept of "genius loci" — a special "spirit" inherent in a particular place [4, p. 8]. Such an approach can be useful in the context of the spontaneity of the formation of urban identity, but it is ineffective for its constitution in the media space. We are pursuing exactly this goal.

As already mentioned earlier, constructivism in Sverdlovsk architecture is subordinated to stylistic integrity and differs in certain trends; for example, they relate to the location of buildings on the city map, forming a number of "axes of concentration". They are located, in particular, on the central streets, such as Lenin Street, Malyshev Street, Lunacharsky Street and their intersections; in the Zheleznodorozhny and Ordzhonikidzevsky districts and on the Square of Labor, the Paris Commune Square, the Square of the 1st Five-Year Plan and partly the Square of 1905 (toponyms referred as peripheral). As a result, a fairly close network of constructivist heritage samples is formed, revealing themselves in almost any part of the city. Interestingly, their dispersion and diversity gave rise to an attempt to create a "Guide to constructivism of Yekaterinburg". Eight routes in different parts of the city are designed using archive photographs

and buildings' layouts (Figure 1). The guidebook was compiled by TATLIN Publishing House by order of the Department of Architecture, Urban Planning and Regulation of Land Relations of Yekaterinburg Administration, at the moment it is published on the website of the city administration. Such an initiative is really unique for covering the phenomenon, and it could be useful for building a discourse around identity if it were not so local. As a result, we observe an exemplary, but inconspicuous work of a team of specialists.



Figure 1. The guide “Routes of constructivism”: route No. 1 (source: official site of Yekaterinburg administration)

At the beginning of our work, we accepted the broad functionalism of buildings as an axiom. If we turn to the historical definition of constructivism as a style, we will again be convinced that the core of its meaning lies precisely in function. Researchers of the architectural heritage of Yekaterinburg note that it was these buildings that distinguished autonomy and versatility [3, p. 10]. Perhaps the most striking examples in this regard are houses of culture and club facilities, as well as factory buildings or complexes. The construction of clubs was based on the search for new forms and lifestyles and, consequently, new structures that together would introduce Soviet citizens to a life of a commune [7, p. 33]. Ideological goals organically fit into the organization of the internal space of the clubs; statistics from the early 1930s show: "on average, there were 267 seats per auditorium in the club, and more than 3 rooms for club work" [5]. Many of these buildings are now given over to the placement of retail organizations or museums, while some are not used at all.

Factory complexes can be examined on the unique example of UZTM (Uralskiy Zavod Tyazhologo Mashinostroeniya or Ural Heavy Machinery Plant). The territory of the Uralmash plant includes industrial buildings, dormitories for employees, a house of culture, a kitchen factory and other buildings. Many of the buildings are rather symbolic for the district; for example, a residential complex (the so-called “Saw-House”) for workers, built according to an ambitious and unexpected project by Peter Oransky (Figure 2). This house has become a significant point on the map of UZTM and the entire Uralmash as an administrative district, rather not because of its rich history or interesting semantic content, but as an object of a special level of authenticity.



Figure 2. Saw-House, 12 Ordzhonikidze Avenue (source: URALMASH's First GOALKEEPER)

Summing up the ways of assigning importance and significance to constructivist buildings in the city, we can say that there are two main directions here: an emphasis on function and an emphasis on the aesthetic component — the so-called authenticity of the place. Based on the conclusions drawn, we will turn to the empirical part of the study.

Recognition and aestheticization: analysis of survey results

To conduct a valid research within the framework of the tasks set, a survey was created on the topic “Architectural symbols of Yekaterinburg”. When searching for respondents, we did not limit the sample to the criteria of place of birth. Thus, it was supposed to track the tendency to recognize different buildings and its connection with certain indicators of the respondent. As a result, responses were collected from 57 people from different age categories living in Moscow, St. Petersburg, Yekaterinburg and other cities. Next, we will consistently analyze the key issues proposed.

1. Buildings associated with Yekaterinburg (Figure 3)

This question assumed an open form of answer, which left a huge scope for respondents' variations on the topic of the names of certain buildings. For this reason, the analysis of the answers was a little difficult; as we will see later, the recognition of certain toponyms is influenced by the wording of the name used in the question: some people, for example, have no idea that “Pineapple house” is the RCC (RMK) office.

The Yeltsin Center (20) and Sevastyanov's House (17) were mentioned more often than others. The leading position is explained by the popularity of the public and museum site; nowhere in Yekaterinburg was it organized at such a high level as it was done at the Yeltsin Center. Sevastyanov's house is a question of purely aesthetics of the place and an attractive image; it is interesting that this answer is most typical for non-Yekaterinburg youth. The next most frequent responses are the City Administration, the Vysotsky Business Center and the RCC (RMK) Headquarters (the building project belongs to the Norman Foster Agency). In the examples given, a common trait is noticeable, tacitly returning to the question of the incompleteness of perception of the city image. The thing is, all these buildings are products of completely different stylistic, functional and historical characteristics, which does not allow us to talk about a single associative connection.

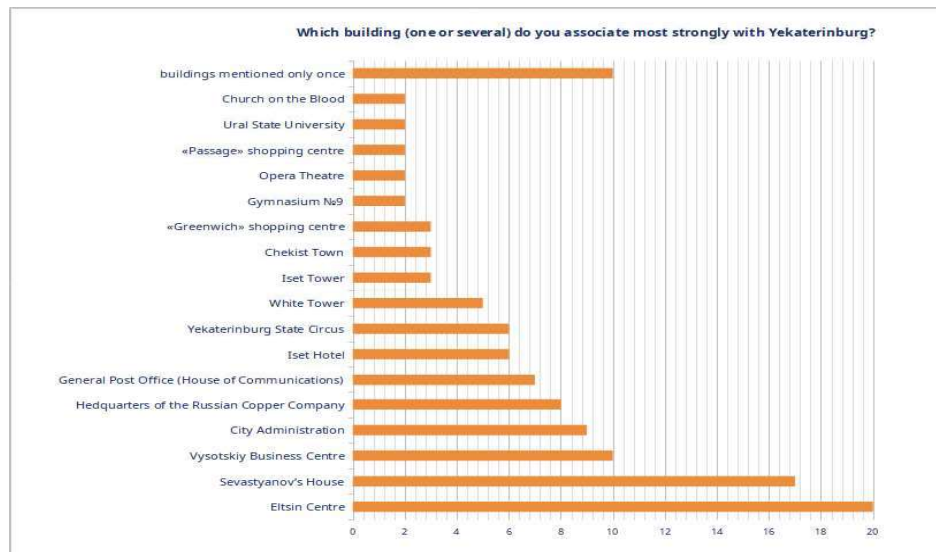


Figure 3. Which building (one or several) do you associate most strongly with Yekaterinburg?

According to the data obtained from the survey, the majority of respondents mention the White Tower (water tower), the Chekist Town, the General Post Office, the Iset Hotel; the Himmash House of Culture was noticed only once. In total, the objects of constructivist heritage were named symbols of Yekaterinburg 22 times. It can be observed that people who have chosen architecture or urbanistics in the question regarding the sphere of their interests are more likely to answer with non-trivial constructivist objects in the question of associations. Also, such an answer is more typical for representatives of the age category 40+. These data allow us to conclude that there are no automatic associations with constructivism in the typical respondent who does not have certain professional competencies and is not a representative of the Soviet mindset.

In fact, there is no consensus on the issue of identity: few studies on the branding of the “Ural capital” have shown results comparable to those obtained during this survey. For example, the existence of the following possible identities of Yekaterinburg is assumed: the city of Yeltsin, the capital of the Ural rock, the city of the murder of the Royal family, the city of the mining civilization, e.t.c. [2, p. 54]. Unexpectedly, such answers were collected from Yekaterinburg residents themselves, whereas a strong opinion about the identity of the “city of the murder” was rather characteristic of residents of other parts of Russia; this reason, in particular, was the impetus for long attempts to create a brand for the city — it was simply necessary to get rid of negative associations [9, p. 97]. Remarkably, the mentioned idea of the “city of mining civilization”, however, organically correlates with the topic of the study. Apparently, our hypothesis is not unique.

2. The level of acquaintance with buildings-representatives of constructivism (Figure 4)

In order to make it easier to work with the answers for this question, a number of building options were selected, which respondents were asked to tick off in case of recognition.

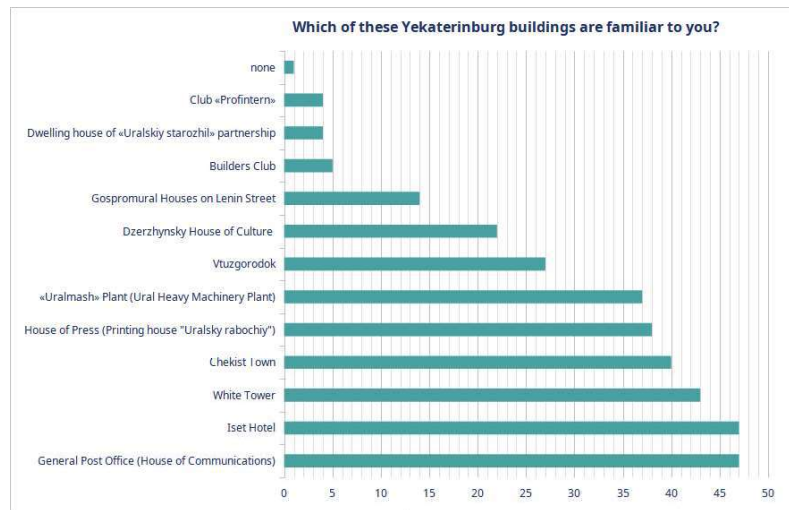


Figure 4. Which of these Yekaterinburg buildings are familiar to you?

The results show several patterns of various degrees of importance. Firstly, the most “famous”, as expected, are the General Post Office and the Iset Hotel (47 positive responses each); followed by the White Tower, the Chekist Town and the House of Press (43, 40, 38). The Builders Club, the Dwelling house of “Uralskiy Starozhil” partnership and the Profintern Club were the least recognizable (5, 4, 4). An interesting situation happened with the Builders Club, which was already mentioned above: the phenomenon of “unexpected naming” worked here. When compiling the survey, a much more popular toponym (Sverdlovsk Film Studio) was not indicated in parentheses next to this option. It was later discovered to greatly reduce the recognition of the building among the respondents. This factor slightly distorted the picture of responses for this particular option, but it did not affect the overall representation much.

It was curious to see how this question changes the perception of respondents' familiarity with constructivist buildings in Yekaterinburg as a whole; the previous question, due to the use of an open form, did not give any information about this. It is also noticeable here that most of those who named the Yeltsin Center, the Sevastyanov House or any other non-avant-garde as the main association know quite a lot of representatives of constructivism.

In general, there is a pattern associated with the cities of birth and current residence of the respondent: non-Yekaterinburg residents are characterized by familiarity only with the most replicated and remarkable buildings (variants with more than 25 votes), and for natives of the city itself or the Sverdlovsk region (Achit, Asbest, Kamensk-Uralsky, Karpinsk, Kamyshlov, Novouralsk, Serov), as well as the nearest regions (Beloretsk and Chelyabinsk), there is a noticeable tendency to expand the range of familiar buildings, up to the most unpopular. This, of course, in almost 100% of cases is accompanied with the respondent's residence in Yekaterinburg, so it is associated with the experience quite ordinary for a local resident.

3. Studying attitudes to practices and assessing the authenticity of heritage (Figure 5)

Have you heard anything about intentions to restore or renovate buildings of Yekaterinburg's historical heritage?

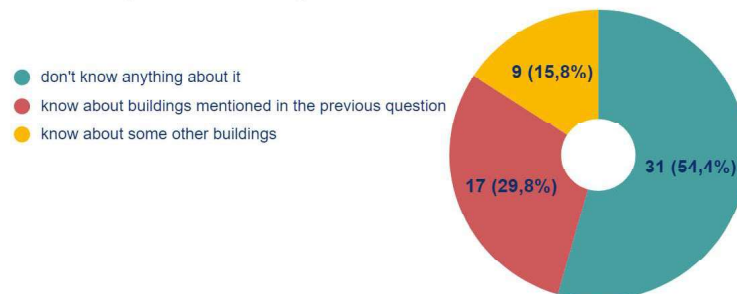


Figure 5. Have you heard anything about intentions to restore or renovate buildings of Yekaterinburg's historical heritage?

There are three possible answers: “I have heard about the buildings from the previous question”, “I have heard about other buildings”, “I have not heard about any at all”. As the results show, slightly more than half of the respondents (54.4%) are not familiar with such intentions at all, and this is quite obvious, since the majority (78.9%) are not urbanists and/or architects and, most likely, are not interested in the relevant news field. Almost one third of the respondents, however, have heard something about the restoration or renovation of Yekaterinburg buildings of the Constructivist era (29.8%). They have probably heard about the restoration of the White Tower — at the moment it is the most well-known example of such a project.

The next question about restoration had four possible answers: certainly yes, rather yes, rather no, definitely no; it was further followed by the optional question “Why do you think so?” (Figure 6).

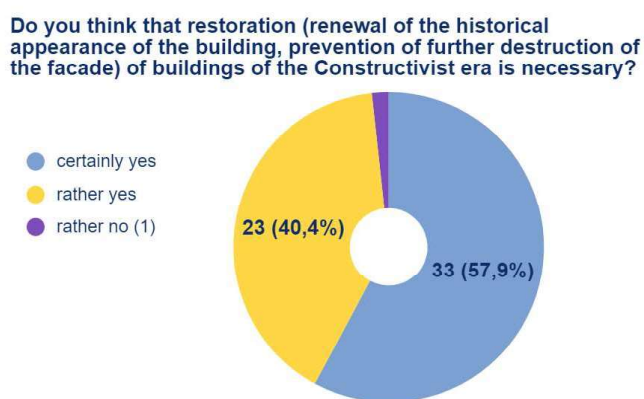


Figure 6. Do you think that restoration (renewal of the historical appearance of the building, prevention of further destruction of the facade) of buildings of the Constructivist era is necessary?

The absolute majority (98.3%) form the opinion “yes”, and 57.9% of the responses from this sample are votes for “definitely yes”. What follows is a fascinating study of the explanations of the selected answer options, which, with a strong simplification, can lead to some common places. Thus, the following “cross-cutting arguments” are noticeable:

- an important part of the history and valuable heritage of the city, which must be valued and protected;
- the symbolic appearance of the city, its “face”, which forms an idea of the appearance of Yekaterinburg;
- constructivism is one of the most perfect architectural styles, therefore it should be preserved in historical form and protected from destruction;
- rare, but the most interesting remarks: “Yekaterinburg is the capital of constructivism”, “the city is recognizable thanks to these buildings”; emphasis focuses on identity and related tourist attraction.

These results suggest an almost unanimous consensus on the need to restore the constructivist heritage; it is fair to say that the respondents' attitude to the preservation of the historical appearance of buildings is more than positive.

The question about renovation had exactly the same mechanics of collecting answers as for the question about restoration; the only omission: the question was added some time after the

survey was distributed. This was due to the expansion of the focus of the study; as a result, the existence of a separate question about renovation radically changed the picture of the answers (Figure 7).

Do you think that renovation (reconstruction of a building that changes its appearance and sometimes function) of buildings of the Constructivist era is necessary?

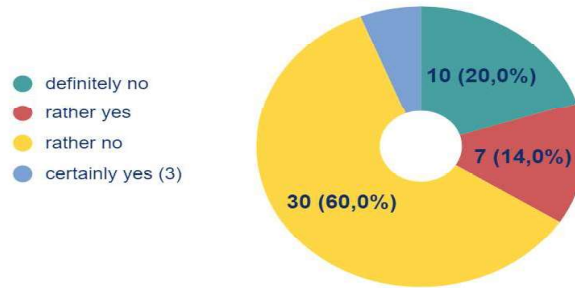


Figure 7. Do you think that renovation (reconstruction of a building that changes its appearance and sometimes function) of buildings of the Constructivist era is necessary?

Thus, the majority of respondents (60%) noted the option “rather no”, another fifth — “definitely not”. As a result, only 20% of all responses were positive, which indicates a huge gap between restoration and renovation in the respondents' understanding. Here we will mainly consider the averaged arguments “against”:

- when changing the appearance, cultural value disappears;
- leads to a loss of the city’s “historical charm”;
- a change in appearance and function is almost equivalent to the construction of a new building;
- the function can be changed, but it is impossible to change the historical appearancean uncommon but interesting remark: “renovation in Russia is equivalent to damage”.

Against the background of negative arguments, more balanced judgments stand out, mainly from urbanists/architects. They note the complexity of the question posed and the need for an individual approach to each building; of course, we agree with this statement. Indeed, it is important to be able to determine what is paramount at the moment, “to preserve the historical significance or to make the building more functional?”. The question is initially simplified, but assumes a following open form precisely so that respondents can offer their examples of “complex cases”. So, there are buildings that are in such poor condition that refunctionalization and renovation in general are no longer applicable for them; for example, this concerns the Chekist Town — now it is a residential building in use (Figure 8).



Figure 8. Chekist Town, 69-2 Lenin Street (source: author's photo)

Few positive responses come from similar groups of respondents, mostly under the age of 25. They are accompanied by hopes for a “new life for buildings”, a belief in the usefulness of changes and the future use of the building for the “development of the urban community”.

Conclusions

It is obvious that the identity of Yekaterinburg is still in the process of searching for itself, but the hypothesis about the broad potential of constructivism in this framework has a number of confirmations. As we have seen, in the public consciousness there is a considerable idea about these buildings in connection with each other and in the context of their authenticity. The study of the phenomenon of identity has shown that the use of an associative series is a much more effective method than the selection of individual symbols without any connections. Based on this, we postulate that the constructivist heritage has a variety of opportunities for the design of the general symbolism of the city. Before popularizing the phenomenon, however, it is important to reach consensus on the necessary restoration and renovation initiatives. To formulate any definite thoughts on how these practices relate to each other in the field of constructivism research, of course, more than this current research is needed. We will confine ourselves to pointing out the importance of further study of the phenomenon in the interests of the development of the Yekaterinburg urban environment.

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Heuristics for the Hamming travelling salesman problem for data visualisation**ABSTRACT.**

The problem of visualising sets and their relationships can be solved using the Euler-Venn diagrams. However, this approach has a significant drawback, which is that the representation is too complicated even though the number of its constituent elements is quite small. Fedor Indukaev, an employee of Yandex, created the Supervenn software package for the needs of data analysis for this type of visualisation. His algorithm requires a near-optimal solution of the travelling salesman problem in the Hamming metric in order to simplify the resulting diagram. The objective of the study is to solve this problem by finding a way of producing a close to the shortest path possible within a reasonable time frame. Both exact and approximate approaches will be considered. The heuristics will be compared, analysed and adjusted. As a result, the obtained algorithm will be implemented in the Cython programming language and committed to the Fedor's package.

Keywords: *data analysis; sets; travelling salesman problem; Hamming distance; graphs; Christofides algorithm; 2-opt.*

In exploratory data analysis, there is often a need to visualise the relationships between elements – for example, to find out which binary features occur together. This question can be reduced to the following problem: there are several finite sets that can intersect with each other, and it is necessary to evaluate their mutual position. If the number of sets is limited to a few, Euler-Venn diagrams can be used. However, even if there are only 3 sets, it is not always possible to visually convey the actual dimensions of the intersections.

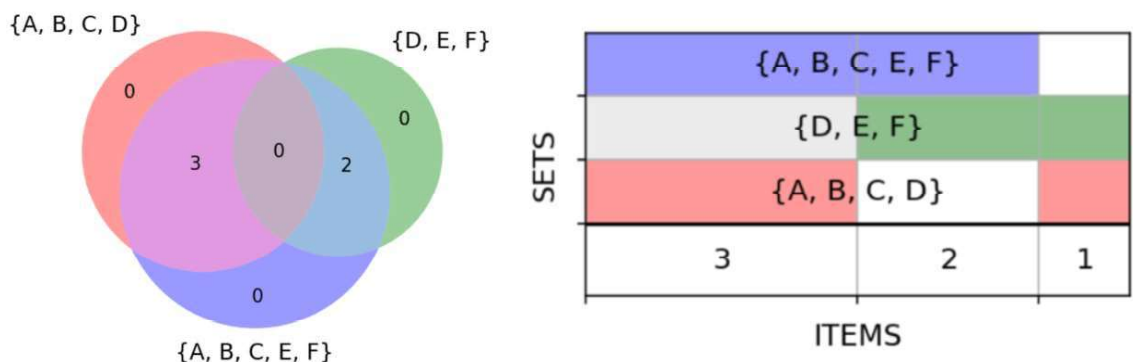


Figure 1. Comparison of Euler-Venn and Supervenn diagrams

Fedor Indukaev, an employee of Yandex, has developed a Python package called “supervenn” [6; 7]. Supervenn constructs diagrams that remain visually understandable with a greater number of sets; it also looks better when most of the intersections are empty (Figure 1).

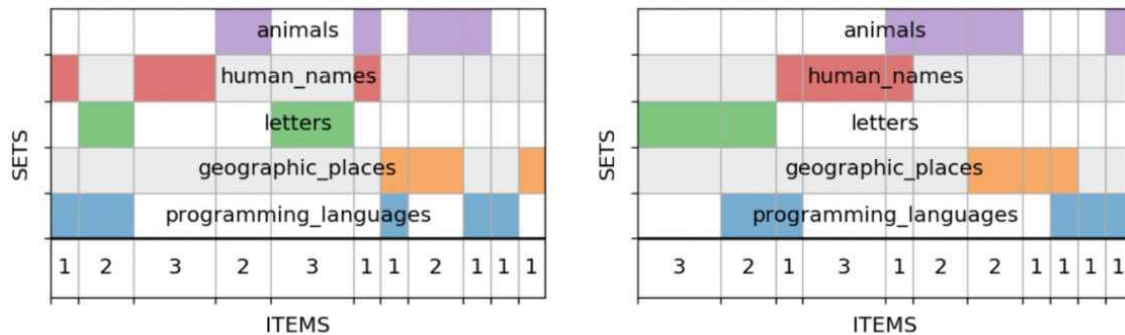


Figure 2. Reordering columns improves readability

This approach isn’t perfect - diagrams tend to have a lot of gaps in their rows, and it would be great to reduce this number by rearranging the columns (Figure 2). The problem of minimising the number of gaps is almost equivalent to the travelling salesman problem in the Hamming metric.

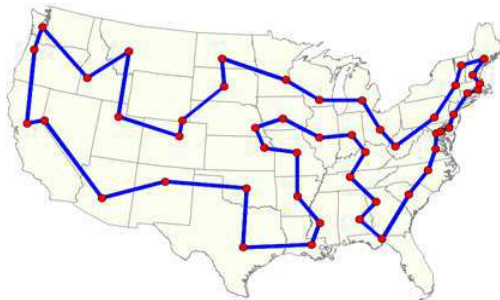


Figure 3. TSP

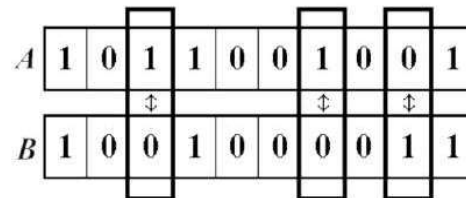


Figure 4. Hamming distance

The travelling salesman problem (TSP) is the problem of finding the shortest possible route through the set of vertices that visits each vertex exactly once and returns to the initial one (Figure 3); Hamming distance between a pair of strings of equal length is the number of positions in which they differ (Figure 4). Vertices correspond to the columns of the Supervenn’s table. It should be noted that if the left and right edges of the table are glued together, turning it into a cylinder, then the length of the path in the Hamming metric will be exactly equal to twice the number of gaps.

To ignore the distance between the first and last columns in the table, a virtual separator column will be added with zero distance to all other columns - thus the distance between a pair of consecutive vertices in the cycle will not affect the total length.

The most obvious exact algorithm is to consider all possible permutations of vertices and choose the one that corresponds to the smallest length. Let n be the number of vertices to visit. There are $n!$ permutations in total, so that such an algorithm can work at best in $O(n!)$. However, a faster way exists – a dynamic programming approach called the Held-Karp algorithm, which finds an exact solution in $O(n^2 2^n)$ at the expense of more memory consumption – $O(n2^n)$.

$$dp[v][S] = \min_{u \in S, u \neq v} dp[u][S \setminus \{v\}] + dist(u, v)$$

$dp[v][S]$ is the length of the shortest path ending at vertex v and using a subset of vertices S . The path consists of two parts – $S \setminus \{v\}$ and $\{v\}$. Therefore, if all paths consisting of fewer vertices than S have already been calculated, $dp[v][S]$ can be calculated in $|S \setminus \{v\}| = O(n)$ operations (choosing the last vertex u in $S \setminus \{v\}$).

In practice, using the Held-Karp algorithm increases the size of the problem that can be solved in a second from 10 to 16, and using precompiled Cython extensions increases this number to 20 (Cython: *C-Extensions for Python*, n.d.).

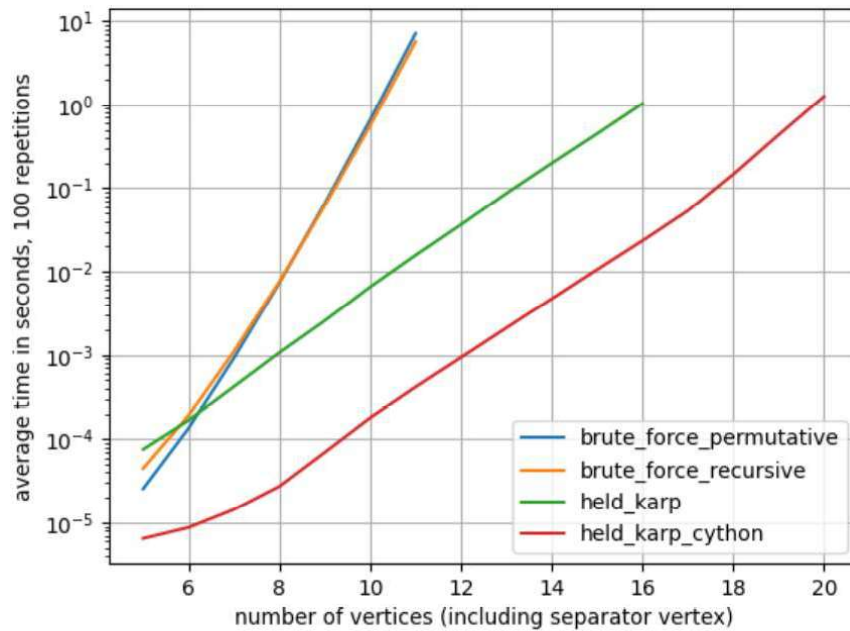


Figure 5. Performance comparison of exact algorithms

The travelling salesman problem is NP-complete, moreover, it has not been determined whether an exact algorithm that runs in time $O(1.9999^n)$ exists [3, pp. 1096-1097; 8, pp. 185–207]. Thus, this task requires resorting to the use of approximate algorithms for larger graphs.

Christofides algorithm stands as the best polynomial time approximation algorithm that has been thoroughly peer-reviewed by the scientific community for the travelling salesman problem on metric spaces [9]. The most asymptotically long, and, by the way, difficult to implement part of it is the determining a perfect match of minimum weight. Replacing this part with finding a perfect match in greedy way (repeatedly selecting a vertex and the closest one to it, removing both) reduces the overall asymptotics to $O(n^2)$.

Decomposition of the original Christofides algorithm [5, pp. 513-514]:

1. finding minimum spanning tree T – Prim's algorithm, $O(n^2)$
2. finding a perfect match P of minimum weight on T 's vertices of odd degree – $O(n^3)$
3. finding an Eulerian cycle on edges of $T \cup P$ – $O(n)$
4. transformation into Hamiltonian – $O(n)$

It turns out that the solutions obtained can be further improved - there is a simple local search algorithm called 2-opt. The main idea behind it (in the case of the Euclidean metric on the plane) is to take a route that crosses over itself and reorder it so that it doesn't (Figure 6).

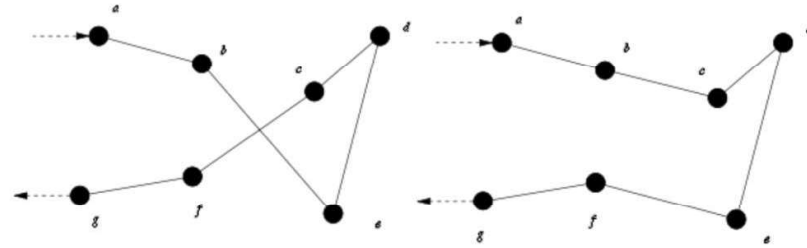


Figure 6. 2-opt

Formally 2-opt works in time $O(n^3)$ - for each of the $O(n^2)$ path's segments it calculates the length, considering this segment reversed, in $O(1)$ and reverses it in $O(n)$ if it will reduce the overall length. In practice, almost every reversed segment has a length of 2; additionally, according to Aguiar [2], 2-opt speeds up hundreds of times when using Cython, so 2-opt often turns out to be faster than Prim's algorithm (also written in Cython), which has a time complexity of $O(n^2)$. 2-opt is especially valuable as it doesn't create a new path from scratch, but refines an existing one.

Compared algorithms:

- 1) greedy – choosing the nearest non-visited adjacent vertex
- 2) faster_christofides (no two-opt) – modified Christofides without 2-opt
- 3) faster_christofides (default) – modified Christofides with 2-opt
- 4) faster_multichristofides (default) – similar to the previous one, except that the construction of the Euler cycle starts from each vertex of the graph, obtaining up to n different solutions and choosing the shortest one.

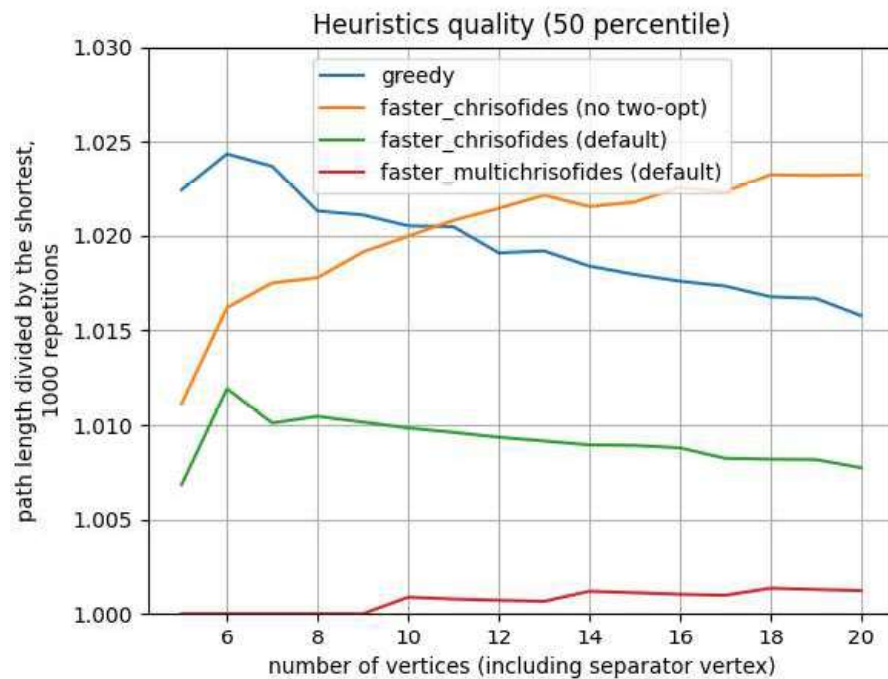


Figure 7. Comparison of heuristics (50th percentile)

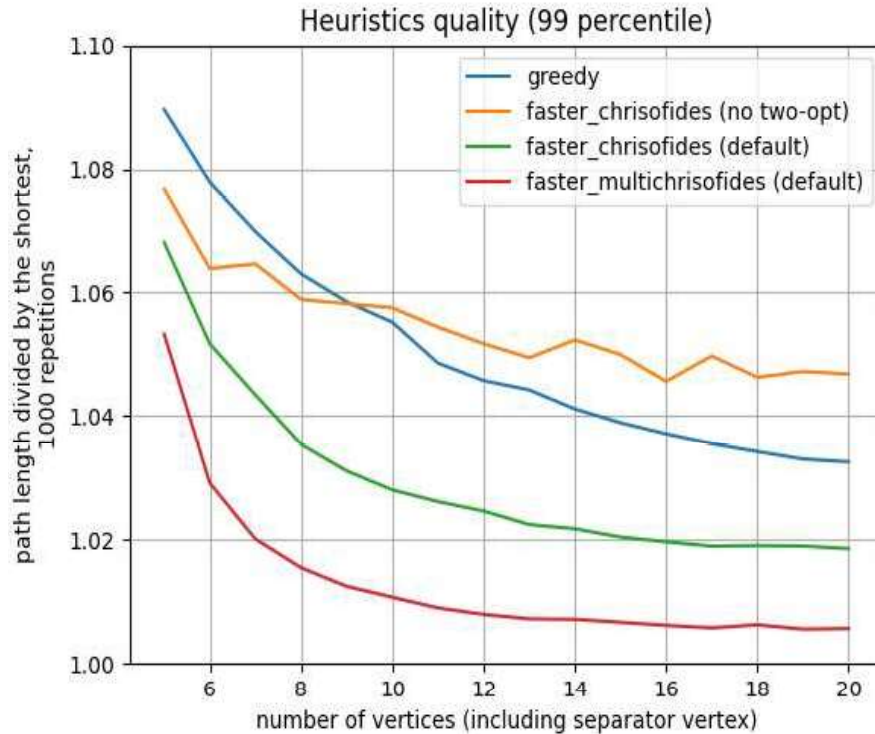


Figure 8. Comparison of heuristics (99th percentile)

The comparison was carried out on graphs of small size to make finding optimal solutions possible. According to the plots above (Figures 7, 8), the fourth algorithm leads by a significant margin. It is expected to be slower than the third one - for example, it fits in a second with about 500 columns, while for the latter this number is about 5000, but modern monitors cannot depict tables with thousands of columns, which is why this speed is sufficient.

The solution of such a seemingly simple problem turns out to be non-trivial - there is no algorithm that would be the best for solving all types of TSP. There are many approaches that are not considered in the article, but deserve no less attention - for example, the formulation in the form of an integer programming problem, as well as Lin–Kernighan heuristic [1].

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The replacement of negative associations

ABSTRACT.

Many people all over the world have different associations that help to remember something better. However, sometimes these associations are not made on purpose. And it may become a real problem because some negative associations may lead to the development of PTSD or depression.

The paper will examine the ability of replacing an artificial negative association to a positive or neutral one. That may help to predict some diagnosis, which is particularly important nowadays, because these diagnoses are so widespread. In my research I am going to use the method of statistics and dynamics track to come to a common conclusion, a few inquiries to select data, and mathematical exercises to cause the fatigue, which makes the experiment stressful and which will help to create a negative association. In this research the comparative method will also be used to see the difference between the experimental group and control groups. It is anticipated that during the work the negative association will be replaced with a neutral one and it will show which period of time is needed for that.

Keywords: *brain; negative associations; psychology; positive associations; skin galvanic response.*

Introduction

“An association is a connection between individual facts, events, objects or phenomena reflected in a person's consciousness and fixed in his or her memory, such that the appearance of one element, under certain conditions, causes the image of another associated with it” [11, p. 4].

Based on the definition, it is clear that associations are directly related to past events and to memory. Speaking about memory, it is necessary to mention such phenomena as consolidation and reconsolidation of memory.

“Memory consolidation is a category of processes that stabilize a memory trace after its initial acquisition” [9]. Fortunately, memories are not immutable. There is a process of reconsolidation of memory, thanks to which something can change, and we can change someone's attitude, based on negative experience, to the object. Memory is a dynamic process [7]. As it turned out, consolidated memory will again take the form of lability [8]. Back in the 20th century, experiments were conducted [17, 18] showing that a conditional stimulus, if memory is consolidated, leads to reactivation, and itself acts as a reminder (as well as context), speaking of which it is necessary to mention the Pavlovian fear conditioning.

Pavlovian fear conditioning is a behavioral paradigm in which organisms learn to predict aversive events [16]. It is a form of learning in which an aversive stimulus (e.g. an electrical shock) is associated with a particular neutral context (e.g., a room) or neutral stimulus (e.g., a

tone), resulting in the expression of fear responses to the originally neutral stimulus or context. This can be done by pairing the neutral stimulus with an aversive stimulus (e.g., an electric shock, loud noise, or unpleasant odor). Eventually, the neutral stimulus alone can elicit the state of fear. In the vocabulary of classical conditioning, the neutral stimulus or context is the "conditional stimulus" (CS), the aversive stimulus is the "unconditional stimulus" (US), and the fear is the "conditional response" (CR). In humans, conditioned fear is often measured with verbal report and galvanic skin response» [10].

“Associative learning is defined as learning about the relationship between two separate stimuli, where the stimuli might range from concrete objects and events to abstract concepts, such as time, location, context, or categories” [15].

Motivation to perform the study

Associations are extremely important for people, they help us to memorize information, to study, to understand our preferences and there are many other advantages of having associations. However, there are some negative outcomes. Some stressful experiences are associated with some objects in our brain as well as positive ones. Sometimes it leads to stress, which is understandable, because a usual object reminds a person of the negative experience. It is believed that the influence of negative episodic memories is stronger, however, positive ones also play a big role and have a strong influence on a person [20].

The aim of the research is to replace a certain artificially created negative association with a positive or a neutral one under normal circumstances.

The replacement of negative memories is crucial for prevention of distress and stress-induced disorders. There have been plenty of studies on this topic published before. For instance, the notorious experiment with baby Albert [13]. This experiment is actually significant, but it is cruel and it describes a young boy who is easy to get scared and to be pleased. The experiment described in this paper has humane methods and it is designed for people in the age of 18-19.

There are also articles that talk about the regulation of emotions [11, 12, 19], about changing the context. They focus on stressors, that is, on combating the reaction to a stressor, while in this article the emphasis is on modifying the association with some kind of stressor or a situation that has already occurred in the past.

Hypothesis

In this article it is assumed that there is a possibility to get rid of negative associations to a certain object by trying to replace them to neutral or positive ones during the period of time which is shorter than the time for association to emit.

Methods and materials

Three volunteers took part in this pilot study: women aged 18-19 years without mental abnormalities with a normal reaction to harsh sounds. The studies involving human participants were reviewed and approved by the Institutional Review Board, Higher School of Economics, Moscow, Russia. The patients/participants provided their written informed consent to participate in this study.

During the entire procedure of the first part of the experiment, the following indicators were measured: verbal report, questionnaires, and galvanic skin response recorded using the amplifier BrainVision ActiCHamp. Variance analysis was used in data processing.

Participants were first grafted with a negative association for a specific picture, and then they were presented with the same picture in favorable and pleasant conditions, selected individually based on the results of a questionnaire about hobbies and preferences. According to the results of the second questionnaire, it was decided whether the subject would take part in the experiment. If the result was positive, the subject was asked to take a third questionnaire aimed at identifying neutral, positive and negative visual images in each subject. Based on the second and third questionnaires, the program of the second part of the experiment, written in PsychoPy, was edited. Then the subjects were sent to the experiment itself. Before that, the instructions were read to them again.

Participants were asked to solve several tasks against the clock, read a text that is difficult to perceive and look at pictures with negative emotions of people, accompanied by certain sounds, for example, crying sounds.

After each task, the participants were shown the same neutral picture (CS) for this particular participant in order to form a negative association with this particular picture. The pictures were selected individually for each participant in accordance with the questionnaire they completed.

The length of the first part was 21.5 min. It consisted of a collection of negative pictures accompanied with unpleasant sounds. There were also mathematical exercises and a text for participants who were told that the text was for retelling.

The second part of the experiment began with a check of the presence of a negative association with the picture using galvanic skin response. In the absence of such, the first part of the experiment had to be repeated. If a negative association was formed, the participants were invited to watch relaxing photos selected individually for each of them considering their interests, based on the answers to the questions of a special questionnaire. During the second part of the experiment the participants found chocolate bars prepared for them. Types of chocolate bars were chosen based on preferences of the participant. A question was also asked about allergies, if any. The participant's indicators, as in the previous part of the experiment, were measured by the same devices. For the negative part, mainly sharp sounds, unpleasant pictures for the participants (based on the answers to the questionnaire) were selected, sharp lines and colors negatively perceived by the participants were selected (it is known that colors can already carry negative associations [4]).

In the third part of the experiment, the presence of a negative association of the participants in response to the picture was checked. If it persisted, the second part of the experiment was repeated. Otherwise, a positive result was recorded.

Results

All participants showed approximately the same reaction to the procedures. Just after the first part of the experiment there was no negative reaction to the photo. The subjects claimed that because of the frequent presentation, they got used to the US, because it was absolutely neutral for them. According to galvanic skin response, there was no emotional reaction to the CS: no peaks were recorded for each participant (Fig.1).

The second part of the experiment started 10 minutes after the first one was finished for participants 001 and 002. Upon presentation of the same picture, the galvanic skin reaction showed excitement, and the participants themselves claimed that the picture was associated with negative memories (Fig.1), despite the positive incentives presented. Galvanic skin reaction showed an increase up to $2 \pm 0,4$ mV.

A few days later, the image was re-shown. One of the participants no longer had any reaction to the picture, after the third part with positive stimuli, this participant formed a positive association with the picture. The second participant reacted emotionally negatively to the picture before the third part, and after the final part of the experiment, the negative reaction decreased significantly, but did not disappear altogether. For this participant, it was necessary to conduct several more sessions, but the trend was already clear (Fig.1).

Since the negative reaction occurred in 2 participants only after the second part of the experiment, it was decided to divide the first and second parts of the experiment not by 10 minutes, but by 24 hours for the third participant. The result was positive. After the first part, this participant, as well as the previous ones, was neutral about the picture. The next day, the reaction was already negative, and after the second part of the experiment with positive presentations, the participant's negative reaction was replaced by a neutral one. A day later, the neutral reaction remained.

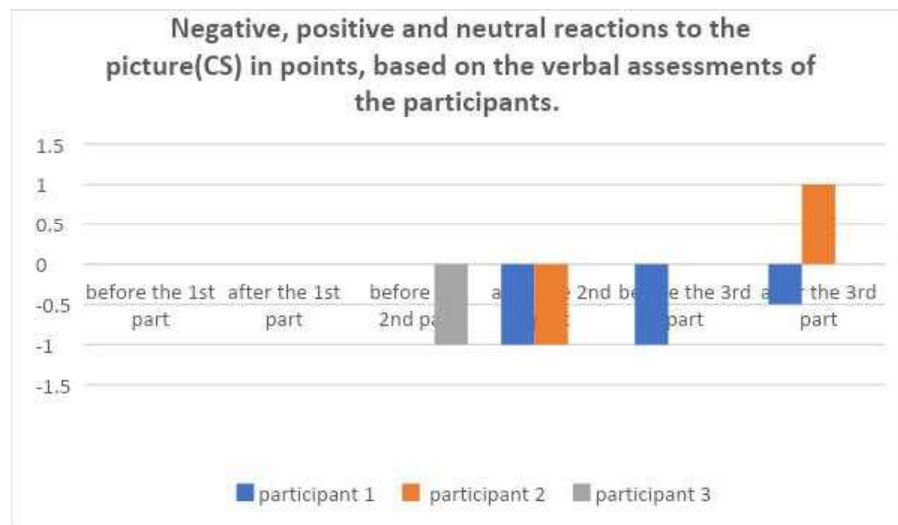


Figure 1. Negative, positive and neutral reactions to CS in points, based on the verbal assessments of the participants

The abscissa axis shows the time of emotion evaluation: before or after a certain (1/2/3) part of the experiment. The ordinate axis shows an assessment of the emotional attitude to CS (conditional stimulus-the picture) in points, where the minimum value = "-1" is a negative attitude, the picture is disgusting; the maximum = "1"-the picture causes pleasant emotions; in the middle is "0", which means a neutral attitude to CS, that is, the picture does not cause any emotions.

It is known that associations do not appear immediately. In some studies, subjects are given a 5-minute break to manifest the association [21]. In this study, a 10-minute break was enough for its manifestation. According to the participant self-reports, the negative reaction to the stimulus began to manifest itself almost from the middle of the second part of the experiment (i.e., about 20 minutes after the first part) in contrast with the positive stimuli presented during the second part of the experiment.

In the already mentioned article "The power of negative and positive episodic memories"[20], a comparative analysis of the power of the influence of negative and positive episodic memories is made on the basis of arguments and articles. According to numerous studies, the negative has a stronger and more lasting effect compared to the positive [2, 22, 23]. However, the issue is controversial [6, 14, 20]. This study once again confirms that negative emotions are stronger than positive ones.

Individual associations are fixed and held differently depending on age [3], temperament, strength of influence [20] and other factors. In our study also replacement of negative associations was successful and quick or partial in different participants.

Conclusion

Our results are consistent with previous findings:

1) The presence of an association does not appear immediately. In the first minutes after the presentation of negative stimuli, the picture seems neutral, apparently from the contrast. By itself, it does not carry a negative connotation, and against the background of really unpleasant stimuli, it seems ordinary for a while. Perhaps the contrast of the emotional coloring of the stimuli affected the duration of the manifestation of the association. First, the contrast between neutral and negative stimuli, then-between CS and positive stimuli.

2) Even if positive stimuli are presented after negative ones (at the moment when the participant still claims that there is no association), these positive stimuli do not prevent the formation of a negative association based on the negative experience that was before.

3) Negative stimuli are stronger than positive ones.

4) For positive incentives to work, a sufficient amount of time must pass. In this case, there is a chance to get rid of the negative association by replacing it with a neutral or positive one.

5) Depending on experience, temperament and other factors, associations created under the same conditions can form more or less firmly.

Further research is needed to determine the average time of formation of a negative association, whether the presentation of positive stimuli before the presence of a negative association affects it, whether sleep affects its formation, whether it is possible to determine immediately by some tests how many sessions are needed to replace the association at the individual level.

Based on the data of the pilot study, it is impossible to identify exact correlations, but certain trends are visible, and it becomes clear that it makes sense to conduct further research on this topic on a more complete scale recruiting a larger number of volunteers. Also, this pilot study revealed a number of new questions, to answer which several experiments should be conducted. This study showed how it is worth adjusting the approach to the individuals and the experiment program to conduct it on a full scale.

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The impact of second language skills in the labour market outcomes

ABSTRACT.

Over the past decades, the importance of language skills in the labour market has significantly increased due to a decrease in the need for manual labour and a shift in production priorities towards the informational level. This paper will analyse several empirical studies that aim to identify the differences in the impact of foreign language proficiency on employment and social integration in various countries. In all studied countries, the knowledge of a second language has a positive impact on employment, which means that workers with language skills have a better chance of finding a job. Knowledge of English is especially in demand, while high language skills bring greater returns than average or low skills. Foreign language is particularly valuable in high-skilled jobs. An interesting conclusion is that changes in politics can increase the economic benefits of foreign language skills in the labour market.

Keywords: *labour market; wage supplement; language proficiency; second language; employment.*

Introduction

In the present day, there is a continuous increase in the number of international and multinational companies, and practically every country is engaged in international trade, investment, and migration. As a result, language skills have gained significant importance in the labour market. Over the past few decades, English has emerged as a primary language in international political and economic affairs. The need to learn foreign languages, whether for

personal or professional reasons, has increased due to the growth of global economic connections and the expansion of multinational communities.

There is a widespread perception that a person's economic competence in the labour market can be positively impacted by their language skills. This has been confirmed through numerous studies conducted in both developed and developing countries, highlighting its significance. Furthermore, possessing knowledge of foreign languages can aid in obtaining well-paying employment and reducing unemployment rates [6, p. 1].

In the recent decade, the viewpoint of the European Union regarding teaching and learning the national language has undergone a gradual evolution. Although learning a foreign language was traditionally viewed as an expression of openness towards various European cultures, present-day EU discussions emphasise the significance of language proficiency for economic expansion, competitiveness, labour mobility, and employment prospects.

According to the Internet portals for employment [11; 12], among the vacancies in the direction of "Start of a career, students" 96% of vacancies state the need for knowledge of English. At the same time, the candidate for the position must know English at the Intermediate level (54% of vacancies). Over the past year, employers have become more demanding on the level of knowledge of English as a foreign language (EFL). The share of vacancies requiring an advanced level increased from 13% to 26%.

In this study, we analyse several empirical articles related to this topic using the example of different countries. The studies under consideration were chosen according to several factors: it was important that the articles cover as many countries as possible, searching via relative keywords and searching through Google Scholar where the status of the journal was significant. The body of selected literature enables an analysis of the conditional correlation between foreign language proficiency and employment probability. Some authors have also used multiple regression in their research to establish the relationship between language skills and monetary performance in the labour market.

Various indicators were analysed using data gathered from various countries and empirical research, including:

- 1) globalisation and its correlation with growing demand for the second language proficiency in the labour market;
- 2) beneficial impacts of the knowledge of the official language(s) of the host country for social integration of immigrants;
- 3) and the relationship between fluency in a foreign language, employment status, and salary.

Theoretical background

In the last few decades, acquiring proficiency in languages has gained paramount importance in the job market. The labour market's rapid change from manual to information-based production has resulted in a stark reduction in demand for manual labour and an upsurge in the need for language skills.

Incentives for learning a new language can be categorised into internal and external motives. Internal motives encompass the non-market value of language learning, as fluency offers the advantages of increased access to information and a larger pool of potential communication partners. Additionally, language proficiency leads to recognition and social status. For some individuals, the learning process itself is enjoyable and contributes to their sense of fulfilment and satisfaction.

There is a correlation between market and non-market value of language proficiency that can be formed by skills' significance for a country's economy. Its value derives from its extensive use in international trade, reducing information, translation, and search costs when interacting with foreign information. Although English acts as a *lingua franca*² in most international trade

² *Lingua franca* is a language or dialect systematically used for communication between people whose native languages are others.

dealings, building lasting business relationships and overcoming cultural differences, it is important to have an understanding of the language used by the other party.

On an individual level, linguistic barriers imply the potential benefits and losses of learning a new language. For instance, there is an employer's willingness to pay for relevant language skills in the workplace [8].

Language skills are among the abilities and learned skills that contribute to an individual's productivity, which is considered part of their human capital. According to Becker's theory, human capital is a one-dimensional object that is directly involved in the production function [2]. Human capital is based on formal and informal education, labour market's performance and natural abilities and skills. It is assumed in the studies [5, 7, 8, 9, 13, 14] that... language skills can be a component of human capital and have a beneficial impact on workers' performance in the labour market. This impact can be direct, such as in the form of more effective job searches or increased productivity in the workplace, or indirect, such as through reduced employer discrimination [7].

Gazzola et al. [6] distinguish between two aspects of language: the advantages of speaking a second language for immigrants and the benefits of connecting with a foreign language, aside from one's native language. For immigrants, the knowledge of the official language (s) of the host country has a positive impact on their performance in the labour market and social integration. Consequently, policies promoting the teaching and use of such languages can enhance immigrants' social and economic assimilation. In terms of correlating foreign language competency with success in local labour markets, study findings have revealed some notable similarities. Firstly, language skills' earnings differential is typically positive and substantial, often increasing the likelihood of employment over unemployment. Secondly, people who have a higher level of language skills are better compensated. Thirdly, the beneficial set of second languages depends on a specific country.

Methodology

We can observe a prevailing trend in the studies, as they consistently fall into two distinct categories. The first category examines data and results on the impact of second language skills in the context of immigration. The second category of studies focuses on the same phenomenon within the context of using a second language as a foreign language.

Yuxin Yao and Jan C. van Ours [13] investigated the wage gap between native Dutch speakers and immigrants who speak Dutch as a second language. The authors used data from the Longitudinal Internet Studies for the Social Sciences (LISS) survey in the Netherlands, which included seven waves of panel data from 2008 to 2014. The study focused on three labour indicators: employment, working hours, and hourly wages. The authors used Ordinary Least Squares (OLS) estimates to obtain results, assuming that there were no measurement errors and that language problems were not related to the labour market. To test the reliability of the results, the authors conducted two types of sensitivity analysis regarding the assumption of age at the time of arrival. Firstly, age was introduced as an additional instrument to take into account the influence of age on the language channel for immigrants who spoke Dutch in their childhood. Secondly, age was considered as a control variable in the labour market productivity equations. This finding acknowledges that the age at which individuals arrive can directly impact labour market indicators through factors unrelated to language proficiency.

The article by Michele Gazzola & Daniele Mazzacani [7] offers an insightful analysis of the second edition of the Adult Education Survey (AES). The survey, covering 28 EU Member States, includes a comprehensive language section that provides valuable data on the mother tongue and up to seven non-native languages spoken by European residents aged 25-64. This extensive dataset can provide a useful resource for researchers interested in language use and education in Europe. The authors' thorough examination of the data reveals various aspects of language learning, including the most commonly taught languages in Europe, the impact of formal education on language proficiency, and the relationship between language skills and employment opportunities. Overall, the article provides an informative account of Europe's

multilingual landscape and highlights the significance of multilingualism in today's globalised world.

The works utilised by Michele Gazzola & Daniele Mazzacani [7] can be categorised into two distinct groups. The first group comprises materials that examine the correlation between immigrants' proficiency in the official language of the host country and their access to employment opportunities. The second group examines the knowledge of English or French as the second language and employment status for European natives.

Michele Gazzola & Daniele Mazzacani [7] explore the link between foreign language proficiency and employment. The earliest study by Vaillancourt in 1988 [10] shows that being bilingual in English and French increased the likelihood of employment for women by 6.5% and for men by 1.8% for Anglophones, 9.5% and 3% respectively for Francophones, and 10.5% and 3.9% respectively for Allophones. In later studies by Donado and Araújo [7; 6], data from Eurostat surveys were used to analyse the correlation between foreign language proficiency and employment among adult Europeans. Donado's cross-sectional study found that foreign language proficiency reduced the probability of unemployment by 3.4%, at a higher percentage for women than for men. Araújo's study used logistic regression to show that English proficiency in particular is positively associated with employment in Cyprus, Spain and Finland, while French proficiency is more likely to increase employment in Malta. Those who know German are more likely to be employed in Denmark, while Russian is associated with a higher likelihood of employment in Bulgaria, Latvia, Lithuania and Poland. The authors have presented tables with descriptive statistics to provide a better overview of the data. One table shows the most common foreign languages in the three countries analysed, including the first to seventh foreign languages spoken by the respondents [7].

The other table shows the level of proficiency in English and French according to the respondents' answers (*ibid*). The data show that a smaller percentage of respondents have excellent language skills, slightly more have good language skills and the majority report having sufficient language skills.

In the article [5], the authors analyse the importance of foreign language skills in the labour markets of the Czech Republic, Hungary, Poland and Slovakia. Using data from online job portals and surveys of workers' salaries, the authors examine the demand for language skills among employers and the associated wage 'premium' for workers. Focusing on the labour market in Central and Eastern European countries, the authors examine the role of foreign languages in countries open to international trade and foreign investors with insufficient language skills. Based on surveys and interviews conducted by Eurobarometer in 2012, the authors have compiled a table with descriptive statistics showing the percentage of people who know English and German in the four countries studied (V4) and in the European Union. Thus, in 2012, knowledge of a foreign language was less common in the Visegrad countries (V4) than in the EU [*ibid*]. In order to investigate the influence of foreign language skills on labour market demand, the authors used linear regression. The authors conducted an analysis on approximately 74,000 job vacancies across 59 occupations and found that knowledge of a foreign language is deemed important by employers in over half of these vacancies. EFL was identified as the most sought-after language, followed by German. The article also shows that knowledge of EFL is associated with higher wages for workers in these countries.

Yonghong Zhou, Rong Zhu and Xian Zheng [14] analyse the impact of workers' knowledge of a second language on their labour market outcomes in Hong Kong. The authors use data from the 1991, 1996, 2001, 2006 and 2011 Hong Kong censuses. The authors only include permanent residents of Hong Kong who lived in the territory before the handover and remained in Hong Kong afterwards, to avoid possible regression coefficient shifts due to internal population migration. The researchers use two labour market outcomes: employment and monthly earnings. Of the 696,434 people in the labour force, about 95% (662,234 observations) are employed and 5% (34,200 observations) are unemployed. Roughly 40% of Hong Kong residents whose first language is Cantonese also speak Mandarin as a second language, and 49% speak English. The

authors conclude that the employed are more likely to speak Mandarin and English than the unemployed.

According to the results of the analysis, the highest unemployment rate is among people who do not know a second language (neither Mandarin nor English). The same trend is observed when looking at monthly income: people who only know Cantonese receive lower wages on average compared to residents who know a second language. Knowledge of both English and Mandarin therefore has a positive effect on a person's salary and job availability, but the premium for English is higher than for Mandarin.

The study by K. V. Rozhkova and S. U. Roschin [9] examines how foreign language skills affect wages in the Russian labour market, using data from the RLMS-HSE from 2008 to 2017. The study found that, on average, 20% of the population knew a foreign language during this period, with English being the most common. The authors also found no significant difference in the proportion of those who spoke a foreign language between the employed and the unemployed, with 20.1% and 18.1% respectively. To examine the relationship between language skills and wages, the authors used a regression model that included gender, age, work experience, higher education, marital status, occupation, enterprise size, type of ownership, type of settlement and region as regressors. The results show that while foreign language skills do affect wages in the Russian labour market. The impact is noticeably less significant compared to the influence of higher education. The authors also examine differences in returns across occupational groups.

Finally, this chapter provides a comparative overview of the data and analytical methods used in each article. The authors rely on data sets from 1991 to 2015, which is relatively recent. The articles reviewed were published between 2015 and 2021, which confirms the relevance of the research. The papers use data from respondent surveys, population censuses and online job search resources. The main aim of the researchers in almost all the articles is to determine whether knowledge of a second language affects employment. Some authors also analyse the relationship between language skills and wage premiums. According to the results of the articles reviewed, knowledge of a foreign language increases the likelihood of employment.

Results

The study conducted by Yao and Ours [13] revealed that female immigrants in the workforce with limited language proficiency experience a considerable 48% decline in wages when compared to female immigrants with similar personality traits but fluent in a second language. In summary, the article establishes several key conclusions. Firstly, the language skills of immigrants have a heterogeneous impact in the labour market depending on gender. The impact of language proficiency on income is more pronounced among female immigrants than male because of the heightened sensitivity of demand for female labour to the quality of human capital [Figure 2, *ibid.*, p. 23]. Secondly, knowledge of the Dutch language is not as important for learning as global languages, such as English or Spanish. The impact of knowledge of Dutch on male immigrants' labour market outcomes is not statistically significant, thereby contradicting previous research that indicates a positive correlation between language skills and income for male immigrants (over 30%). This finding partially shows that immigrants possessing limited proficiency in regional European languages are not subject to disadvantage. Moreover, male immigrants without language skills have the same employment probability as male immigrants with language skills. The third conclusion is that not knowing a second language harms immigrants more than their immigration status. Furthermore, the results of the research show that dialect speakers generally earn 8-10% less than native language speakers.

Brian Fabo, Miroslav Beblavy, Karolien Lenaerts [5] analysed the largest online portals in the Visegrad Group (V4) countries - the Czech Republic, Slovakia, Poland, and Hungary. According to the article, knowledge of a second language is important for employees in the local labour market. The Hungarian and Czech labour markets were found to be more demanding of second language proficiency than Slovakia. According to the authors, 52% of all vacancies presented on online portals require knowledge of the English language, 12% - knowledge of the German

language, 2% - knowledge of the French language, and less than 2% require knowledge of Italian, Spanish, or Russian language. Thus, language skills are in demand in all four countries, but the main demand is for knowledge of the English language, and to a lesser extent - German. This study also analyses the influence of language skills on various professions represented in the online sphere. The results show that the EFL is particularly important for highly skilled positions and administrative professions ("white-collar workers"). As regards physical labour-related professions, English and German languages are less important. An important discovery from the study is that certain technical occupations, including mechanics, locksmiths, welders, and others, exhibit a strong need for proficiency in the English language. This trend is particularly prominent in Poland. The authors explain this by the fact that workers in these professions often seek jobs abroad or work for foreign employers, therefore requiring knowledge of a foreign language.

In addition, the article's authors employed a multiple regression analysis to explore the impact of language proficiency on wage levels. They used not only language skills but also other variables, such as years of education, work experience, gender, place of residence, type of profession, and company size. They found that when controlling for these variables, a medium level of English language proficiency results in a 6% increase in wages, and a high level of knowledge of English results in a 20% increase in wages. Therefore, analysing the relationship between language skills and wages, the authors concluded that proficiency in the English language is associated with an increase in wages. However, they did not find any correlation between German language proficiency and a wage increase.

The article of Yonghong Zhou, Rong Zhu, Xian Zheng [14] presents findings that largely coincide with the results of other studies we have considered. The authors of this work analyse the relationship between second language proficiency and labour market outcomes of residents in Hong Kong using a multiple regression model. In addition to the main regressor (language proficiency), variables such as age, gender, education level, marital status, and nationality are also taken into account. Based on this analysis, the authors conclude that proficiency in Mandarin and English is associated with improved labour market outcomes. Moreover, the wage premium for English language proficiency is much higher than for Mandarin dialect proficiency.

The current study examines the influence of political changes on the size of the salary supplement associated with knowledge of a second language. To do this, the variable 'handover' representing the transfer of sovereignty of Hong Kong to China was added to the already studied regression. According to the results of the study, the transfer of sovereignty increased the positive effect of knowing Mandarin and English languages when searching for a job in Hong Kong. Additionally, the political changes of 1997 led to an increase in wages for workers who speak Mandarin, but decreased the salary supplement for knowledge of the English language.

Michele Gazzola & Daniele Mazzacani [7] employed probit regression and drew intriguing conclusions. It is noticeable that employment status correlates positively with age and negatively with age squared. Marital status and having children are also positively associated with men's employment status in all three countries. Overall, the level of urbanisation has no effect, but for Spanish men living in low-density areas, the likelihood of employment increases. As expected, there is a significant correlation between one's level of education and their earnings within the labour market. Additionally, as one's level of education increases, the likelihood of employment also increases.

The research findings demonstrate that there is a lack of conditional correlation between speaking French and men's employment status in the three countries. These countries' observations align with the findings reported by Araújo et al. [7]. The authors noted differences between countries and found that "German men speaking English are 3.4% more likely to be employed than their fellow countrymen who do not. This probability is equal to 4.3% for Italian men, and to 5.2% higher in Spain" [7, p. 730]. Apart from this, the authors have examined that a proficient level of English skills has a greater impact on employment status than sufficient or intermediate levels. However, there are differences observed across nations in this regard. For

instance, “good and very good skills in English increase the probability of being employed for German men by 3.8 and 5.4% respectively” [7, p. 730]. In contrast, Italian men with sufficient and proficient English skills exhibit a higher probability of employment compared to non-English speakers: the coefficients are equal to 4.3% and 5.8%.

In a similar vein, Spanish men with a high level of proficiency in English exhibit a slightly higher likelihood of employment compared to those with only moderate skills. Specifically, the probability of employment for Spanish men with excellent English proficiency stands at 7%, while it is 6.8% for individuals with sufficient skills. These findings carry significance as they indicate disparities between nations in terms of how language proficiency influences employment status.

Moreover, the research findings suggest that language proficiency levels play a significant role in determining the impact of language skills on employment status. Specifically, a proficient level of English skills has a greater impact on employment status than sufficient or intermediate levels. Nonetheless, the disparities observed across nations suggest that the impact of language skills on employment status is not universal and that there are country-specific factors that may be influencing the relationship between language skills and employment status.

Unlike men's, women's employment status is negatively impacted by variables such as marriage and children. Apart from this, Italian women who are married, but childfree, exhibit a lower probability of unemployment, whereas the opposite holds true for German women. For Spanish women, marriage and children display a negative correlation with their likelihood of being employed. The beneficial impact of English proficiency on employment status is significantly greater for women. Specifically, German and Italian women who possess English language skills experience respective increases of 5.6% and 5.7% in their likelihood of being employed compared to those who do not speak English. However, there is no significant impact of proficiency in the English language on Spanish women. The conditional correlation between French language proficiency and employment status is also not statistically significant in these three countries. Spanish women who possess proficient EFL skills exhibit a 12% higher likelihood of being employed than those without such proficiency, while sufficient or intermediate language abilities do not demonstrate a significant effect. The relationship between language skills and employment status in Germany and Italy is contingent upon the level of language proficiency. As with men, women with higher language competencies have greater employment prospects, although not across all proficiency levels. German women with sufficient and proficient EFL exhibit a 6.5% and 7.6% higher likelihood of being employed, respectively. Similarly, for Italian women, sufficient and good skills of English language result in a 5.4% and 5.6% increase in the probability of employment. However, the coefficients for French language proficiency are not statistically significant in any of the three countries under analysis.

K. Rozhkova and S. Roshchin [9] use a regression model to assess the returns to language skills in the Russian labour market. The results demonstrate that the return in the Russian market is 11% when controlling for job characteristics. Apart from this, the level of foreign language proficiency also matters in the research, whereby the return for high language skills exceeds the corresponding return for other levels and is 27%. Specifically, the authors show that language skills have the greatest impact on the wages of workers aged 30 to 39, with an increase of wage of 13%. In addition, the study investigates the benefits of foreign language proficiency across various occupational categories. The findings suggest that the highest financial benefit resulting from foreign language skills is seen among high and mid-level managers, whose job roles necessitate the cultivation of cognitive and intellectual capabilities. This gain amounts to 22%. However, for workers whose profession is associated with manual labour, foreign language skills do not have such a strong impact on wages.

Table 1. Characteristics of articles included in the report

Author, article	Country	Data	Results
Gazzola, M., Mazzacani, D. (2019). Foreign language skills and employment status of European natives: evidence from Germany, Italy and Spain.	Germany, Italy, Spain.	Data from the second edition of the Adult Education Survey (AES) from 2011 to 2012; Data from Eurostat Eurobarometer surveys from 1990 to 2012 (124,000 natives aged 15 and over).	<ol style="list-style-type: none"> 1. Knowledge of English increases the probability of employment for men in three countries by 3.4%, 4.3% and 5.2% respectively. 2. Knowledge of English increases the probability of employment for women by 5.6% and 5.7% respectively in Germany and Italy, but not in unemployed. 3. The degree of influence of Dutch language proficiency on earnings is less than the influence of English and Spanish.
Yuxin Yao, Jan C. van Ours (2015). Language skills and labour market performance of immigrants in the Netherlands.	Netherlands	Data from the Longitudinal Internet Studies for the Social Sciences (LISS) survey in the Netherlands, which consisted of seven waves of panel data from 2008 to 2014.	<ol style="list-style-type: none"> 1. The return on language skills in the Russian market is 11%. 2. The salary premium for those who have a high level of proficiency in a foreign language is on average 27%. 3. Workers between the ages of 30 and 39 receive the highest return on their knowledge of a foreign language - a bonus of 13%. 4. In comparison with blue collar workers, employees who are engaged in intellectual work have significant rewards from language proficiency (with a return of 22%).
Rozhkova K.V., Roschin S.Ju. (2019). Is knowledge of foreign languages rewarded in the Russian labour market?	Russia	RLMS-HSE 2008-2017. Population censuses 2002, 2010.	<ol style="list-style-type: none"> 1. Knowledge of English (52% of the presented vacancies require knowledge of English, 12% require knowledge of German, 2% require knowledge of French, and less than 2% require knowledge of Italian, Spanish or Russian). 2. English language is particularly in demand among administrative professionals and highly skilled positions. For professions related to physical labour, knowledge of English and German is less necessary. 3. Intermediate-level English language skills lead to a 6% salary increase, while highly skilled English language skills increase salary by 20%. 4. No correlation was found between knowledge of German language and salary increase.
Brian Fabo, Miroslav Beblavy, Karolien Lenaerts (2017). The importance of foreign language skills in the labour markets of Central and Eastern Europe: assessment based on data from online job portals.	Czech Republic, Hungary, Poland, Slovakia.	Data obtained from online job search portals and online salary surveys (2015) of 74,000 vacancies across 59 professions.	<ol style="list-style-type: none"> 1. Knowledge of Mandarin and English languages has a positive effect on employment (the percentage of unemployed people who only speak their native language is 49%, which is higher than the percentage of unemployed people who speak English or Mandarin). 2. People who speak English have a 0.6% higher chance of being employed than the population who only speak Cantonese. Residents who speak Mandarin dialect have an 0.8% higher chance of being employed than people who only speak their native language. 3. People who only speak Cantonese receive lower wages on average compared to people who speak a second language. 4. The salary increase for knowledge of EFL is much higher than that for Mandarin dialect (27.3% and 1.6% respectively). 5. The transfer of sovereignty of Hong Kong from the United Kingdom to China in 1997 enhanced the positive role of knowledge of Mandarin and English languages in job search in Hong Kong and increased the economic return on language skills in the labour market. Political changes increased the monthly income of workers who speak Mandarin dialect, but reduced the salary increase for knowledge of EFL.
Yonghong Zhoua, Rong Zhub, Xian Zhengc (2020). Second language skills and labour market outcomes: Evidence from the handover of Hong Kong.	Hong Kong	Data from the censuses of Hong Kong in 1991, 1996, 2001, 2006 and 2011. 696,434 observations.	

Conclusion

This study conducts a report of several empirical articles analysing the impact of second language skills on individuals' labour market performance. The research is based on data from both developed and developing countries and shows a positive impact of language skills on wage levels and the likelihood of employment, over and above the effect of formal education. The same trend is present in all the articles: the return to knowing a second language is positive in all

countries, with the highest return for workers who know English. In addition, high proficiency in a foreign language has a higher return than good or sufficient proficiency. In terms of employment, workers with language skills are more likely to be employed than those without. In the countries analysed, as nearly all the articles demonstrate, possessing knowledge of a second language in the labour market is linked to a wage "bonus".

Regarding the results for different sectors of activity, Rozhkova and Roshchin [9] and Fabo et al. [5] showed that foreign language skills are particularly in demand for administrative professionals and high-skilled positions, while knowledge of a second language is insignificant for occupations related to manual labour. In addition, according to the conclusions of the article by Yonghong Zhou, Rong Zhu and Xian Zheng [10], significant political changes have increased the economic returns to language skills in the labour market, as demonstrated by the transfer of sovereignty of Hong Kong from Britain to China in 1997.

To summarise, individuals learn languages with the intention of honing their language skills for a range of activities, including work-related endeavours. These skills carry potential rewards, and individuals are willing to invest their time and resources, such as paying for language classes, to enhance them. Similar to physical capital, human capital is formed through investments, involving initial costs that can be recovered over time.

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The humanization and personification of monster figure in pop-culture: "Gravity Falls" case

ABSTRACT.

In the modern world, the image of a monster is undergoing reconstruction due to the inclusion of "scary" characters in teen animation, as well as the trends of acceptance, tolerance, and humanism. The animated series "Gravity Falls" is filled with characters that can be labeled as "monsters." However, in order to adapt the content for a young audience and align with contemporary trends, the depictions of mystical and frightening creatures in the series undergo processes of humanization and personification. In our study, it was important to determine the methods by which the portrayal of the "other" is humanized and personified, using the animated series "Gravity Falls" as an example. The research was conducted using content analysis, which yielded the results. This work can be further utilized by screenwriters and animators who intend to reconstruct monster depictions in content aimed at diverse audiences.

Keywords: *monstrosity in animated series; depictions of the "other"; monster depictions; monster image, monstrous representation; anthropomorphism; "Gravity Falls".*

In today's world, we can clearly sense the interplay between the media and society, as social networks, mediated communication, and new technologies have seamlessly integrated into our personal, professional, and public lives. As the media researcher Stuart Hall wrote, the media audience is both the recipient and the source of the message, since the media is an institution of society and represents certain trends [7, p. 238]. There's a new phenomenon in the 21st century, connected to the representation of evil on the movie screen. The trend of humanizing villains is on the rise, reflecting the audience's increasing preference for villains with more relatable human features. People are occupied by the visual representation and motivations of villainous characters and try to understand them. Villains nowadays provide an opportunity for people to explore a darker side of themselves. The communication of villains tends to be more complicated

than before, and the audience seems to realize that the evil side has something good to offer as well. This can help to broaden our understanding of humanity and our relationship with the unknown and the supernatural.

The relevance of the study is also based on the growing popularity of animated products, not only among the child audience but also among adults. Parrot Analytics, an analytics portal, has released a study that underscores the audience's demand for more "adult" animated content. Adult-oriented animated series such as "Rick and Morty," "Attack on Titan," "South Park," and others have gained increasing popularity [8]. The animated series "Gravity Falls" targets a teenage and adult audience and is rated 12+ [5]. Therefore, this animated series occupies an important niche in the growing landscape of popular content.

Our goal was to explore, analyze and understand:

- what makes " a monster " in visual media, what types of markers it has and what roles it plays in the story
- what the main features of humanizing these monsters are
- what types of different techniques animators use to make monsters more empathetic and interesting

Thus, the primary objective of our research was to analyze the process of humanization and personification of monster portrayals in popular culture. The focus of our study was on the portrayal of monsters in the television series "Gravity Falls," examining the methods used to transform these portrayals towards humanization and personification, as well as their impact on the viewers of the series.

Among the most crucial concepts in our analysis are the notions of humanization and personification of the "horrible" and "monstrous." Personification entails altering the state of a character, whereby "something not human is given a human identity or "face" [3]. On the other hand, the term "humanization" encompasses the process of imbuing internal qualities, "showing that someone has the qualities, weaknesses, etc. that are typical of a human, in a way that makes you more likely to feel sympathy for them" [2].

Humanization and personification are broad and encompassing concepts, and their study finds relevance in various domains. For instance, research has been devoted to the humanization of voice assistants like Alexa or Siri [10]. Scholars also explore the realm of brand personification, where companies associate themselves with specific mascots or personalities [1]. Furthermore, there are studies closely aligned with our research, examining the themes of monstrosity and the transformation of the "horrible" or the "other." Notable examples include articles such as "Humanizing Horror: Rereading Monstrosity in Popular Literature" [6] and "Humanizing Beowulf's Monster: John Gardner's Grendel" [11]. However, a challenge in this field is the tendency for scholarly works to concentrate on a limited range of empirical subjects, often failing to extend their analysis beyond established conventions.

The scientific novelty of our research lies in the introduction of a previously underexplored cultural object, the TV series "Gravity Falls", into the scientific discourse. The majority of texts dedicated to this animated product have predominantly focused on analyzing other aspects, such as the linguistic components of the series or its transmedia elements. Notably, the articles "Monsters and Mad Scientists: Frankenstein and Gravity Falls" [4] and "What's hidden in Gravity Falls: Strange creatures and the Gothic intertext" [9] were the closest studies to our goals and research subjects, as they helped us identify specific categories of analysis. However, these existing research works did not employ the methodology utilized in our research, thus our work has the potential to provide an original analysis.

The animated series "Gravity Falls" premiered on June 15, 2012, on the Disney Channel. Created by A. Hirsch, who also serves as the show's executive producer, the series draws inspiration from the creator's own childhood experiences. The narrative revolves around the

adventures of twins Dipper and Mabel, who spend their summer vacation with their great-uncle Stan in the fictional town of Gravity Falls. This town is filled with anomalous and mysterious locations, leading the main characters to encounter various mystical beings and monsters throughout the episodes [5]. These "monsters" often deviate from the conventional depiction of evil from myths or medieval stories, as the cartoon primarily targets a young audience. The creators of the series strive to blend supernatural elements with aspects of reality, kindness, and familiar cartoonish elements within the episodes. It is from this combination of unusual monsters in a children's animated series that the hypothesis of our research arises. We propose that the animated series "Gravity Falls" reconstructs the image of monsters by humanizing and personifying these characters through the incorporation of human traits and the inclusion of supernatural creatures in a contemporary and more child-friendly world.

The methodology employed in this study involved the use of content analysis method, which was selected due to its applicability to various data sources, including textual, audio, and visual data such as animation. Content analysis is defined as a "systematic, reproducible method of compressing a large amount of textual content into a smaller number of content categories based on explicit coding rules" [13, p. 1]. In our case, content analysis encompassed the identification of content categories related to monster images in the animated series "Gravity Falls," followed by the extraction of potential coding outcomes and the encoding of results into a numerical system. In his article "Content Analysis," S. E. Stemler highlights the method of emergent coding, which involves two or more researchers independently identifying coding categories and comparing their results to eliminate redundant categories. The advantage of this type of analysis lies in the identification of categories that are noticed by another researcher, thereby reducing subjectivity in the identified items [12, p. 3-4]. It is precisely this method that we employed during the content analysis process.

Different categories of variables were identified and documented using N.G. Voskresenskaya's handbook on content analysis in media communications. The variables were classified into nominal, interval, and relative levels. The nominal level consists of exclusive values that are assigned numeric codes, such as the variable "gender of the main character" coded as 1 for male and 2 for female. The interval level includes variables with scales, such as character friendliness or emotionality. The relative level involves examining specific elements of the message, such as the duration of TV episodes or the occurrence of certain words in media texts [14, p. 20-21]. During the process of emergent coding, in conjunction with the content analysis handbook, we identified analysis categories across different groups. For the relative level, categories such as "appearances (in times)" and "running-time (in minutes)" were established. The nominal level encompassed categories like "the role in the episode," "pop culture elements or human hobbies," "the presence of character evolution," "the presence of emotional reactions in the character," "the presence of cultural references" and "how the character is referred to by others". The interval level was allocated in categories such as "the type of backstory," "dangerousness," "communication with the main characters," and "appearance." For the convenience of analysis, a coding table was created, which served as a counting system and a navigational tool during content analysis.

Table 1. Content analysis coding table

Category	Variables and codes	Examples/comments
Appearances	(in times)	
Running time	(in minutes)	

The type of backstory	<ul style="list-style-type: none"> 0 – No backstory 1 – Evil 2 – Neutral 3 – Sad 4 – Funny 	Backstory contains the character's biography, either presented from themselves or narrated by other characters, as read in Dipper's journal.
Dangerousness	<ul style="list-style-type: none"> 0 – Dangerous in general 1 – Might be dangerous 2 – Not dangerous 	Dangerousness refers to the level of being dangerous, indicating the potential to cause physical harm to other characters
The role in the episode	<ul style="list-style-type: none"> 0 – Antagonist 1 – Helper 2 – Love interest 3 – Friend 	
Communication with the main characters	<ul style="list-style-type: none"> 0 – Aggressive 1 – Neutral 2 – Friendly 	
The presence of pop-culture elements or human interests/hobbies	<ul style="list-style-type: none"> 0 – No 1 – Yes 	This category refers to a wide range of clothing styles associated with mainstream culture, the consumption of popular culture content, implementation of viral memes, ironic tropes, and diverse references to any culture (national or cinematic)
The presence of character evolution	<ul style="list-style-type: none"> 0 – No 1 – Yes 	The character's evolution involves them acquiring new qualities, unveiling their hidden stories, or transitioning their behavior from negative to positive
The presence of emotional reactions in the character	<ul style="list-style-type: none"> 0 – No 1 – Yes 	The presence of emotional responses in the character examines the character's display of emotions, excluding anger /aggression

How the character is referred to by others	0 – By its species 1 – By its name 2 – Other	The category of "other" may encompass both the absence of a specific method of naming the monster and the presence of a humorous or crude nickname
Appearance	0 – Scary 1 – Cute 2 – Funny	The assessment of appearance should include the presence of dangerous elements (teeth, claws, etc.), evaluate the gait and the movements, the size compared to other characters, and the presence of atypical or even comedic elements
The presence of cultural references	0 – No 1 – Yes	This characteristic includes the presence of a reference in the monster, meaning a resemblance to characters from myths/fairytales/other iconic stories

The sample of series was formed from episodes of the series, in which there were so-called monsters - creatures that various official sites dedicated to gravity falls attributed to this category. The sample included 7 episodes from Season 1 and 2 episodes from Season 2, as the second season focused more on the development of the main characters' narratives and storylines, and to a lesser extent, introduced new monsters into the narrative. Results obtained during the analysis were then transformed into diagrams for easier comprehension.

First of all, our research shows that humanizing monsters doesn't mean sugarcoating them. As illustrated on Diagram 1 most of the monsters shown in the series were portrayed as dangerous and threatening. The specific visual and narrative elements employed to evoke fear vary across episodes and storylines, but only 11% of the monsters were pictured as innocuous.

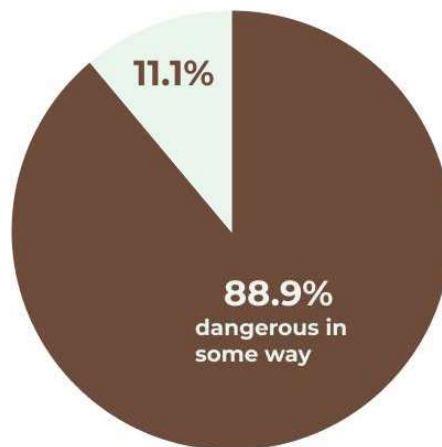


Diagram 1. The percentage of monster characters with menacing appearance (88.9%) and the percentage of characters with harmless appearance (11.1%)

Interestingly, all the characters in the series had references from various cultural narratives. For instance, the Manotaur in the episode "Dipper vs. Manliness" borrowed key characteristics from the mythological Minotaur of Ancient Greece. Similarly, the gnomes in the episode "Tourist Trapped" were reminiscent of the fairy tale gnomes, including those found in the children's story "Snow White and the Seven Dwarfs." It can be assumed that the sense of perceiving something familiar and well-known helps the audience to feel a closer connection to the creatures and, at times, even fosters empathy towards them.

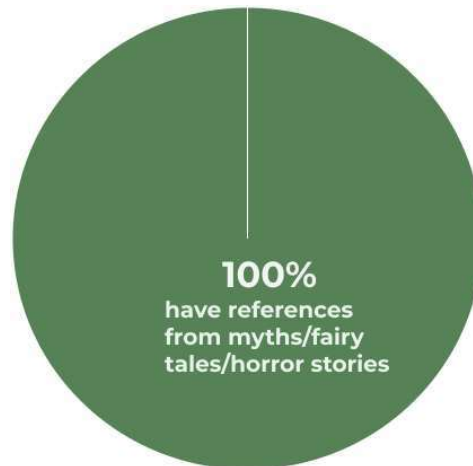


Diagram 2. The percentage of monster characters that have prototypes from other myths/fairytales/stories/movies (100%)

When it comes to the processes of humanization and personification, 66.7% of the monsters had a backstory, with the majority of them being either sad or neutral. For instance, the story of Mermando is worth mentioning. He shared with the main character Mabel how he was accidentally caught in a net along with some fish. Although he managed to escape, he could not swim away from the pool and missed his family.

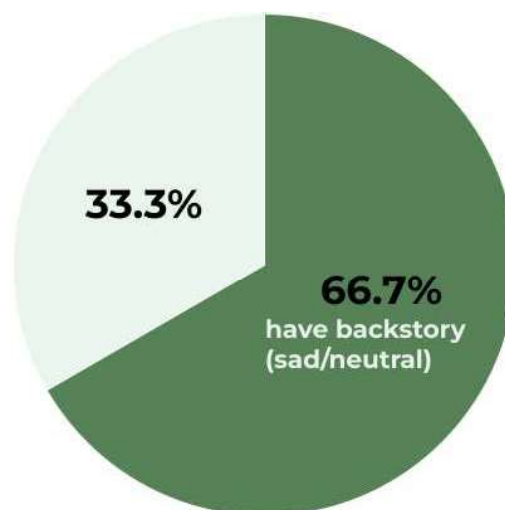


Diagram 3. The percentage of monster characters with a sad or neutral backstory (66.7%) and the percentage of monster characters without a backstory (33.3%)

Another approach taken by the animators to evoke sympathy towards the monsters was the inclusion of pop-culture references, human hobbies, distinctive traits, and elements of humor. As much as 88.9% of the monsters exhibited a cute, funny, or widely recognized "human" interest.

For instance, in the episode "Dipper vs. Manliness," the Multi-Bear was seen listening to the music of the band "BABA" on a portable music player, which can be a reference to the well-known Swedish pop group "ABBA".

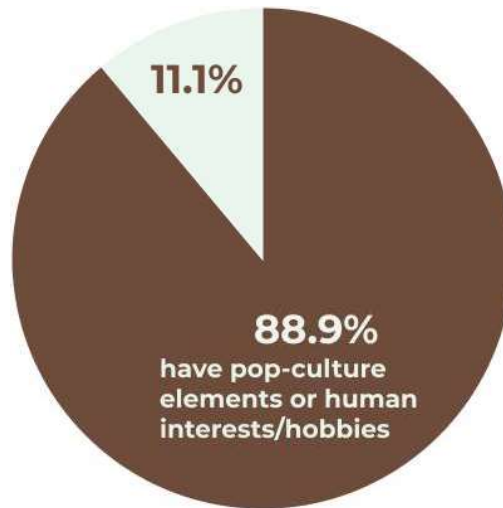


Diagram 4. The percentage of monster characters with human hobbies, interests, or pop culture traits (88.9%) and the percentage of characters without such traits or interests (11.1%)

The process of humanization and personification can also involve character evolution or some form of transformation for the monster. In the analyzed episodes, 66.7% of the monsters underwent character evolution. For instance, the previously mentioned Multi-Bear in the episode "Dipper vs. Manliness" initially appears as an aggressive monster to be defeated, but gradually transforms into a vulnerable and endearing companion to Dipper.

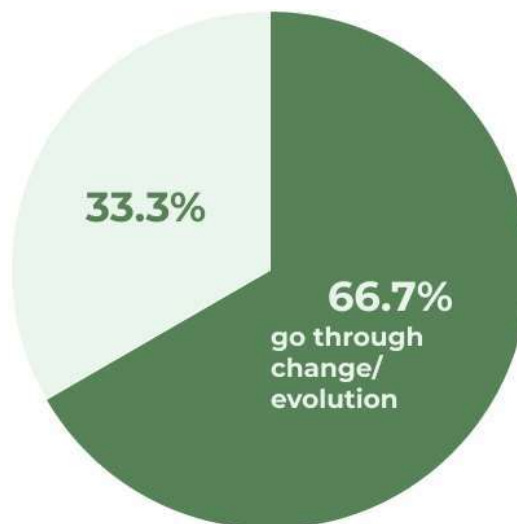


Diagram 5. The percentage of monster characters that undergo changes or some form of evolution (66.7%) and the percentage of monster characters that remain unchanged throughout the story (33.3%)

Also, what makes monster characters more likeable and empathetic is that most of the monsters are able to experience human emotions and have feelings, other than anger, aggression or hate. We see them cry, be jealous, confused, have fun, feel sorry or regret and that gives them additional depth. 66.7% of the monsters displayed emotions beyond anger and aggression. For

instance, the character Summerween Trickster in the episode "Summerween" experiences sadness and vulnerability due to being unloved and made of unwanted, tasteless candies.

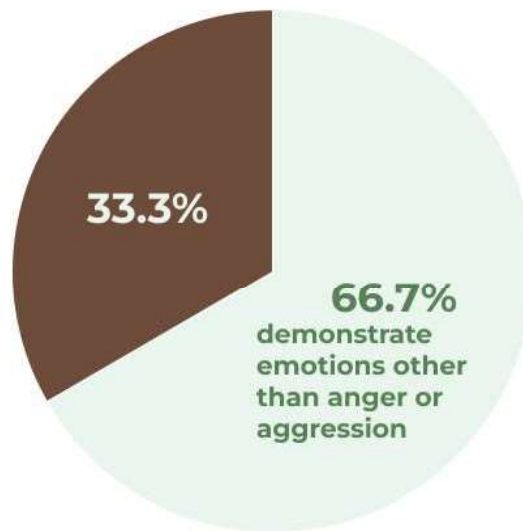


Diagram 6. The percentage of monster characters that demonstrate emotions beyond aggression and anger (66.7%) and the percentage of monster characters that do not display any emotions or solely exhibit sinister emotions (33.3%)

Certain techniques, when it comes to humanization, were found to hold less importance. One example is the duration of a monster's presence in the series. Despite only appearing for a brief two minutes in the episode, the Multi-Bear evolved into a significant character with a rich and intricate storyline. In contrast, the zombies in the episode "Scary-oke" were on screen for over 8 minutes, yet their backstory remained shrouded in mystery, and their display of human traits was minimal.

It was crucial for us to analyze the concept of the monster and identify what kind of characters get this label. We identified key elements that unified nearly all monster characters in the series, such as menacing visual traits and a sense of impending threat. However, it is important to note that all monsters also exhibit human-like features and cultural references. This leads us to specific checkpoints that reflect the most frequent and effective methods personifying monsters in the series.

As a conclusion, it can be observed that the process of personification and humanization of monsters in the animated series "Gravity Falls" is achieved through various narrative techniques. Firstly, character evolution makes them more developed and closer to the main characters. Secondly, the presence of emotions beyond aggression and anger in the monster characters can evoke sympathy or empathy from the audience. Additionally, the description of their backstories, which predominantly lean towards sadness rather than comedy, is part of the humanization process. Pop-cultural references also contribute to the personification by adding familiar elements to the depiction of the "other." However, visual elements of the characters receive lesser emphasis in terms of humanization or personification, with most monsters maintaining their outwardly intimidating appearance to uphold the label of being "monstrous".

In order to validate our hypotheses, it was important to refer to the existing research in the field of monstrosity analysis, both in general and specifically within the series "Gravity Falls." L. Piatti-Farnell, in her article "What's hidden in Gravity Falls: Strange creatures and the Gothic intertext" notes that a significant portion of the creatures in the series possess anthropomorphic elements and reinterpret established concepts of monsters by combining different monster names into one entity (e.g., gremlins and goblins merging into a "gremoblin") [9].

In the article "Monsters and Mad Scientists: Frankenstein and Gravity Falls," T.Carter writes that many characters in the series "Gravity Falls" exhibit prototypes from existing stories. T. Carter compares the monster character Gobblewonker from the episode "The Legend of the Gobblewonker" to the character of Frankenstein. Additionally, T.Carter notes that in the animated series "Gravity Falls," while the monster image draws inspiration from Gothic literature, it is more human-like and possesses a certain backstory that reduces its danger for the younger audience [4, p. 57-58]. Through alternative research, we were able to confirm some of the points of our content analysis and the conclusions drawn.

Therefore, the concept of evil in animated films is gradually changing, and studies like ours can provide valuable insights for screenwriters, animators, and content creators who aim to humanize the portrayal of monsters. The main point we wish to emphasize is the significance of decoding the image of the villain in order to foster inclusivity and empathy towards individuals with diverse appearances and belonging to marginalized social groups, who may have faced discrimination, bullying, or cancellation due to conflicting circumstances. The process of humanization and personification can also serve as a tool for reimagining and reconstructing the monster archetype, pushing the boundaries of what is known and expected.

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The development of a brand concept for a photo studio based on consumer behavior analysis

ABSTRACT.

In the current economic climate investing in intangible assets has come to be regarded as a primary objective and an effective tool for improving financial performance and creating value. Among intangible assets, the notion of a brand stands out: not only does it make goods and services more appealing, but it can also boost and diversify a company's cash flow. The continuous development of new media and the digitalization of art contribute to the massive development of the photography and videography market in Russia. In this regard, it should be noted that the demand for services provided by photo studios has increased dramatically over the past 10 years. In line with this trend, the study focuses on the development of a brand concept for a photo studio based on consumer behavior analysis. The market analysis, which was conducted with the help of a series of expert interviews with the owners of the most popular photo studios in Perm, made it possible to determine the competitive advantages of each of the studios. The analysis of consumer behavior based on an online survey was aimed at determining the patterns of consumer behavior. Based on the two analyses, a brand concept for a photo studio was developed.

Keywords: *brand; branding; goods; services; consumer behavior; photo studio; photography; videography.*

There are a lot of different definitions of the term "brand", but all of them are linked by the dominant role of the consumer, in whose subconscious mind a certain impression of a product is formed, thereby identifying a brand per se. For instance, a brand can be defined as a sign, symbol or brand that helps to distinguish goods or services from the mass of their own kind [7, p. 408]. However, also noted are the psychological aspects of the impact of goods on the consumer, which subsequently form a brand, such as fame and attractiveness, as well as the value of goods [6, p.16]. In the context of exploring the definition of the term "brand", Voronina A.M. in her recent research identifies three approaches: classical, virtual and complex. Among the classical ones, the definition suggested by D. Aaker, a specialist in marketing, advertising and branding, is the most prominent. Professor Aaker defines a brand as a special name or symbol that helps not only to identify the goods and services of one seller, but also to differentiate them from a group of competitors offering similar goods. From a virtual point of view, a brand is considered not as a product, but as an image in the perception of the consumer, having a certain relation to the product. Moreover, nonsense can be viewed from a comprehensive point of view, which implies

a set of consumer perceptions about a brand, as well as a set of product properties, including its history, reputation, advertising methods, etc. [9, p. 180].

Thus, comparing several definitions, it is worth noting that a brand is a set of properties of a product or service that has a specific name or symbol distinguishing it from similar competitive products, aimed at forming a positive perception of, and associations with, these goods or services in the consumer's mind.

The brand is an identifier of the goods or services of the company presented [4, p. 555], and also emphasizes value and uniqueness, guaranteeing the satisfaction of consumer needs [1, p. 5]. The components of a brand directly depend on the object of branding. Tangible assets include: name, logo, slogan, brand book (color palette), marketing strategy. Each of these elements in one way or another has a direct impact on the perception of the brand by the consumer.

In addition to the material aspects of a brand, it is worth paying attention to its intangible components. Among them are positioning, brand image and reputation. It should be noted that the former influence the latter, creating consumer perception due to the brand name, its logo, slogan and color design, forming the consumer's idea of the brand, its image and reputation [6, p. 132].

According to Bart J. Bronnenberg, Jean-Pierre Dube, Sridhar Moorthy (2019), "Brand is the result of branding", also considering this concept from the point of view of a long-term process for creating preferences for a product [10, p. 293]. Branding is also regarded as a set of techniques and methods that create an impression of a product or service, as well as influence their perception by a potential consumer [10, p. 133]. Takumi Kato found that "Branding is a purposeful activity to create a brand, which includes several complex stages related in their content and more to marketing" [10, p. 410].

There are several steps of branding, the key of which is the analysis of the target audience and the market. Planning, as the second step, includes the direct formulation of the brand concept, as well as its positioning and further strategic vision of brand development. In addition to analysis and planning, brand formation is distinguished as the process of developing a logo, corporate identity, brandbook and other components. The final stages are brand promotion and verification of its effectiveness [4, p. 303].

The relevance of this research is determined by the continuous development of the photography and videography market in Perm. Over the past 10 years, the market for photo studio services in the city has been growing exponentially. This trend followed an increase in the demand for this type of service due to the rapid development of new media. In view of the above, a well-developed brand should be classified as a competitive advantage, which contributes to raising brand awareness, and will therefore increase the level of customer loyalty in the future.

The study is aimed at developing a brand concept based on consumer behavior analysis. In accordance with the aim of the research the following objectives were set: firstly, to explore the theoretical aspects of the study; secondly, to analyze the market of photo studios in Perm; thirdly, to analyze the behavior of consumers of photo studio services; finally, to create a photo studio brand concept based on both analyses.

The research was premised on the assumption that after analyzing the market and the competitive environment it is possible to develop a brand for a photo studio that will be able to compete with the existing photo studios in the market of photo and video services and attract potential consumers.

The research methods include the analysis of open sources, expert interviews, and two online surveys.

Over the past 5 years, the market of photo and video services has grown significantly due to the development of new media, namely the popularization of social networks such as Instagram and VKontakte. Social networks have become not only platforms where people share their personal lives, but also a place where people create their own business. The services of a photographer and videographer are now in great demand, and are requested by people not only

for personal purposes, but also for the purpose of creating content for their business in order to increase sales.

The first stage of the research procedure consisted in the analysis of open sources prior to carrying out market research. This method was chosen due to the fact that most photo studios tend to withhold information about their performance, particularly their financial indicators, which means this kind of data is very difficult, and in some cases almost impossible, to obtain. Eventually, some information about the leading photo studios in the city of Perm was found on social networks, namely in the communities and public accounts of those photo studios. It was discovered that there are about 37 photo studios in our city.

The second step of the study was to rank the photo studios by customer loyalty. This phase of the research procedure involved conducting an online survey using a questionnaire (a Google form). The sample included a total of 100 respondents, photographers and videographers working in Perm (Figure 1).

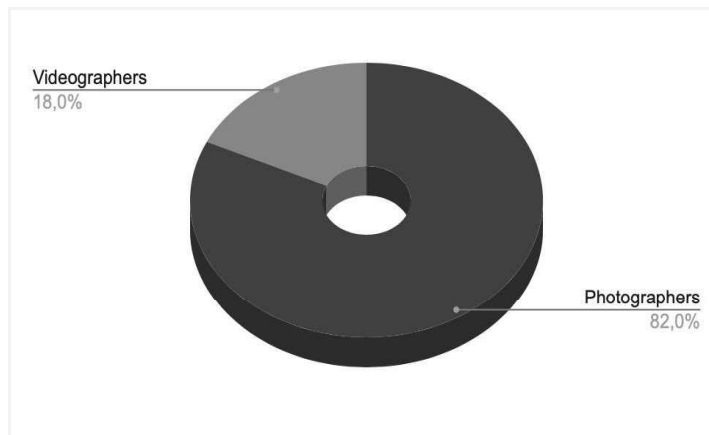


Figure 1. Photo studio customers in Perm

The type of activity of each respondent was also determined (Figure 2). It is worth noting that regarding the specifics of this field, respondents were asked to choose whether they are photographers and/or videographers. Photographers and videographers totaled 33% of all respondents. The average value of the experience (in years) of each of the respondents engaged in photography and videography in our city was also determined. It was revealed that on average respondents have been working in the photo and video industry for about 5 years. During the survey, 3 key groups of consumers of the services of photo studios in Perm were identified:

- 1) photographers and videographers of Perm, who are looking for a space for commercial and creative filming;
- 2) customers of service who are independently looking for a space to create and take photos for personal use, social networks;
- 3) professional models who use the services of photo studios to replenish their personal portfolios.

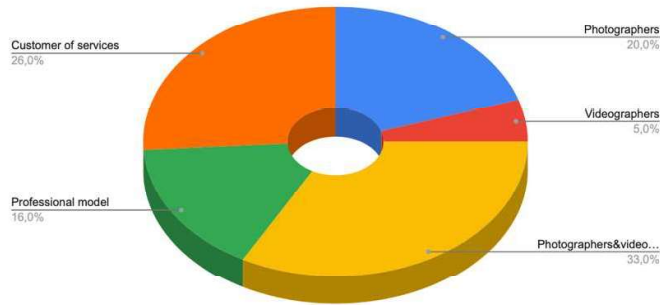


Figure 2. Distribution of respondents by type of activity

The results of the survey and the analysis of the open sources were summarized in a table which contains information about the 5 most popular photo studios in the city, including information about their studio equipment, interior, color palette, as well as the current data on their rent payment and online booking systems (Table 1).

Name	Equipment	Studio Interior	Color Palette	Online Booking System/Rent Payment
Chill Studio	constant light, pulsed light, gobo masks, flags, blackout curtains	Cyclorama, minimalism	White, grey, shades of beige	AppEvent System
ARMA Photostudio	constant light, pulsed light, gobo masks, flags, blackout curtains	Cyclorama, 2 halls, minimalism	White, black	AppEvent System
FLACON Studio	constant light, pulsed light, gobo masks, flags, blackout curtains, portrait plate	Cyclorama, 5 halls	White, grey, shades of beige	Own booking and payment system
NOFRAME Studio	constant light, pulsed light, gobo masks, flags, blackout curtains	Cyclorama	White, grey, black, pink, blue	AppEvent System
Roomlight Studio	constant light, pulsed light, gobo masks, flags	Cyclorama	White, black, pink	AppEvent System

Table 1. Top 5 photo studios in Perm

According to the results of the survey, five of the studios were identified as being the most technically advanced and popular with photographers and videographers. The selected studios were shortlisted for further analysis – to be precise, for conducting a series of expert interviews with the studio owners.

The results obtained during the expert interviews made it possible to identify the key branding trends in the given service sector, as well as the intangible assets which play a significant role in the positioning of each of the selected photo studios (Table 2). These factors formed the basis of the subsequent online survey.

Tangible Assets	Intangible Assets
<ul style="list-style-type: none"> – a short and clear brand name that is easy for consumers to understand and remember; – minimalism and calm colors in interior design; – a slogan reflecting the core marketing message; – an eye-catching and memorable logo. 	<ul style="list-style-type: none"> – the availability of a wide range of studio equipment; – the availability of a paper or fabric background; – the use of a cyclorama; – large spacious dressing rooms; – photography equipment rental; – clothing rental; – top-quality service; – parking facilities; – access to an elevator.

Table 2. Tangible and intangible assets in the branding of a photo studio

The study showed that the key factors in choosing a photo studio are interior design and state-of-the-art equipment. The presence of a cyclorama and a paper background are the other two factors that consumers pay attention to when choosing a photo studio.

The analysis of consumers of photo studio services in Perm was carried out using an online survey on the Google Forms platform. This particular platform was chosen because of its clear interface, and also due to the fact that it enables a researcher to collect a sufficient number of

responses, and is free. The survey was distributed on social networks among consumers of the photo studio services in Perm identified during the expert interviews.

First of all, the importance of each of the factors when choosing a photo studio by consumers was revealed. Figure 3 shows a diagram that reflects the importance of having professional studio equipment for consumers of photo studio services in Perm. Based on the data obtained, it can be concluded that for the majority of respondents (44.6%), the availability of professional studio equipment plays a role in choosing a photo studio for photo and video shooting.

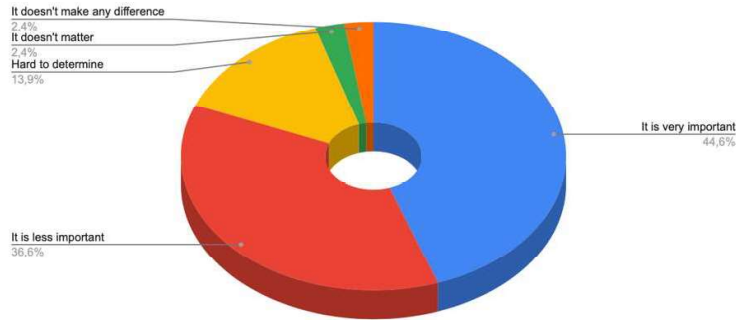


Figure 3. The importance of having studio equipment when choosing a photo studio by a consumer

What is more, the presence of fabric and paper backgrounds plays an important role in choosing a photo studio, as evidenced by the survey results shown in Figure 4. However, this is less important relative to the data obtained than the availability of professional studio equipment.

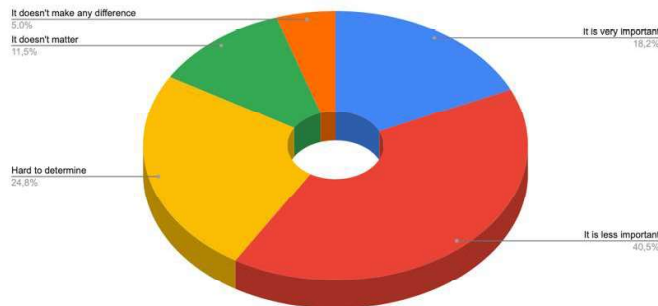


Figure 4. The importance of having paper backgrounds when choosing a photo studio by a consumer

Another important observation that can be made on the basis of the survey results is that more than half of the respondents (75%, to be precise), when choosing a photo studio, prefer an option where the rental period can be selected, and paid for, online (Figure 5).

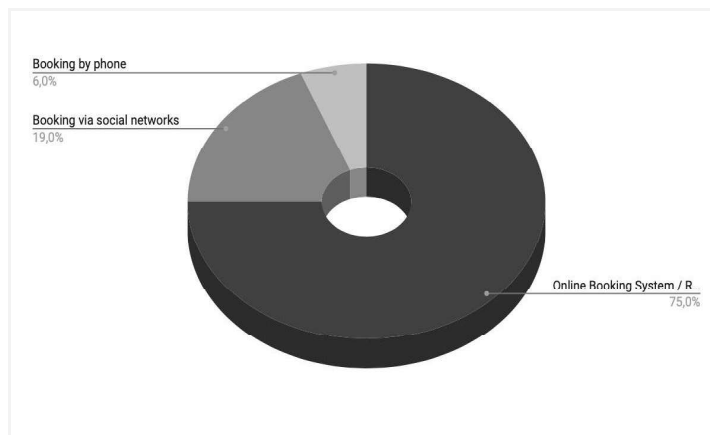


Figure 5. Booking systems used by photo studios

It is interesting to observe that 88% of the research participants chose a calm and light color palette for the design of a photo studio (Figure 6).

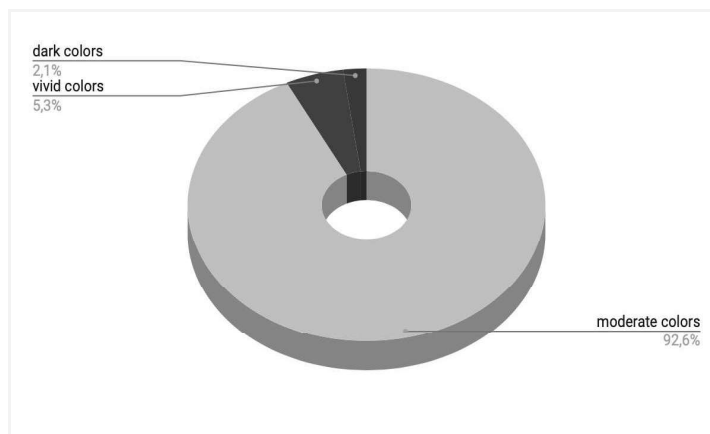


Figure 6. Preferable color palette

The survey results showed the level of importance of each of the aspects identified over the course of the expert interviews, which, on the whole, makes it possible to determine the competitive advantages and positioning of a photo studio. It is worth noting that all the aspects studied are important for a particular customer segment, however, when developing a brand concept and creating a photo studio in the future, attention should be paid to such factors as technical equipment and the presence of a cyclorama, which turned out to be the most significant physical aspects of a photo studio. The service in the photo studio is also one of the essential elements, as well as competent administrators who create all the necessary conditions for the client's comfort. In addition to the above, the availability of a photo studio website is highly desirable as it is bound to improve communication with the client.

Thus, the research findings fully confirm the initial hypothetical assumption that it is perfectly feasible to determine the characteristics of a photo studio that will meet all the existing needs of consumers of these services in Perm: a technically well-equipped photo studio with a cyclorama, which provides its customers with a high level of service and competent administrators ready to help them in any situation.

Finally, according to the data obtained from the analysis conducted, a brand concept was developed. The photo studio name is "RAW STUDIO PERM". The suggested slogan for the prospective photo studio is "RAW is always more features". The reason for selecting this particular brand name is the fact that "RAW" is a type of file that offers a photographer more

options for editing an image, therefore the core marketing message behind the name is: “We provide more opportunities for your professional activity” (Figure 7).



Figure 7. The brand-specific logo for the prospective photo studio

The slogan of this brand reflects the key feature of the prospective photo studio, namely the provision of work opportunities for photographers and videographers in the city of Perm. The choice of a color palette for the prospective photo studio fully meets the requirements of consumers identified as a result of applying the analytical procedure described above. Moreover, the evident trend towards minimalism in the interior, which not only provides the client with a comfortable stay in the studio, but is also indicative of simplicity and a sense of creative freedom, and emphasizes the functionality of the photo studio, was another reason for choosing this particular color palette. The main colors of the photo studios covered by the research are pastel shades of beige and gray, as well as white and black (Figure 8).



Figure 8. The color palette for the brand

The suggested positioning is fundamentally different from that of the competitors and fully meets the demand of consumers.

Overall, based on the results of the analysis performed, it can be concluded that the photo studio brand developed on the basis of the research findings fully meets the needs of consumers of this type of service.

In the photo studio service sector the characteristics of a brand are dictated by the quality of the service provided and the way it is perceived by the consumer. Branding, in turn, apart from creating competitive advantages for companies in the market, reduces the risk of losing customers and helps a brand meet and exceed its targets.

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Microbial communities of freshwater ecosystems of the Kindo Peninsula and their hydrolytic potential

ABSTRACT.

This paper is focused on communities of microorganisms that inhabit boreal ecosystems and are capable of degrading various plant polymers. The sources of samples represent various ecotopes on the Kindo Peninsula, near the Pertsov White Sea Biological Station – arctic soils, lakes and high moors. In sampling from natural sources, the most attention was paid to places enriched with plant debris, such as: sphagnum mats submerged in water, soils with dead plant debris, lake plant sediments. The main objective of this study is to estimate the diversity of hydrolytic microorganisms from freshwater reservoirs and arctic soils of the Kindo Peninsula, their accumulation in enrichment cultures and isolation into pure cultures, and assess the ability to efficiently degrade these substrates. As a result of the research, 12 bacterial cultures were isolated, showing enzymatic activity on polysaccharides, such as karaya gum, xanthan gum and cellulose.

Keywords: *microbiology; hydrolytics; karaya gum; xanthan gum; cellulose; arctic soils.*

Introduction

Arctic conditions are characterized by extremely low temperatures in winter, strong winds, low precipitation in summer, and a lack of nitrogen and phosphorus in arctic soils and soils [6]. It is worth noting that among microorganisms living in such conditions, the group of degraders of various polymers is of particular interest, since their ability to decompose complex polymers is a consequence of the presence of specific enzymes that are resistant to environmental influences. In view of these properties, these microorganisms and their enzymes have a high potential for application in various fields of biotechnology. One of the most popular examples of enzymes are hydrolases, enzymes widely used in different industries. Substrates for hydrolases are complex polymers ranging from proteins and lipids to polysaccharides. Currently, natural polysaccharides and their modified products are attracting considerable attention owing to their potential applications in various fields, such as biomedicine and pharmaceuticals due to their biocompatibility and biodegradability. Hydrolysis of polysaccharides processing by glycosidases is one of the most diverse groups of hydrolases. Searching glycosidases with precious features is

one of important directions in biotechnology, and extremophilic ecosystems would be a great source for this purpose.

The ongoing work has been divided into three sections:

1. Isolation of pure cultures growing on polysaccharides by various cultivation approaches, using solid and liquid nutrient media;
2. Profiling of microbial diversity in natural sources, enrichment and pure cultures growing on polymers, using NGS sequencing of the V4 region of the 16S rRNA gene.
3. Characterization of the efficiency of hydrolysis of polysaccharides by enrichment and pure cultures and estimation of their enzymatic activity.

Material and methods

Sampling was carried out near the Pertsov White Sea Biological Station of Moscow State University. Sampling points are indicated on the map in Figure 2. The distribution of seed material on substrates is shown in Figure 1. All samples were divided into two groups according to the place of sampling: fresh water with silt (FW) and soil with leaf litter residues (S), as well as by pH.

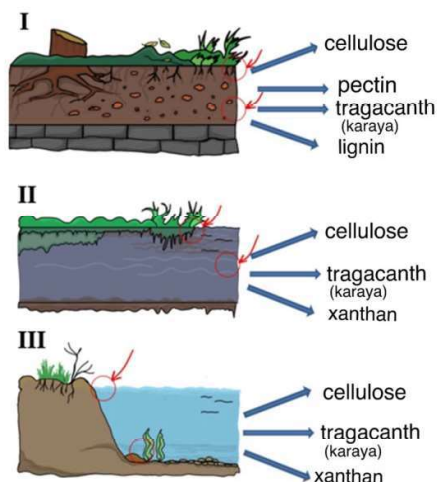


Figure 1. Examples of sampling locations and the substrates on which they were seeded

- I - Soil with leaf litter and residues of decomposing plant organic matter;
- II - Sphagnum mats, water with the debris of decaying Sphagnaceae moss;
- III - Fresh water, water and silt near the shore and bottom.



Figure 2. QR code on map with sampling points

The composition of the media (Table 1) for the cultivation of enrichment and pure cultures was selected based on the literature data. The total mineralization of the medium was low and amounted to approximately 1 g/l.

Component	Concentration (g/l)
NH ₄ Cl	0,2
MgCl ₂	0,1
CaCl ₂ *2H ₂ O	0,02
KH ₂ PO ₄	0,1
buffer MES (pH=5,5-5,6)	10 mM
Vitamins	1 ml/l
Trace elements	1 ml/l

Table 1. The composition of the medium for culturing water samples with a pH of about 5.5

In order to adjust the required pH value (5.5), we added 6 N HCl or 10% NaOH to the media. After adjusting the pH, the desired substrate was added, according to the enrichment culture. The percentage of polysaccharides was no more than 1%. The content of agar for cultivation on solid media was 2%.

Cultivation was carried out in glass tubes with volume 10 or 20 ml with a closed and fixed rubber cap, pierced with a needle from a syringe with sterile cotton, without a shaker, at room temperature (20°C).

The selected soil samples were ground in a ceramic mortar in 10 ml of distilled water, after which they were inoculated into the desired medium.

A pure culture was obtained by the method of 10x serial dilutions from each enrichment culture and inoculation on Petri dishes with a microbiological loop.

Culture growth was assessed by the following methods:

- 1) Visually, by the turbidity of the tube compared to the control (not inoculated medium).
- 2) Microscopically:

We used 3 types of microscopes for visual estimation of pure cultures. A light microscope and a light microscope with phase contrast allow a quick assessment of the homogeneity of the culture. To prepare samples for such microscopy, it is enough to place a drop of water with a supposed pure culture on a glass slide and cover it with a coverslip. We also used fixed stained preparations for light microscopy. The third type is scanning electron microscopy. The scanning electron microscope allows us to see the external structure of bacteria and is used to more accurately describe pure cultures.

For the profiling of communities and enrichment cultures for the 16S rRNA gene, DNA was isolated in two ways: phenol with chloroform and using a kit for the isolation of genomic DNA from soils (FastDNA Spin Kit For Soil, MP Biomedicals), according to the manufacturer's protocol.

The hydrolysis activity of karaya gum, xanthan gum, and cellulose by enrichment culture enzymes was measured by the amount of reducing sugars during a fixed incubation time.

Results achieved

All selected samples were seeded on various substrates and they are demonstrated in Table 2.

Sample/ substrate	1 fw	2 fw	3 fw	4 fw	5 fw	6 fw	7 fw	8 fw	9 fw	10 fw	11 fw	12 fw	14 fw	15 fw
Xanthan gum (XG)	1	2	no	no	1	no	0	1	no	no	no	1	0	2
Karaya gum (KarG)	1	2	1	1	1	1	0	2	1	1	2	1	1	1
Pectin (Pect)	no	no	1	2	no	1	no	no	1	0	1	no	no	no
Lignin (Lig)	no	no	0	0	no	0	no	no	1	1	2	no	no	no
Cellulose (Cell)	1	1	1	2	1	1	1	1	0	2	1	2	0	1

Table 2. Evaluation of the growth of enrichment cultures on different substrates

Designations: no - no enrichment culture was placed on this substrate.
0 - no growth was observed;
1 - growth was observed;
2 - there was an active growth.

Morphologically diverse cultures were microscopically examined using a scanning electron microscope (Figure 3).

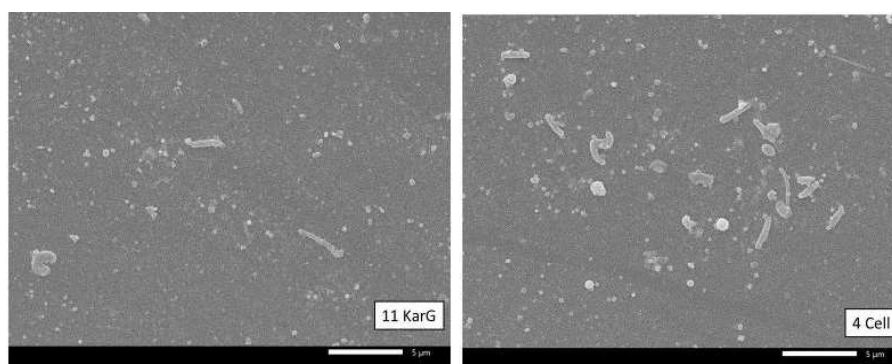


Figure 3. Microscopy of selected cultures on a scanning electron microscope

According to the results of scanning microscopy of enrichment cultures (Figure 3), the morphology of microorganisms can be visible in more detail. For example, in the 11 KarG enrichment culture, light microscopy revealed rods of various lengths, cocci, and curved rods, which can also be observed on SEM (Scanning Electron Microscope).

DNA was isolated from the accumulation cultures on various substrates on which active growth was observed and sent for sequencing. The results are shown in Figure 4.

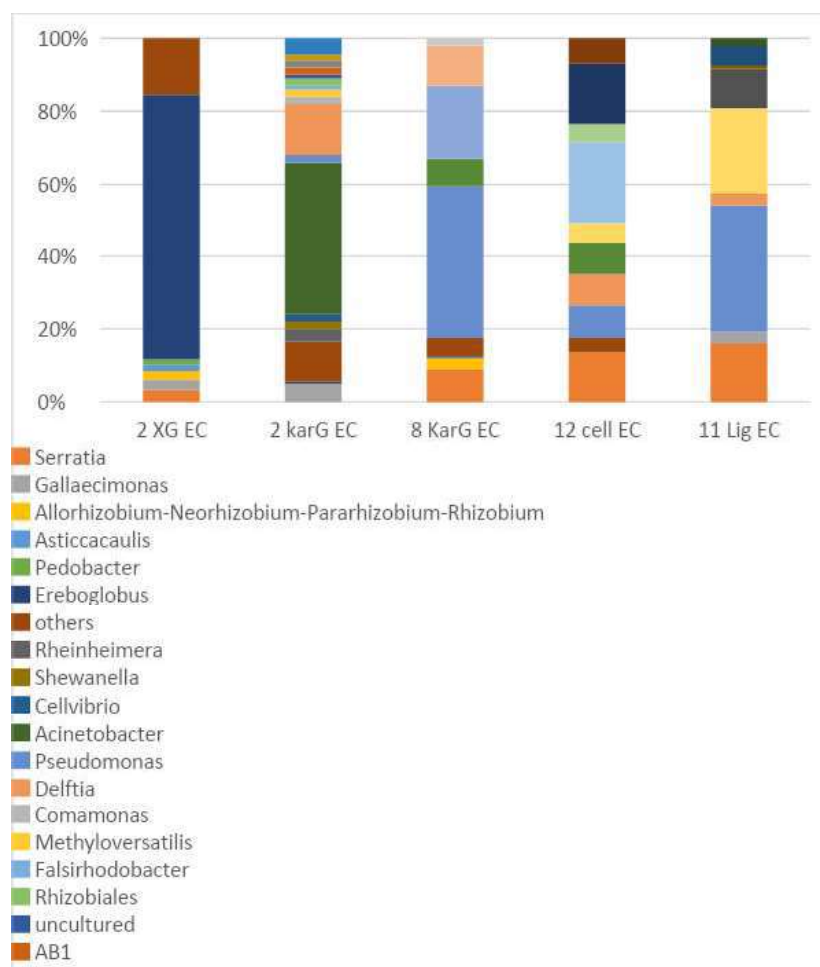


Figure 4. Sequencing results of storage cultures (EC - enrichment culture)

Based on the results of the sequencing of storage cultures, we can evaluate the genus of microorganisms capable of growing on a given substrate.

This diagram shows that in the accumulation culture on Karaya gum 8 KarG the following microbial genera are predominant: *Pseudomonas* (42%), *Silvimonas* (20%) and *Novosphingobium* (11%). Representatives of the genus *Silvimonas* are common in forest soils and are facultative anaerobes capable of chitin and carboxyethyl cellulose decomposition. For the genus *Pseudomonas*, the ability to hydrolyze various substrates has been shown in particular cellulose. The genus *Novosphingobium*, according to literature data, is characterized by the ability to decompose cellulose and lignin. Growth on gum karaya can be possible considering the presence of enzymes in these organisms capable of decomposing not only the main polymer chain, but also those which can be specific to detach the offshoots of oligosaccharides in the gum molecule.

Two genera, *Citrobacter* (22.5%) and *Achromobacter* (16.5%), are shown to dominate the 12 Cell accumulation culture. Representatives of the genus *Citrobacter* were found as part of a consortium of *Citrobacter freundii* and *Sphingobacter multivorum* growing on wheat straw. According to literature data, *Citrobacter* mainly consumes amino acids and simple sugars, and *Sphingobacterium* hydrolyzes complex polysaccharides, including cellulose. For the genus *Achromobacter*, endoglucanase, β -glucosidase, endoxylanase, and filter paper degradation activity have been shown.

Representatives of the genera *Pseudomonas* (33%), *Escherichia-Shigella* (22%), *Serratia* (15%), and *Stenotrophomonas* (10%) prevail in the 11 Lig accumulation culture. The genus *Stenotrophomonas* is characterized by its distribution everywhere in the environment, especially

in close association with plants. It is worth noting that they can degrade phenolic compounds and produce a variety of proteases, chitinases, glucanases, lipases, and laccases. Also, cellulase synthesis genes can be found in their genome. It can be assumed that the species of this genus detach side branches from the lignin molecule, thus participating in the decomposition of this substrate. Representatives of the genus *Pseudomonas*, according to the literature data, can participate in lignin decomposition.

The genus *Serratia* is known to be capable of hydrolyzing cellulose, hemicellulose, and pectin. Growth on medium with lignin as a substrate is apparently explained by the ability to detach side groups from the lignin molecule.

According to the sequencing results, there were few reads in this sample, which explain the presence of the genus *Escherichia-Shigella*, suggesting that this group of microorganisms is an entry from other samples that were sequenced simultaneously.

According to the literature, the only species of this microorganism, *Ereboglobus luteus*, was described, which was isolated from the hindgut of the cockroach (*S. lateralis*) [5]. A representative of the genus *Ereboglobus* is a mobile gram-negative coccus, which is an anaerobic microorganism. It can be assumed that a new species of this genus may be found in this enrichment culture. As can be seen in the graph below, in the supposedly pure culture of 2 XG PC, representatives of the genus *Ereboglobus* disappear. This happens considering the fact that the sequencing data were obtained later than the method of limiting dilutions and seeding on a solid medium in Petri dishes was applied to isolate a pure culture. According to the literature data, a representative of the genus *Ereboglobus* is an anaerobic microorganism and, therefore, further cultivation conditions were not suitable for its growth, as a result of which its culture was lost. In a presumably pure culture of 2 XG PC, three main cultures are found - *Pseudomonas*, *Asticcacaulis* and *Novosphingobium*. For the genus *Pseudomonas* of the species *Pseudomonas fluorescens* (the closest to that present in culture), according to the literature, the ability to break down polymeric carbohydrates into free sugars, which they use as a carbon source, in particular cellulose and hemicellulose [2], is known. Representatives of the genus *Asticcacaulis* are gram-negative obligate aerobic microorganisms that live in the soil and enter into symbiosis with plant roots [7]. According to the literature data, bacteria of the genus *Asticcacaulis* are characterized by active decomposition of cellulose [1]. For the genus *Novosphingobium*, activity in the decomposition of cellulose and lignin is also mentioned in the literature [3].

Thus, all presumably pure cultures did not turn out to be such, apparently, the bacteria could not be separated due to their close interaction with each other to decompose the substrate.

Conclusion

The main genera of microorganisms dominating in enrichment cultures and natural samples:

1. *Novosphingobium* was present at 2 XG (53%) and 15 XG (8%) cultures. It is known that this genus is characterized by participation in the decomposition of lignin and cellulose.

2. *Sphingobacterium* was found in enrichment cultures 11 Lig (38%) and 12 Cell (24%)

3. *Mucilaginibacter* was found in cultures 11 Cell (29%) and 15 XG (16%), and the ability to decompose pectin and cellulose is known.

4. *Pseudomonas* was found in many natural communities and enrichment cultures: 4 fw NS (8%), 8 fw NS (15%), 8 KarG (42%), 11 Lig (33%), 4 Cell (67%) and 10 Cell (27%). In general, it is a hydrolytic, it is known about lignin, cellulose.

5. *Serratia* (19%) was found in one natural sample 4 fw NS (24%) and the following enrichment cultures: 11 Lig (15%), 2 XG (34%), 4 Cell (19%), 10 Cell (45%). Known activity on cellulose, pectin and hemicellulose.

6. *Enterobacter* was present in only one 10 Cell culture (22%). This genus is known to have hydrolytic activity on xanthan gum and lignin.

7. *Klebsiella* was found on two enrichment cultures with karaya gum 2 KarG (99%) and 11 KarG (95%). According to the literature data, hydrolytic activity with respect to cellulose is shown.

The presence of the same taxa in different enrichment cultures indicates the hydrolytic properties of this genera. Thus, for the genus *Novosphingobium*, activity on xanthan gum has not been described previously. Bacteria of the genus *Sphingobacterium* grew on polysaccharides that hydrolysis had been described in the literature. For the genus *Mucilaginibacter*, hydrolytic activity towards cellulose was previously known, but for xanthan gum it was shown for the first time. The genus *Pseudomonas* is a typical representative of soils and fresh water bodies; its accumulation is shown in enrichment cultures on lignin and cellulose, which corresponds to the literature data. The accumulation of bacteria of the genus *Serratia* had been shown on lignin, cellulose, and for the first time on xanthan gum. The genus *Enterobacter* has been shown to be active on cellulose, although it is reported in the literature to be active on lignin and xanthan gum. It is possible that bacteria of the genus *Enterobacter* did not grow on the appropriate substrates due to strong competition with other hydrolytic genera. For the rest of the discovered genera of microorganisms, their accumulation on the corresponding substrates is given in full agreement with the literature data.

As a result of the work, 15 samples of natural samples were collected, 48 enrichment cultures were obtained on five different substrates: karaya gum, xanthan gum, pectin, lignin and cellulose. 39 of them had sufficient or active growth, while 9 grew very little or did not grow at all. Four attempts were made to isolate a pure culture (the method of 10-fold serial dilutions was used once and continued three times on solid media with the selection of individual colonies in a liquid medium). As a result, 12 cultures were obtained with active growth on the respective substrates: 2 XG, 2 KarG, 4 Cell, 4 Pect, 7 XG, 8 Kar, 9 Cell, 10 Cell, 11 KarG, 11 Lig, 12 Cell and 15 XG. After verifying the purity of the culture with various tests, 10 cultures of 2 XG, 2 KarG, 4 Cell, 4 Pect, 8 Kar, 10 Cell, 11 KarG, 11 Lig, 12 Cell and 15 XG were confirmed to be pure. As a result of DNA isolation from natural samples, enrichment cultures and presumably pure cultures, 18 profiles of communities and enrichment cultures were obtained. The composition of communities and enrichment cultures on the substrates was analyzed, and a comparison was made with the literature data to search for known microorganisms - hydrolytics. For the genus *Klebsiella*, it turned out that it is able to grow in culture on karaya gum, which has not been previously shown for this genus [4]. In the course of the work, it was possible to show the growth of microorganisms of the genus *Ereboglobus* in enrichment cultures on xanthan gum in a sample taken from arctic soils; the discovered microorganism is presumably a new species of this genus.

Thus, in the course of the work, ideas about the ecology and enzymatic activity of hydrolytic microorganisms were formed, which can help in studying the ecological relationships of the inhabitants of fresh water bodies and soils of northern habitats.

In the course of the work, an assessment was made of the capabilities of enzymes cultivated on various bacterial polysaccharides. It turned out that they are active to several polysaccharides, that is, they have a wide specificity, which may have potential for biotechnological industry such as biomedicine.

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Cross-cultural communication in business negotiations with Chinese partners

ABSTRACT.

«The world has seen many changes, often not for the better. Yet the main thing has remained unchanged: friendship between Russia and China, which is consistently growing stronger for the benefit and in the interest of our countries and peoples. The progress made in the development of bilateral ties is impressive. The Russia-China relations have reached the highest level in their history and are gaining even more strength» [32]

(Vladimir Putin, 2023)

The world is facing new challenges. The maintenance of stability and development depends directly on effective and strategic partnerships between global superpowers. In this regard, Russia-China cooperation demonstrates a new type of international relations based on trust, mutual respect, and aimed at expanding spheres of strategic partnership and unleashing its potential to improve the well-being of their citizens. Since China has become Russia's main trading partner, there is a need for detailed guidance for those who are interested in Chinese corporate culture but not conversant with main cultural differences. This article examines the corporate cultures of Russia and China and their influence on business communication. The analysis of verbal and non-verbal features of corporate cultures of Russia and China served as the basis for creating supplementary educational materials for students on conducting business negotiations with China. The content and goals of supplementary material will be discussed in detail in this article.

Keywords: *corporate cultures of Russia and China; Russia-China strategic partnership; business negotiations with China; cultural differences between Russia and China.*

Globalization and political changes are shaping new geopolitical realities, where relations between global superpowers play an increasingly important role. One of the most interesting and significant partnerships is the cooperation between Russia and China.

The expansion of economic and political relations between representatives of different cultures requires the cultivation of intercultural competence and the ability to effectively interact in a multicultural environment. Cultural differences can become an obstacle to successful business negotiations. One of the key tasks is understanding the verbal and non-verbal features of corporate cultures in different countries.

The analysis of cultural differences in corporate cultures of Russia and China is highly relevant for several reasons. Firstly, Russia and China have drastically different cultural backgrounds stemming from religious and philosophical traditions. Correspondingly, Russia has a long history of Christianity that has shaped its culture, society and institutions, while China has been influenced by Confucianism and Taoism, which form the basis of traditional Chinese

philosophy and ethics [23]. Different language systems also contributed to the way Russians and Chinese perceive the world, as the Russian language uses letters, while the Chinese language uses characters. Moreover, it is worth noting that China was isolated from Western influences for much of its history, while Russia has had more engagement with Europe through trade, migration and geopolitics [12]. This separation meant that Chinese culture has evolved along its own distinct trajectory, devotedly preserving its unique traditions and customs, with Chinese civilization retaining an inward focus and self-contained nature.

Secondly, Russia and China demonstrate relative economic power and influence. China has emerged as one of the world's leading economic and trade powers, which gives it significant sway over the Russian economy. According to the latest World Trade Organization's (WTO) report, in 2020, China held the position of the world's leading exporter of merchandise trade, representing 13% of the global total; the total value of China's merchandise exports amounted to US \$2,323 billion [39]. China's immense economic clout and strong trade ties with Russia allow it to exert considerable influence on key aspects of Russia's economic development and growth prospects. Additionally, the strategic economic partnership between Russia and China has been stable for the past few decades. Moreover, Xi Jinping made an official visit to Russia in March 2023. Xi Jinping intentionally chose Russia as the first stop of his foreign visit to express his commitment to strengthening Russia-China political and economic cooperation [7].

According to a report by "Izvestia" on July 19, 2023, during the first half of 2023, the Russian market witnessed a remarkable 52% increase in job opportunities related to China, with sectors like sales, tourism, IT, and logistics experiencing significant growth. This trend reflects burgeoning interest among young Russian professionals to pursue career opportunities with China, as the mutual trade turnover between the two countries to boost [22].

The analysis of cultural differences in corporate cultures of Russia and China holds immense importance for understanding and navigating the dynamics of international business negotiations between these two influential nations. The stark contrast in their historical, religious, and philosophical backgrounds has shaped distinct cultural identities, influencing how business interactions are perceived and conducted. The use of different language systems further impacts communication styles and interpretations. As China emerges as a global economic superpower with significant influence over Russia's economy, comprehending the cultural nuances becomes imperative for successful bilateral trade and cooperation. This article aims to delve into the features of corporate cultures in Russia and China, examining verbal and non-verbal aspects in business communication, and understanding how these cultural differences impact international business negotiations. Moreover, the findings presented could be a basis for an educational course designed to facilitate effective negotiation between Russian and Chinese business partners, taking into account the unique characteristics of their respective corporate cultures. By fostering cross-cultural understanding, the course intends to enhance cooperation and strengthen economic ties between Russia and China in an increasingly interconnected global landscape.

In line with the goals mentioned before, the following tasks can be singled out for this article. The study will start by investigating the peculiarities of verbal communication in the corporate cultures of Russia and China, including language and communication style. Following that, peculiarities of non-verbal behavior in the business sphere of both countries, including gestures, facial expressions, intonation, and other non-verbal features will be further analyzed.

The study utilized a comprehensive approach, including a literature review and scientific research related to intercultural communication and organizational culture to identify the peculiarities of corporate cultures of Russia and China. Relevant videos [5, 6, 11, 33] and foreign analog educational materials for conducting business negotiations with China were also analyzed to create modules for the course. Additionally, educational literature [20, 24, 38] on preparing for international business Chinese exams was studied to create a universal vocabulary at the end of the educational material.

Scientific works [8, 9, 25] on the study of cultural peculiarities of China and Russia were analyzed. These studies helped to examine cultural differences that have a significant impact on the corporate cultures of the two countries and their ability to effectively interact. This analysis formed the basis for the creation of the first two modules of the course.

Subsequently, foreign educational materials [4, 29, 34, 38] for conducting business negotiations, publications in the media, and video materials on the topic of business communication with Chinese partners were studied. The main recommendations for preparation and developing negotiation strategies, as well as the most commonly used phrases and expressions, were identified.

Corporate culture is a critical aspect of an organization, encompassing the shared values, beliefs, and behaviors that shape its identity and functioning. Within corporate cultures, communication plays a fundamental role in conveying and reinforcing these cultural elements. Communication can be broadly classified into two categories: verbal and non-verbal. Verbal means of communication encompass spoken or written language used in interactions, including formal meetings, negotiations, and everyday conversations. On the other hand, non-verbal means include the cues and signals communicated through body language, facial expressions, gestures, and other visual elements that often convey subtle but crucial messages. Understanding and effectively managing both verbal and non-verbal means within corporate cultures are essential for fostering productive and harmonious work environments, facilitating negotiations, and building successful business relationships [4, 10, 35, 40]. Moving forward, the article will discuss language peculiarities and communication style that prevails in the business environment of Russia and China. Studying this topic allows one to understand what verbal nuances can affect the effectiveness of communication and understanding between Russian and Chinese partners during negotiations. In the frameworks of the present article, we will delve into two key features that shape the communicative landscape in both countries: directness in speech and time orientation and how it affects the pace of negotiations.

Directness in corporate cultures of Russia and China plays a crucial role in shaping business relationships but differs in a certain way. Russians demonstrate directness in speech during business negotiations through clear and unambiguous language. They tend to openly express their thoughts, expectations, and concerns without hesitation. Fang (2006) points out that Russians tend to use direct language when addressing sensitive or critical issues during negotiations [13]. They may openly express concerns or criticisms to achieve a clear understanding of the situation. For example, a Russian negotiator might say, "We have reservations about the quality of your product, and we need reassurances before finalizing the agreement." This straightforward approach reflects the Russian preference for candid discussions in business negotiations. Russians got used to the direct style during business communication due to several reasons. Firstly, the Soviet era in Russia further reinforced a top-down communication approach, where clear directives were expected from leaders, and subordinates were expected to follow them precisely. This hierarchical communication style carried over into the business sphere, where directness in conveying instructions and expectations became common [30]. Secondly, the rapidly changing economic situation and market instability in Russia have necessitated clear and decisive communication in business negotiations. In a dynamic business environment, Russian negotiators often prioritize results and efficiency, leading to a direct and to-the-point communication style [15]. Ultimately, Russian culture places value on sincerity and straightforwardness. Being direct in communication is often seen as a sign of honesty and respect for the other party [27].

In contrast, Chinese business negotiators often demonstrate indirectness in speech and this style of communication is deeply rooted in Chinese cultural norms and values. In Chinese culture, maintaining harmonious relationships is highly valued. Indirect communication helps to avoid direct confrontation or disagreement, which could potentially disrupt the harmony between negotiating parties. By using softer language and non-verbal cues, Chinese negotiators can address sensitive issues without causing offense or embarrassment [8]. "Face" (*mianzi*) is a

fundamental concept in Chinese culture, encompassing one's social standing, dignity, and reputation. Avoiding "loss of face" is crucial in maintaining harmonious relationships and social harmony, thus Chinese tend to use indirect speech as a way to avoid causing embarrassment, humiliation, or discomfort to themselves or others, which could lead to a loss of face [21].

Indirect communication is deeply ingrained in Chinese cultural norms, which influences the way people express themselves and interact with others. From a young age, Chinese children are socialized to be more reserved and avoid expressing their opinions too directly. This emphasis on indirectness is reinforced through education and societal expectations [19]. Chinese collectivist values play a significant role in shaping the communication style. In collectivist cultures like China, individuals are encouraged to prioritize the needs and interests of the group over their individual desires. This cultural value is reflected in communication patterns, where direct confrontation or disagreement may be seen as disruptive to group harmony. As a result, Chinese negotiators tend to use indirect language to convey their thoughts and intentions more subtly [8]. For example, they might use expressions like "I'm not sure if this is feasible, but..." or "It might be a bit difficult, but we can explore the possibility of..." This indirect approach helps to avoid direct refusals or rejections while still conveying their reservations [25].

Indirectness in Chinese culture significantly influences the way business meetings are conducted, leading to distinct differences when compared to Russian business meetings. Chinese meetings tend to involve more time spent on discussing seemingly irrelevant matters and can be longer in duration. Chinese business meetings prioritize relationship-building and establishing trust. The initial part of the meeting often involves small talk and discussions about personal matters before delving into the main agenda [17]. Russian business meetings tend to be more focused on achieving specific results efficiently. Small talk and personal matters are generally kept to a minimum [41].

Additionally, Russian business culture is short-time oriented, which means that Russians focus on the present, and emphasize the accomplishment of short-term goals. Russian negotiators may use expressions like "let's expedite the process" ("давайте ускорим процесс"), "let's discuss the key aspects" ("предлагаю обсудить ключевые моменты"), "time is money" ("время - деньги") and other phrases to encourage swift progress and timely decision-making. Chinese partners may adopt a more patient and deliberative approach to allow sufficient time for relationship-building and mutual understanding [36]. Chinese negotiators may employ phrases such as "let's take our time to explore all possibilities" to emphasize the importance of thorough discussion and consideration. When it comes to decision-making, Chinese may demonstrate patience in reaching agreements, as decisions may require consensus among various stakeholders [36]. Chinese professionals usually say such phrases as "we need more time to consider" ("wǒ men xū yào gèng duō shí jiān lái kǎo lǚ"), "I need to consult with my team" ("wǒ xū yào gēn wǒ de tuán duì shāng liàng yī xià") or "let's start with something simple first" ("ràng wǒ men xiān cóng jiǎn dān de shì qíng kāi shǐ tán qǐ"). These verbal strategies are aimed at ensuring that all stakeholders are heard, and decisions are made collectively to foster long-term relationships and harmony in business dealings.

Complementing the use of verbal expressions, Russian and Chinese negotiators also employ various non-verbal cues during business negotiations. Non-verbal communication encompasses gestures, facial expressions, body movements, intonations and other means that can affect the effectiveness of business negotiations between Russian and Chinese business partners.

The non-verbal features of corporate culture in Russia and China display notable disparities, particularly concerning body language and gestures. In Russian corporate culture, assertiveness and directness are often reflected in firm handshakes and expressive hand gestures [14]. These non-verbal cues convey sincerity and confidence during business interactions. For instance, a Russian business executive may offer a firm handshake to emphasize their commitment to a deal. In contrast, Chinese corporate culture places emphasis on preserving harmony and Chinese usually use softer handshakes as a sign of politeness [36]. For instance, a Chinese business

representative may greet their Russian counterpart with a slight bow to demonstrate respect and cultural sensitivity.

Another aspect of non-verbal communication is the use of gestures. Russian professionals may utilize more expressive and pronounced gestures to emphasize their points during discussions. For example, using open palms while speaking can indicate transparency and a willingness to engage in honest dialogue. On the other hand, Chinese professionals may rely on more subtle and symbolic gestures. Folding hands together in front of the body can convey politeness and attentiveness, demonstrating respect for the speaker and the conversation.

In Russian corporate culture, maintaining direct and prolonged eye contact is often considered a sign of attentiveness, respect, and sincerity during business interactions [3]. For instance, a Russian business professional may maintain steady eye contact while listening to a colleague or negotiating with a business partner, as it is believed to convey engagement and interest in the conversation. Conversely, in Chinese corporate culture, excessive or prolonged eye contact may be perceived as intrusive or aggressive [9]. Chinese professionals tend to employ more intermittent and subtle eye contact, especially when dealing with superiors or authority figures, to show respect and deference. Avoiding direct eye contact during conversations is considered a sign of humility and politeness. Moreover, the role of eye contact in conveying emotions varies between the two cultures. In Russian corporate culture, direct eye contact can be interpreted as a sign of sincerity and trustworthiness, as it allows individuals to gauge each other's emotions and intentions [3]. On the other hand, in Chinese corporate culture, emotions may be conveyed more through other non-verbal cues such as facial expressions and body language rather than direct eye contact, as prolonged eye contact can be considered intrusive and disrespectful.

During business negotiations, Russians and Chinese have distinct approaches to expressing emotions. Russians are generally more direct and expressive in showing their emotions during negotiations. They may openly display enthusiasm, excitement, or frustration through facial expressions, gestures, and tone of voice [1]. In a Russian negotiation, you may notice frequent changes in their facial expressions, such as raising eyebrows to indicate surprise or nodding in agreement. Chinese negotiators tend to be more reserved and controlled in displaying emotions. They often maintain a calm and composed demeanor to avoid revealing their true feelings during negotiations [ibid]. Chinese negotiators may find the overt display of emotions by Russians to be somewhat surprising or uncomfortable. The directness and intensity with which Russians express themselves might be perceived as confrontational or overly assertive [17]. However, in Russian culture expressing emotions openly is often considered a natural and authentic way of communicating, while in Chinese culture, maintaining a composed and harmonious atmosphere is the norm. These different approaches can lead to some challenges in cross-cultural business negotiations.

Russia-China cooperation is an important element of the stability and prosperity of the modern world. This partnership is based on mutual respect, trust and shared interests and has the potential to significantly impact the global balance.

In the context of economic partnership between Russia and China, it is particularly important to understand the cultural and corporate peculiarities of these two countries. The present article examined verbal and non-verbal aspects of corporate culture in business communication between Russia and China. The study of these features formed the basis for developing a course that provides students with the necessary knowledge and skills for successful business negotiations with Chinese partners.

To summarize, the observed differences in verbal and non-verbal communication styles between Russians and Chinese during negotiations underscore the significance of cultural sensitivity and awareness in fostering successful business relations. The distinct approaches to decision-making, directness in speech, as well as the expression of emotions, highlight the need for astute cross-cultural understanding. Developing effective strategies for negotiating with Chinese counterparts requires a keen appreciation of their emphasis on building long-term relationships and the significance of consensus among stakeholders. As Russia and China

continue to play crucial roles in the global economy, acknowledging and adapting to their corporate cultures can pave the way for fruitful collaborations and mutually beneficial partnerships. The insights provided by the designed course offer valuable tools for students venturing into the realm of Chinese business, equipping them with the skills and knowledge necessary to navigate the intricacies of cross-cultural negotiations successfully.

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Which ESG factors affect a firm's value the most?

ABSTRACT.

This study reveals which Environmental, Social and Governance (ESG) metrics need to be prioritized while investing money in a business by finding which ESG subfactor affects Firm Value significantly. The hypotheses of the research assume that Environmental factors are the most influential on market value (H1). In addition, it is believed that the most impactful ESG factors vary between industries (H2). By using Ohlson regression model and weighting the effect of E/S/G variables on a market value, it is found that Social factors impact Firm Value most in a positive way (H1 is rejected). Moreover, the obtained results show that Environmental factors affect Firm Value (FV) most in the Software & IT Services, Internet Media & Services and Automobiles industries. Governance factors affect the FM of a company most in the Apparel, Accessories & Footwear industry. Overall, the effect of ESG factors in various industries differs (H2 is confirmed). Applying ESG metrics is something that could bring more trust to the business and promote assurance of transparency. To shareholders and all stakeholders, implementing these factors well means that the company is well-governed, less risky and more stable compared to others.

Keywords: *business environment; non-financial information; ESG (environmental, social, governance factors); stakeholders; shareholders; market value (firm value).*

Background of research

In order to achieve sustainability in the long-term perspective, businesses must apply ESG metrics into its routine. ESG concept is not a one-time implementation that immediately produces results; rather, a company tends to enforce these metrics for good, to achieve targets, to minimize detrimental and maximize beneficial effects in order to positively impact different spheres of its business. If the firm did not consider ESG factors seriously, there would be lower fair market value and goodwill as well. The market will undervalue the business because of its possible financial risks. The risks mean future consequences of disregarding negative external and internal effects that the company creates. External effects could involve greenhouse gas emissions, fair consumer public policy, corruption and bribery, whereas internal effects are within the firm, it could be paying decent wages to the workers, minority shareholders protection policy, fair board elections, etc.

It becomes obvious that some ESG factors affect the firm value more than others. Every firm has its own 'package' of such influential ESG factors, making it a possible sustainable competitive advantage, as a consequence, value creator. For example, Ritz-Carlton Hotel Company with their credo "We are Ladies and Gentlemen serving Ladies and Gentlemen" is

well-known for being a people-centric organization. It becomes obvious that Social metrics greatly affect such business, which is why Ritz Company is trying to implement these factors well. This equality, respectful attitude to workers and as a consequence to clients, through providing services to them, creates value for the company in a form of sustained competitive advantage.

As regards each component of ESG that companies implement, Ecological metrics may be based on energy use, carbon emissions, animal testing, etc. Social factors may include diversity of employees, raising living standards (paying decent living wages), respectful workplace, customer satisfaction. Corporal metrics can be measured by money laundering, minority shareholders, diversity on board of directors, tax avoidance, etc. However, it is difficult to assert without investigation what factors can greatly influence every firm's value and whether such factors exist.

Many researchers claim that there is a positive correlation between a firm's value and implementing ESG factors, but only a few works provide findings of particular ESG factors that affect a firm's value most.

The purpose of the research is to identify what ESG factors have the most significant impact on a firm's value.

The following tasks should be addressed to achieve the purpose:

- to conduct a review of core literature that was analyzed to determine the most influential ESG factors on a firm's value;
- to build an Ohlson regression model to confirm constructed hypotheses and assess the influence of each of ESG factors on a market value of a firm;
- to compare the obtained results with the scientific literature.

The scientific literature review shows that an ESG score itself has a positive relationship with Firm Value and Financial Performance of the company. This statement is proven by Gordon L Clark, et al. [2], Mahmut Aydoğmuş, et al. [1], Bohyun Yoon, et al. [7], Gunnar Friede, et al. [3] and many others. It is a right thing to assert that a well-developed and well-thought implementation of ESG factors creates value to the business. MCKinsey [4] suggests that there are 5 ways to do so. They are Facilitating top-line growth, Reducing costs, Minimizing regulatory and legal interventions, Increasing employee productivity and Optimizing investment and capital expenditures. Such procedures to value creation are implemented differently in specific industries. Moreover, various ESG factors may be needed in order to achieve the enhancement of the value. Hence, the contribution of each of ESG factors to the process may be different.

It is stated by Mahmut Aydoğmuş, et al. [1], Bohyun Yoon, et al. [7] that Social factors affect the market value of a company the most. However, Jean-Michel Sahut, Helene Pasquini-Descomps [6] have not achieved statistically significant results to claim so. Moreover, Jason Saul [5] claims that Social factors are poorly measured on account of a shortage of precision. Less attention is paid to Social factors due to the problems of standardization, quantification and their reporting. As it is difficult for investors to compare implementation of Social factors, the previously mentioned findings can be questioned.

With preference to ESG factors' effect on the firms in various industries, it is proved that E, S and G implementations as well as their impact differ from sector to sector. Jean-Michel Sahut, Helene Pasquini-Descomps [6] find that the Media industry has Governance factors as the most impactful on a firm's value, but the results are not statistically significant, while Social factors have a significant positive influence (US companies sample). For UK companies it is Governance factors that affect market value mostly. In the banking sphere, Social factors account for a great positive effect on a firm's value (Chinese companies sample).

Considering the outcome of the literature review, the following hypotheses are developed:

1. Environmental factors have the largest impact on a firm's value due to social anxiety about ecological issues;

2. The most influential ESG factors vary between industries.

Research methodology and description of data

The data sample is made of 50 well-known publicly-listed companies that are divided into 13 industries by means of The Sustainable Industry Classification System was created by SASB. Data is sourced from YAHOO finance with a one year time frame (2021).

These companies disclose non-financial sustainability reports constantly, thereby manifesting interest in the robust implementation of ESG factors.

Industry	Publicly-listed companies
Hardware	Apple Inc. (AAPL) Samsung Electronics Co. Ltd. Lenovo Group Ltd (992) Cisco Systems, Inc. (CSCO) LG Electronics Inc (066570) Dell Technologies Inc. (DELL) Sony Group Corp (6758)
Software & IT Services	Microsoft Corporation (MSFT) Visa Inc. (V) Mastercard Incorporated (MA) Oracle Corporation (ORCL) Salesforce, Inc. (CRM) Paypal Holdings, Inc. (PYPL) Adobe Systems Incorporated (ADBE)
Apparel, Accessories & Footwear	Nike, Inc. (NKE) Adidas AG (ADS) Hermes International (RMS) LVMH Moët Hennessy - Louis Vuitton (MC.PA) Cie Financiere Richemont SA (CFR) Burberry Group PLC (BRBY) Christian Dior SE (CDI) Kering SA (KER)

Table 1. A piece of the sample of chosen companies

The Ohlson regression model is chosen to identify the impact of E, S and G factors on a firm's value by weighting each of them. This model contains financial (current net assets, earnings) and non-financial information (E, S and G). The control variable SIZE is also added to ensure that the results are trustworthy.

$$MV_{2021} = \beta_0 + \beta_1 B_{2021} + \beta_2 X_{2021} + \beta_3 E_{2021} + \beta_4 S_{2021} + \beta_5 G_{2021} + \beta_6 SIZE$$

	MV (market value)	B (net assets)	X (earnings)	E	S	G	SIZE
Apple Inc. (AAPL)	2901000000000	630900000000	946800000000	0,6	6,9	9,2	26,58405776
Microsoft Corporation (MSFT)	2522000000000	1419880000000	612710000000	1,5	8,4	5,3	26,53374493
Alphabet Inc. (GOOGL)	1917000000000	2516350000000	760330000000	1,7	11,1	11,4	26,60733447
Amazon.com, Inc. (AMZN)	1691000000000	1382450000000	333640000000	5,6	14,8	9,9	26,76482684
Berkshire Bancorp Inc/NY (BERK)	6691200000000	5149300000000	897950000000	0,6	3,8	11,6	27,58893165
Tesla, Inc. (TSLA)	10610000000000	3158300000000	551900000000	2,8	16,2	9,6	24,8525109
Nvidia Corporation (NVDA)	7352700000000	2661200000000	975200000000	2,3	5,2	6	24,51169647
Meta Platforms Inc (FB)	9219300000000	12487900000000	3937000000000	1	21	10,5	25,83517531
Visa Inc. (V)	4694200000000	3758900000000	1231100000000	0,7	7,8	7,5	25,14085265

Table № 2. Chosen variables for regression model in the dataset, a piece of created data sample

Results achieved

- The most influential on a business' value ESG factors vary between industries and firms.
- Social factors affect a firm's value predominantly in the chosen data sample.

- Environmental factors affect a market value of a company the most in the following industries: Software & IT Services, Internet Media & Services, Automobiles.

- Governance factors affect a market value of a company the most in the following industries: Apparel, Accessories & Footwear.

On balance, the results confirm H2 (The most influential on a firm's value ESG factors may vary between businesses' sectors). However, H1 is not confirmed by the results as not Environmental but Social factors are the most influential on a firm's value.

Main dataset	Coefficients	P-Value	Dataset of 50 companies	Coefficients	P-Value
β_0 (external factors)	-1970.28	0.063322	β_0 (external factors)	-375,5419634	0.716336
β_1 (B- net assets)	-4.16701	1.27E-06	β_1 (B- net assets)	-0,00000000327 481194	8.79E-05
β_2 (X- earnings)	34.35438	1.98E-15	β_2 (X- earnings)	0,000000031270 00566	6.38E-14
β_3 (E)	-12.4195	0.131142	β_3 (E)	1,504918744	0.866831
β_4 (S)	30.85011	0.014428	β_4 (S)	18,28747524	0.179498
β_5 (G)	-18.2548	0.379971	β_5 (G)	-28,78570322	0.325003
size	79.64561	0.085507	size	23,32878481	0.579165

Table 3-4. Results of regression analysis (the main dataset of 50 companies, statistically significant results and the dataset of 50 companies with the biggest market cap, not statistically significant results)

Software & IT Services	<i>Coefficients</i>	<i>P-Value</i>	Internet Media & Services	<i>Coefficients</i>	<i>P-Value</i>
β_0 (external factors)	-2859848300098	0,07775468627	β_0 (external factors)	-1.0348E+12	0.189781
β_1 (B- net assets)	-4,305154722	0,1953122962	β_1 (B- net assets)	4,337414002	0.155462
β_2 (X- earnings)	44,96542795	0,03354466367	β_2 (X- earnings)	2,594016589	0.66722
β_3 (E)	666582959747	0,07927881411	β_3 (E)	1,54E+11	0.093235
β_4 (S)	175117697281	0,0874008711	β_4 (S)	-16663683000	0.325089
β_5 (G)	144937956683	0,07962382095	β_5 (G)	1,42E+11	0.183291

Table 5-6. Results of regression analysis (Left table: Software & IT Services industry, statistically significant results; right table: Internet Media & Services, statistically significant results)

Automobiles	<i>Coefficients</i>	<i>P-Value</i>	A., A. & F.	<i>Coefficients</i>	<i>P-Value</i>
β_0 (external factors)	-2,40E+11	0.413703	β_0 (external factors)	-435484060422	0,1163048611
β_1 (B- net assets)	-0,62169	0.598742	β_1 (B- net assets)	-4,412278843	0,1924164898
β_2 (X- earnings)	3,096107	0.753947	β_2 (X- earnings)	41,33318475	0,06305809303
β_3 (E)	-8,80E+10	0.059697	β_3 (E)	-52804403613	0,2720490275
β_4 (S)	7,52E+10	0.041193	β_4 (S)	-21326715903	0,2566918104
β_5 (G)	3,51E+10	0.268661	β_5 (G)	119928638580	0,07285037367

Table 7-8. Results of regression analysis (Left table: Automobiles industry, statistically significant results; right table: Apparel, Accessories & Footwear, statistically significant results)

Dataset	The most impactful factor	Statistical significance
All companies	Social factors affect MV the most in a positive way	(+)
Companies with the biggest Market Cap	Governance factors affect MV the most in a negative way	(-)
Hardware	Environmental factors affect MV the most in a positive way	(-)
Software & IT Services	Environmental factors affect MV the most in a positive way	(+)
Semiconductors	Governance factors affect MV the most in a negative way	(-)
Biotechnology & Pharmaceuticals	Governance factors affect MV the most in a negative way	(-)
Household & Personal Products	Governance factors affect MV the most in a positive way	(-)
Oil & Gas - Exploration & Production	Environmental factors affect MV the most in a positive way	(-)
Apparel, Accessories & Footwear	Governance factors affect MV the most in a positive way	(+)
Commercial Banks	Environmental factors affect MV the most in a negative way	(-)
Medical Equipment & Supplies	Environmental factors affect MV the most in a positive way	(-)
Internet Media & Services, E-commerce Media & Entertainment	Environmental factors affect MV the most in a positive way	(+)
Restaurants	Governance factor affect the MV the most in a negative way	(-)
Automobiles	Environmental factors affect the MV the most in a negative way	(+)

Table 9. Results of regression analysis

Applying the results

Gordon L Clark, et al. [1], Mahmut Aydoğmuş, et al. [5], Bohyun Yoon, et al. [8], Gunnar Friede, et al. [2] claim that there is a positive connection between implementing all ESG factors and a firm's value; however, the results of the research show that there is a negative relationship between E and G factors and a market value (they are not statistically significant) and only S factors have a positive link with a business' value.

MCKinsey [7] shows that every ESG factor influences a firm's market value differently and the contribution of each of them varies.

Moreover, Mahmut Aydoğmuş, et al. [5] as well as Bohyun Yoon, et al. [8] defines Social factors as the most influential on a firm's value, whose results comply with the findings of this research. However, Jason Saul in his article "Fixing the S in ESG" [3] claims that Social factors experience a lack of standardization, quantification and reporting which may question the found outcomes.

As regards industries, Jean-Michel Sahut, Helene Pasquini-Descomps [4] find that Media has Governance factors as the most influential on a firm's value, while this study claims that it is Environmental (significant results). The Commercial Banks industry has Social factors as the most impactful on Firm Value, while this study states that it is Environmental (statistically insignificant results).

Also, Shen Zhing, et al. [6] assert that Social factors and Environmental can be substituted in order to create market value of a company; however, this study does not possess such findings.

Limitations of the study

This study includes some limitations, in particular small data sample size (50 companies and 13 industries with 7 companies in each), non-statistically significant results (where P-value is more than 10%) and a lack of research studies on the impact of E/S and G on a firm's value.

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Onboarding without board: adapting employees online

ABSTRACT.

Onboarding is a process that is part of corporate adjustment and constitutes the first steps of learning the organization. It allows new employees to adapt to the social and performative aspect of their new job as painlessly and effectively as possible [4]. The article attempts to assess the effectiveness of online onboarding. It takes a non-trivial approach of analysis through the exile, in which the employee ceases to feel part of the coherent mechanism. There is a sense of detachment from the team, which can make it difficult for online onboarding to fulfill its primary function of employee adjustment. Online onboarding also makes it difficult to use familiar self-presentation techniques, which can lead to a misperception of the employee by colleagues and superiors and make it difficult to build a trusting relationship with them. The study was conducted using qualitative methods of data collection and analysis, and the empirical basis consisted of 21 semi-structured interviews with employees with experience of online onboarding in a large company. The manifestation of the expulsion phenomenon makes it difficult for the employee to adapt; as a result, the effectiveness of online onboarding depends on the severity of the expulsion phenomenon and the organizational structure of the employer.

Keywords: *corporate adjustment; online onboarding; self-presentation techniques; exile; employee; organizational structure.*

Background

The established spatial and temporal boundaries of organizations are being blurred, companies are becoming boundaryless. Modern computer technology and the Internet [32], the lack of spatial mobility, and the personal predisposition to seclusion or self-organization have all influenced the acceleration of the shift of human activity to an online format. However, remote working has become not only an evolutionary or psychological choice, but also a necessity in the last few years because of the COVID-19 pandemic: about half of Russian companies switched to remote working at the height of the pandemic. The move to telecommuting also affected employees who were just getting ready to start in the workplace. The process of integrating new employees into the organization or, in other words, onboarding, went online, which seriously

hampered the new recruit's familiarity with the corporate rules and norms: the individual ceased to be aware of being part of a special "organism", where each "organ" understands and shares certain norms and values [19].

Problem statement

In the online format, onboarding loses the most important external condition for the adaptation of a new employee, which determines the format of interaction - the physical workspace that allows employees to actively exchange signs of non-verbal communication [13]. As a result, the employee's job satisfaction decreases, the sense of importance of the activity he or she performs and of belonging to the team is lost [47]. The current practice of online communication is often not perceived as a functional alternative to face-to-face communication [14].

The conditions of the online environment allow constant supervision and control of the worker's actions. However, a number of works analyzing mechanisms of managerial control - for instance, [11; 19; 41] - conclude that during remote activities the employee does not feel the burden of supervision and control by the employer. Online mediated interaction leads to an employee's fear of being "left behind". In the context of online employer-employee communication, the metaphor of "exile" comes into play [19]. It implies that the employee ceases to feel part of the coherent mechanism, feels unrecognized; the construction of corporate identity is disrupted.

As a result, a problem arises: onboarding, which solves the problem of a new employee's adaptation to the team, leads to the opposite result: the employee becomes invisible and feels excluded from the team, despite the additional conditions of transparency and control over the employee's activities created by the online environment. It seems important for us to consider how employees who have experienced online onboarding evaluate the effectiveness of the onboarding process in terms of adapting to the new organization.

Membership in an online format

The conditions of modern organizations, which began long before the pandemic, are characterized by the remoteness of the employee from their employer and colleagues, accompanied by the use of information and communication technologies, which ultimately lead to a "boundaryless" work environment [32] and the increasing independence of the worker [29] amidst the paradox of managerial control [11].

Starting a new job in a new organization comes with the stress of the new environment, so a well organized and executed adaptation process by the organization for the newly arrived employee is important for both parties [4]. Corporate adaptation is the process of adjusting to the new environment, the main goal of which is to quickly and effectively introduce the new employee to the organization by informing him or her about the behaviors required of the employee in the future [22], the structure and rules of the organization as well as the basics of the corporate culture and the principles of the motivation system [49]. Onboarding is traditionally seen as one of the practices of corporate adjustment during the first stages of a new employee's introduction to the organization and the position [4]. Its purpose is twofold: on the one hand, onboarding should be seen as a process aimed at adjustment and welcoming the employee to the new position, preparing him or her for possible difficulties; on the other hand, onboarding allows the employer to introduce the employee as quickly as possible and familiarize him or her with the organizational mission so that this employee starts to bring profit.

Onboarding increases job satisfaction and effectiveness by clarifying mutual expectations and goals [9], internalizing corporate norms, and providing the newcomer with support in times of stress. A psychologically constructed relationship based on the integration of employee and organizational values and goals leads to employees' self-identification with the organization [1]. Lack of a membership is particularly characteristic of employees undergoing online adaptation to the work process: the level of group identity and sense of belonging to the organization is lower in individuals using computer-mediated communication methods compared to individuals performing the assigned task in a physical presence environment [6]. Lack of adaptation in

general can lead to a lack of job satisfaction and a sense of lack of professional competence in employees, leading to a decrease in their productivity in the organization [4].

Features of online onboarding

There are many differences between online and offline onboarding, which often turn into problems for certain activities. First, it is possible to identify features of the physical space when working in an office that have an important impact on both work productivity and job satisfaction [47]: the physical features of the work environment, the internal (arrangement of furniture, size of rooms) and the external structure of the building. It is very difficult for an employee to arrange the workplace at home independently and to separate work and private life [40], which leads to decreased productivity and psychological problems - such as feelings of isolation [31] and fatigue [18].

In the context of online mediated onboarding, the employee lacks the ability to fully use non-verbal communication and interaction in the physical environment [13]. The new employee has no sense of belonging to the structure of the organization despite the opportunities available in the context of online onboarding to engage in the corporate environment [8].

Moreover, the online environment makes it difficult for workers to use the practices of self-presentation - creating a favorable impression of themselves with both “external audiences” (those around them) and “internal audiences” (themselves) [17]. E. Goffmann’s concept of social dramaturgy allows us to consider the workplace as a kind of “theater” [23], where there is a formal and informal hierarchy of roles. The formal hierarchy implies the actor’s performance of the established social roles, guided by the established organizational norms in the process of playing on the “main stage” [17]. “Backstage”, on the other hand, allows the worker to prepare an image of their own self, focusing on the non-verbal signs and reactions of colleagues. In the process of online onboarding interpersonal interactions are embodied in a computer-mediated format, which makes adjustments to the nature of informal communication of actors. Let us also turn to the tactics of impression management [12], which B. Schlenker defines as “the conscious or unconscious attempt to control the images that are projected in ... social interactions” [42]. The use of these tactics involves the use of verbal, non-verbal and expressive forms of behavior [43]. There are also the tactics of changing appearance, which has been considered in the domestic literature by E. Petrova who defined the realization of the visual self-presentation of the image of the self from the position of three semiotic systems [38]: habitus (physical appearance, facial and body features), costume (appearance design: clothes, footwear, accessories, hairstyle) and kinesics (mimics, gait, gestures). In the context of computer-mediated interaction, these tactics may lose their effectiveness.

Panopticum or exile: the use of philosophical metaphors

The mediation of onboarding by an online environment leads us to revise analytical concepts. First and foremost, we considered the philosophical metaphor of “panopticon” [7; 16], since it takes the distribution of managerial control into account [19]. The organization of management control in the online environment is carried out through automated control (control of search queries on the Internet via remote access, downloaded files). As a result of the dispersed nature of control, the “managerial eye” is deindividualized and automated, and an employee may begin using self-control techniques.

However, managerial control can be blurred in online format [20; 28]. An employee (contrary to the panopticon conditions), is controlled willingly, the use of information and telecommunication technologies leads to the absence of physical co-presence of the manager and the employee during work – and blurs spatial and temporal boundaries of control. With the help of technology, an employee gains autonomy and independence, becoming an active subject of communications [35].

“Exile” metaphor [19] refutes the panopticon’s efficiency for monitoring productivity, assuming that an employee remains unnoticed, loses their recognition in front of the organization that ensures the formation of corporate identity. The fear of “exile” is intensified due to the increasing precarity produced by individualization, competition and radical responsibility in

capitalist organizations. As a result, an employee may feel exiled [41], despite the fact that he/she continues carrying out official duties.

Exile has several important properties. Firstly, exile is accompanied by the presence of an organizational center. Lack of the sense of belonging to that center daunts the employee: exile is the territory of exclusion, lack of belonging. Secondly, exile demarcates “inner” and “outer” social spaces. While “inner” space boundaries are usually clearly defined and maintained with the sense of belonging, the “outer” boundaries space are built by the employee themselves.

Methodology

We turned to qualitative methodology in order to get a clear picture of the effectiveness of online onboarding in terms of employee adjustment. A semi-formalised interview format was used to maintain confidentiality and create a welcoming atmosphere for the worker. Our sample consisted of 21 informants aged between 21 and 36, of whom 6 were male and 15 female. Informants were recruited in 3 stages: initially, contacts of HR managers and departments of large employers were sought through social media pages, which we contacted to find informants who had recently undergone online onboarding. Separately, we selected social media pages with recent internship, apprenticeship and school programmes from large companies. This resource allowed us to find informants interns who had participated in online onboarding internships and who could potentially be employed by a company after completing this step. Selection was based on the following criteria:

1. The employee has taken online onboarding in a firm or corporation with more than 100 employees. In smaller companies, the employee has the opportunity to interact more closely with colleagues. In order to meet our objectives, it is important for us to see how online onboarding goes for workers employed by larger companies, which have a higher chance of causing the worker to feel alienated during work processes.

2. The employee had undergone online onboarding less than a year ago. Thus, respondents are more likely to remember details related to the online onboarding experience, and the depth and completeness of responses will be maintained.

3. The employee holds the position of an average executive in the organization or is an intern. This criterion is necessary in order to exclude from the sample informants who do not feel the effects of managerial control (freelancers, self-employed, self-employed).

Speaking in more detail about the sphere of employment of the respondents, it can be noted that their work took place in various, often extremely far from each other, spheres: marketing, information technology, fashion industry, education, consulting.

We faced the following methodological limitations in our research: our sample included informants for whom the experience of onboarding was related to their first work experience. On the one hand, for these informants, the existence of work itself was important, and they paid less attention to the coherence of the onboarding process. On the other hand, informants sometimes took everything that happened during onboarding with an overly positive attitude that this is how it happens in “average” companies. Informants with prior onboarding experience were more balanced about their experience in their current job, which influenced their understanding of this organization’s mission and how quickly they adapted to it.

Another disadvantage of our sample is the presence of informants who had undergone online onboarding as part of an internship. On the one hand, such workers are often more sensitive to onboarding events and employer actions. On the other hand, such informants may have encountered lenient attitudes from colleagues: they may have been given few tasks so as not to be overburdened, or too much “dirty work”. Future studies should limit the number of trainees in order to identify differences in onboarding for workers in different job positions.

Results

Onboarding structure

Before moving on to examine online onboarding in the context of panopticon and exile metaphors, it seems important to define the structure and features of remote onboarding in terms of the features we noted in the experiences of our informants. It should be noted that onboarding

is a part of the process of corporate adaptation [4], but has its own structure. Conventionally, onboarding of a newcomer can be represented as a table (Table 1), where the time of work in the company (horizontally) is associated with the stages of acquaintance with the organization and its employees (vertically).

		Time in company →
Stages of acquaintance with organization	a) Search and absentee impression of the organization <ul style="list-style-type: none"> • <i>Awareness of the organization</i> • <i>Expectation of duties</i> • <i>Maintenance of social networks by employer</i> 	d) The image of the organization formed in the course of the work
	b) Interview as the first communication <ul style="list-style-type: none"> • <i>Preparation and self-presentation of employee</i> • <i>Preparation and self-presentation of employer</i> 	e) The image of the employer formed in the course of work
	c) Getting Started in the Organization <ul style="list-style-type: none"> • <i>Responsibilities of an employee at the onboarding stage</i> 	f) Responsibilities and work characteristics through the lens of experience <ul style="list-style-type: none"> • <i>Employee's transition to state</i>

Table 1. Stages of employment-onboarding

The “absentee” image of the organization is formed by the prospective employee either from feedback from friends and acquaintances or from the image that the employer builds in the online environment. The employer and employee then present themselves to each other during the interview phase, after which the employee is left with the task of presenting himself or herself correctly to their colleagues at the start of the organization in the course of further self-presentation.

Starting work in an organization becomes the first stage of the online onboarding process itself. There are at least three actors involved in this process: the employee who is the focus of the onboarding process, their employer who builds the onboarding process, and the employee's colleagues, a secondary actor who allows the process to be carried out more effectively.

Onboarding, unlike adaptation, has clearer boundaries of duration - the amount of time spent onboarding. In the informants' experience, it depended on the degree to which the process was organized and the employer's clear position on the issue. On average, online onboarding lasts from 2 weeks to 3 months [4].

During online onboarding, the employer's actions might be divided into formal and informal ones. The former have an orderly, strict form, fixed in the organization's formal documents or reflected in corporate culture values [4]. These include providing an employee with an onboarding plan; having a mentor / supervisor being a colleague with work experience in the organization, who can help the newcomer quickly master the tasks entrusted to him; getting to know the team and choosing the format of the acquaintance; online meetings at the request of the employee (in case the employee experiences notable difficulties in performance), regular meetings for discussion of current tasks; instructing (formalized actions, involving the preparation of clear instructions by the employer, with possible subsequent inspections). We should also note feedback for companies with an open structure, it is operational and serves as a tool for the formation and consolidation of corporate culture, a marker of the positional hierarchy [47]. Feedback can be one-sided - the employee does not have the opportunity to respond to it, receives only comments about the need to refine the job done; two-sided, if the employee has the opportunity to enter into a dialogue, clarify the situation and even dispute the employer's comment. There may be no feedback, when an employee receives orders that are not subject to discussion. Employer's informal actions are associated with accelerating the employee's

adaptation through tools that do not imply a clear organizational plan: joint leisure, intra-collective communication on personal issues in online chats, etc.

An employee is not a passive recipient, who just accepts help from an employer, but an actor to whom requirements and role expectations are imposed. Thus, the employee turns out to be a full-fledged member of the organization, involved in the corporate culture. That is why one of her actions may be demanding feedback. In organizations with a flexible structure [44], employees had the opportunity to show initiative, which consisted in the possibility of expanding their functionality and responsibilities, introducing new actions to optimize work processes or create innovative ways to solve problems: *“Well, I can text [co-workers] and agree and initiate new tasks myself. Direct bridging leads to the fact that I feel involved, because I have already texted to almost everyone I could text, arranged meetings with everyone”*.

It is important to note that showing initiative by the employee herself is regarded as an opportunity to represent oneself, to demonstrate one’s expertise. Involvement in work processes increases, and there is a positive influence on the sense of belonging formation [10].

Disadvantages of online onboarding

The online format of onboarding makes adjustments to a new employee’s self-presentation techniques and work structure, and thus to the corporate onboarding process. We noted the difficulty of ensuring the involvement of a newly arrived employee in work processes and intra-collective discussions due to home conditions in which it can be quite difficult to organize a productive workflow, which correlates with previous studies [40]. Newcomer workers often find it difficult to separate work and personal life, which leads to violations of the boundaries of personal life, weakening of self-discipline, overwork, as well as health problems. This also correlates with the results of previous studies of the online format of work activity, who noted a decrease in productivity [31] and concomitant psychological problems [18].

The lack of face-to-face communication makes it difficult to build trusting relationships with colleagues. Thus, it can lead to corporate non-adaptation and burnout - a lack of job satisfaction in the organization. A similar conclusion was obtained by T. Bauer: a non-adapted employee can be dissatisfied with their job and not feel their usefulness in the organization [4].

Some are frightened by the possibility of appearing irresponsible, of giving a false impression of themselves because of the technical errors that inevitably occur in online communication: *“On the other hand, I was afraid that because I couldn’t connect, I might be seen as irresponsible in absentia and so on”*.

Moreover, in computer-mediated communication there are difficulties in being able to impress colleagues, to be remembered by them at least in appearance. Prolonged experience of online work can make offline communication difficult or impossible at all: *“I have encountered that if hypothetically I were to go into the office, I realize that I would have the feeling that I did not know these people”*.

Let us take a closer look at the disadvantage of online communication, which is the lack of non-verbal communication between employees. At the interview stage, job candidates have the opportunity to successfully present themselves to the employer, partly because it is common practice to prepare for an online interview by taking the impression of the organizations at a distance and highlighting their distinguishing features, as employers place great emphasis on their image in the online environment. Attitudes towards mandatory camera inclusion and decent appearance in the interview were highlighted, which correlates with impression management theory [12], according to which job candidates behave like theater actors, using “scenery” to create a certain impression of themselves on the “main stage” [23]. In a number of interviews we encounter the position that in online meetings one should formally introduce oneself and talk about one’s experiences, to be friendly. Also some informants thought about not only their speech but also its timbre in the “backstage” before meeting the employer [17]: *“I usually try to play with my voice: with some confidence to speak, with calmness, as I prepare myself for what I am going to say”*.

However, in further self-presentation to colleagues and employers, there are difficulties in using self-presentation techniques. First, in an online communication format, especially in text format, it is very difficult to understand the intonation with which the interlocutor writes the message, which can lead to a false negative image of colleagues or management. Moreover, it is almost impossible to understand from a chat message the “level of urgency of the task” assigned to the newly arrived employee.

Secondly, we highlighted the inability to use eye contact as a self-presentation technique in online communication. The gaze ceases to be effective in its signaling function when exchanging lines [37], which can lead to breakdowns in communication. The inability to use oculusics (eye contact) as a language, often able to completely replace verbal communication [39], leads to slower working communication, as gaze provides “feedback on the interlocutor’s behavior and degree of involvement in the communication” [37]: *“Office experience shows that if everyone is in the same space, communication goes faster. If someone asks a question and another person is around, he or she will answer. Maybe not with words, but with a gesture, a look or some emotion”*.

Thirdly, in an online format, informants find it difficult to do without the full use of gestures. The camera creates “its own redundancy” due to the limitations of the quality and location of the camera in computer devices. Also, the online communication format allows colleagues to know only a small fraction of the gestures used daily in the offline environment, which leads to complications in the self-presentation of newcomers. In addition to the difficulty in gesturing and reading the gestures of interlocutors, informants also point out the inability to physically approach colleagues in the online environment, e.g. by using touch, hugs or handshakes. This is particularly acute for informants who have experience of learning specific body practices for self-presentation in a new team.

Finally, we highlighted the inability of adonisation - literally, beautification - as a way of self-presentation [27] in an online format. The inability to show one’s costume [38] - clothes, shoes, accessories, hairstyle - can lead to a newcomer feeling insecure, not being able to present oneself to others in familiar techniques. This insecurity in ‘inner audience’, in turn, can hinder the creation of a favorable impression of oneself in the ‘outer audience’ [36].

Thus, the analysis of the online onboarding experience highlights a number of problems at the psychosocial level that have already been mentioned in previous studies: difficulty in ensuring inclusion, problems with self-discipline [5], overwork [18] and feelings of isolation [31]. A key disadvantage that gives rise to other problems is the difficulty in balancing work and personal life, which has also been noted by predecessors [26]. Due to the inability to find a balance between family and professional responsibilities, the above mentioned problems arise, which may eventually lead to burnout [30]. Another set of problems is related to the fact that in an online mediated onboarding environment it has been suggested that the employee loses the opportunity to fully use non-verbal communication and interaction in the physical environment [13], however, in the interview stage employees still manage to successfully use techniques such as facial expressions and intonation due to their distance awareness of the employer’s image. In further self-presentation to colleagues and management, the attitudes regarding the effectiveness of using intonation and facial expressions do not change as long as the camera and microphone are switched on, but the use of adonisation is not possible. Alongside this, gesticulation also cannot be considered an effective technique for creating or maintaining one’s image in an online environment.

Advantages of online onboarding

Many studies of remote working activities have concluded that the online format has numerous economic advantages: savings in travel time and reduced clothing and cosmetic costs, more efficient use of working time [24], higher productivity [2] and better coordination and organization of work tasks [3] due to the use of new information and communication technologies. However, along with the listed advantages of the online format, we were able to

identify the perceived advantages of remote onboarding related to the psychosocial state of workers based on the informants' responses.

To begin with, some of the benefits of the online format that were identified in interviews with informants were consistent with previous research; the savings in travel time and the ability to work flexible hours. The general comfort of remote, not being tied to any geographical location, onboarding was noted.

Further, it is easier to receive and perceive information, communicate and interact with colleagues in an online format, with less psychological and emotional cost of these processes. First, being able to access information repeatedly allows for effective inclusion in work processes and therefore has a positive effect on employee productivity, which directly affects the image of the newly arrived employee with colleagues and management: *"I feel comfortable being written to more often, rather than being asked questions head-on. I can, for example, reread an obscure assignment or letter"*.

Secondly, in the online format, it is easier to approach a colleague you do not know in person with a question. In addition to the fact that finding the right employee is much easier, contacting a colleague does not require a lot of physical and emotional effort compared to the offline format: *"You don't have to push yourself and go to a strange office where strange people are sitting, and you don't know what the person you need to ask a question looks like. And here you just go into a chat room, you see that the names match - I'll write now. It's convenient"*.

Moreover, the online format facilitates scheduling a meeting as there is no special time and place to have a one-on-one meeting or to receive feedback from the organization's manager or a senior colleague.

Thirdly, the online format of activities can reduce the likelihood of conflict as the presence of external factors (sounds, smells, etc.) is mitigated and the degree of emotional tension due to the constant presence of each other is reduced.

Finally, it is important to point out that developed texting becomes one of the main advantages of the online format, while being only a substitute for real non-verbal communication. In dialogues with colleagues and management, workers have an impression of the grammatical features of the text messages they send: the presence or absence of commas and their spacing in the message; the sending of emoji; the use of reactions in messengers, which can mean either an additional reading notice or some point in the communication: *"As if just reading the message is not enough. It feels as if one has to keep communicating until it is impossible to continue. And so the reaction to the message then becomes a finality of sorts..."*

Emoticons help to lower the "working heat" in chat rooms, to build and maintain contact with interlocutors. Messages are not only used to convey "dry" information, but also to express emotions, as texting is more similar to spoken language than traditional writing [33]. Therefore, texting is a new way of communication, namely a written form of spoken language [21], which helps to better understand the mood and intonation of the interlocutor, building relationships becomes easier.

Summing up, the advantages of the online onboarding format that have been identified by previous researchers - time saving, cost reduction, efficient use of working time [24], high productivity [2] and better coordination and organization of work tasks [3] - can be complemented by us. First, in an online format it is easier to receive and perceive information, to communicate and interact with colleagues, while having less psychological and emotional costs from these processes, as there is the possibility of repeated reference to information, no need for personal contact with unfamiliar colleagues, and less potential for conflict. Secondly, developed texting becomes one of the main advantages of the online format, as it allows to partially make up for the lack of non-verbal communication [13] (intonation, mood, etc.), which positively influences the construction of trusting relationships with colleagues by management, which, in turn, is an indicator of successful corporate adaptation [22] and effective onboarding [6].

Perception of online control mechanisms by employees

During online onboarding employees are supported with automated control mechanisms. We found out that the use of IT is inextricably linked with the execution of both work and everyday tasks, so control mechanisms in use are not perceived as violating personal boundaries - their perception is determined by weakening of managerial control. Our results confirm the results of the 2014 study by O. Leclercq-Vandelannoitte et al.: the blurring of managerial control [28] is an important transition point in the emergence of an employee's "exile" feeling.

The weakening of managerial control takes place in several tangible features. Firstly, managerial control in effective onboarding takes the form of horizontal control, a situation when an employee is supervised by fellow employees, and each member of the team feels responsible for the performance [45]. Accordingly, there is no clear entity inspecting task completion.

Secondly, (as mentioned in the theoretical framework of the study) the organizations we considered often were boundaryless as a result of working in an online environment [32]. Thus, an employee has an opportunity to work anywhere, at any time, and an employer can flexibly and quickly change tasks to meet current problems [28]. However, the limitlessness of work leads to the fact that a newcomer can carry out their duties at any convenient time remaining unnoticed, and control in this case takes place according to the results of performance.

On the other hand, organizational flexibility leads to structural uncertainty [48]: the responsibilities of employees are mixed, no clear center setting tasks. An employee may be left without work assignments because senior managers did not receive recommendations on what tasks are priority for them. As a result, uncertainty in the organization structure about to whom the employee presents the result of their performance emerges.

The result of managerial control weakening and freedom increase is the emerging internal self-control mechanism used by an employee, which assumes responsible task completion, despite the flexibility of work in an online format. Tasks can be performed at any time, but it does not free one from responsibility: *"And I just have some internal level of responsibility that does not allow me to do nothing at all. It seems to me that control doesn't change much because of online [format], ... when you have all the work in your laptop, everything is fine"*.

Thus, the obtained results regarding the perception of control mechanisms in the online environment coincide with the results of previous studies on use of communication technologies in the organization of control mechanisms [20; 28; 45]. The emergence of technologies and mobile devices leads to their spread in work and everyday life. The perception of control mechanisms is changing: they are not considered as violating personal boundaries. However, such mechanisms lead to a blurring of managerial control, which is manifested in the absence of a clear control center [11] as a result of the horizontal nature of control and structural uncertainty.

The exile phenomenon during online onboarding

When the blurring of managerial control becomes noticeable, an employee's fears remain unnoticed by management as a result of lack of control and accountability - the exile phenomenon [41]. Based on the obtained data, we found that exile manifestations can be divided into two main groups: remoteness from the center and lack of corporate culture.

The first group assumes a special position of the employee, in which they find themselves distant from their direct supervisor, the so-called center [19]. It manifests itself in the autonomous position of the employee in the structure of the organization. The employee gains the opportunity to independently form a plan for the task execution and decide on the quality of her performance: *"Because the company believes that the analytics department can work in isolation, that they do not need help to structure their work, that they are not small children and can cope on their own. This is true, because none of us need any kind of corporate get-together"*.

During the initial analysis, we concluded that analysts or IT specialists occupy such a position in organizations [25]. However, in the course of a detailed analysis, we came to a conclusion that remoteness is also the result of structural uncertainty. When the shift in employees' responsibilities or lack of sufficient clarification of the scope of a newcomer's responsibility is not eliminated during onboarding, a newcomer feels remoteness from managers.

“Lack of corporate culture” is the next group that allows us to consolidate the signs associated with the position of an employee in the structure of social and official relations: presence in the inner or outer social space [19], global processes misunderstanding. The presence in the inner social space assumes presence of the closest colleagues, with whom a worker interacts daily, most often effortlessly (except for employees in an autonomous position) thanks to daily online team meetings.

However, the presence in outer social space, which involves interaction with larger structural units of the company [19], may cause difficulties. An employee experiences difficulties building spatial boundaries and filling that space. Entering it requires additional costs for finding actors that can engage an employee in a branch of the network with which they do not interact. Structural holes emerge [50]: “But as it turned out, our company is not limited to that circle of people... For example, I often interact with some different colleagues at work, and on those rare occasions when I come to the office, it may be that I'm sitting there replying to a colleague's letter, and they may be present in the office, and I won't even say hello to them, just because I don't know their face”.

Another indicator was the lack of understanding of global processes in the organization: the work of other departments or companies that are part of the holding, their interaction. In online format, meetings mostly include colleagues within the same team. Meetings of all employees are formalized and do not allow building social ties [50]. This does not allow the employee to get involved into the organizational network during the online onboarding period and can lead to a feeling of isolation from the organization as a whole [19].

We found out that online mediated interaction during the onboarding period faces problems related to manifestation of the exile phenomenon. Remoteness from the center confirms that in the online format, exile becomes more prominent. Earlier studies came to the same conclusion [41], [7]. The lack of corporate culture is a sign that allows us to enlarge the manifestations associated with the position of an employee both in structure of social ties [19] in structure of and official ones. Thus, we found that the difficulties of the employee associated with exile, during online adaptation, are perceived by them painfully, because they lead to employee non-adaptation.

Difficulties of online onboarding in various types of organizational structures

We found out that the effectiveness of online onboarding also depends on an external factor which is a type of organizational structure of the employer company – a model of internal division of functions, roles, power and influence in the organization [34].

Thus, there were features of rigid organizational structures with bureaucratic characteristics [51]: promotion in accordance with positional experience, performance strictly in accordance with functional responsibilities with complete separation from management means, without possibility of assigning a place in positional hierarchy. The latter features lead to formation of a sense of alienation in the employee, since their individual contribution to the achievement of the organization's mission seems meager [19]. An employee can feel like an easily replaceable part of a huge mechanism.

We observed completely different situations in organizations with flexible organizational structure [44]. Such organizations were characterized by an employee's involvement in decision-making, the possibility of dialogue with the employer, flexibility in case of changes. Employees in such organizations can interact with senior colleagues freely, taking the initiative in problem solving. The employer is interested in the employee's result, so flexibility is allowed (regarding the time and format of performance).

However, flexible organizational structure leads to difficulties. Firstly, flexibility regarding a professional's position in the organizational structure can lead to its autonomy, but it in turn causes a feeling of “disconnection” from the team [15]. In this case, an employee does not feel being a part of the organization, since they does not feel unity with colleagues based on corporate values. Involving an employee in corporate culture becomes difficult.

Moreover, in flexible organizations, the aforementioned structural uncertainty problem emerges. It leads to the fact that some employees may find themselves without tasks or not get a detailed clarification of their job responsibilities, which also leads to a feeling of “disconnection” from the processes [41], reducing employee motivation.

As we have seen, each type of organizational structure during online onboarding faces a feeling of alienation or “disconnection” from the collective – in other words, the exile. Thus, the evaluation of online onboarding effectiveness is associated with the manifestation of various features of the exile phenomenon.

Evaluating online onboarding effectiveness

The exile phenomenon during employee’s adaptation in an online environment, as well as the external conditions set by the organizational structure, have become factors determining the effectiveness of onboarding. As we stated above, organizational structure creates the external conditions in which online onboarding takes place. Difficulties emerging in various types of organizational structures during online onboarding correspond to signs of the exile phenomenon. Thus, we came to the opportunity of evaluating the effectiveness of online onboarding in terms of employee adaptation. We have developed a scheme that allows us to typologize employers (In our study, the employer will be understood as the director of a legal entity in the form of an LLC, JSC, PJSC, ANO, CJSC who hires employees for a certain position to perform a certain type of work with the conclusion of an employment contract. It is important to note that in the context of managerial control, we will contact the employer's subjects represented by team leaders, heads of departments responsible for carrying out adaptation measures, and HR managers), according to the degree of effectiveness of online onboarding.

The scheme is a two-dimensional space that allows us to consider employees’ perception of online onboarding, depending on the external conditions formed by the type of organizational structure and degree of exile signs intensity. Along the vertical axis: top – a rigid organizational structure with clear and strictly defined functional responsibilities and complete alienation from management means, without the possibility of assigning a position in hierarchy; bottom – flexible structure assuming the employee involvement in decision-making, the possibility of building an open dialogue with the employer, flexibility in case of changes. Along the horizontal axis: on the right – exile is represented by the characteristics assumed by us hypotheses: the employee's perception of employer as a “center”, the construction of boundaries of social space in the organization and fear of “exile”; on the left – involvement is represented by the unity of value orientations and the strength of relationships with colleagues, as well as the consistency of the activities of employees, prominence of corporate culture.

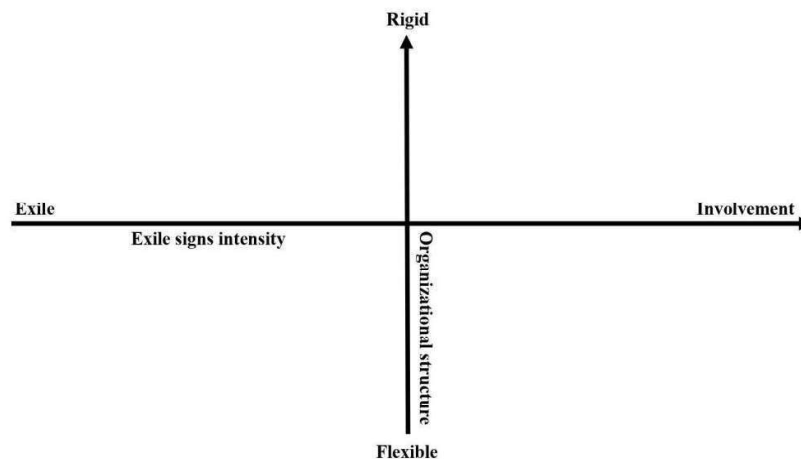


Figure 1. Axes of the effectiveness of online onboarding evaluation scheme
Source: constructed by the authors of the paper

It should be noted that this analytical space is universal and allows us to place on it an employer with any combination of features used in the scheme. Further studies should verify these schemes using quantitative analysis methods on representative samples data.

Memo to employers

The aim of our study was to determine how employees faced with online onboarding evaluate its effectiveness in terms of adapting to the new organization. What was important to us is the application of the 'optic lens' of the expulsion metaphor to analyze the impact of the online environment on the process of adaptation. The analysis produced theoretically useful results that could influence the emergence of further research on onboarding practices in the online environment. However, it is worth noting that our research is not without practical benefits. We did not aim to generate practical advice for employers on online onboarding, but identifying the main difficulties faced by employees led us to create a memo for employers on possible difficulties and how to deal with them. The tips were developed in terms of conducting effective online onboarding in a way that allows for the most complete and planned immersion of a new employee into the organizational environment. The full memo can be accessed by the reference or in the appendix [46].

Conclusions

In this study, we used an unconventional approach to online adaptation of newly arrived workers - the exile metaphor [11; 19; 20; 41]. It assumes that the employee does not feel like a part of a well-coordinated mechanism, feels unrecognized, and corporate identity construction is disrupted [11].

The study aimed to evaluate the effectiveness of online onboarding in terms of adaptation. However, we faced a difficulty: research papers often consider onboarding as a part of corporate adaptation [4], which is confirmed by collected data. Insufficient problematization of online onboarding as an independent process that lays the foundation for an employee's corporate adaptation (both in the experience of our interviewees and in current research) leads to the fact that effectiveness of online onboarding assessment is associated with the prominence of processes which make it difficult for an employee to adapt online - exile [9; 41].

Currently, we observe that the online format modifies usual scenarios of interaction between an employee and fellow workers, on which previous researchers also agreed [6; 13]. Such self-presentation techniques as intonation, facial expressions and neat appearance [23] work effectively. They are actively used both at the stage of the first acquaintance with the employer, and during further communication with colleagues. However, some practices of nonverbal self-presentation (habitual and effective for some employees), such as adonization (demonstration of an attractive appearance, especially elements of a suit) [27] and gestures, lose their effectiveness in computer-mediated interaction after taking office.

Some of the remote onboarding practices may remain useful for a newly arrived employee: the presence of a colleague of the same level as a mentor, the involvement of an employee in understanding business processes, the presence of online chats with colleagues where they can discuss informal topics, congratulate each other on holidays: also instructions, checkpoints and edits on the interim work results. All of these may make an employer perceive the experience positively. However, one should not omit the absence of excessive loyalty to online onboarding, consisting in accepting it as effective even if feelings of non-inclusion [15] and non-adaptation [4; 22] are obtained as a result. This may be due to the peculiarities of our sample: it only included interviewees for whom the experience of online onboarding or working in a large company was the first in their lives.

In this study, we found out that the effectiveness of online onboarding should be evaluated from the perspective of two factors: the external conditions set by the organizational structure in which online onboarding takes place, and prominence of the exile phenomenon, which may be inactive or active. In the former case, the employee adapts and is included in the organization, in the latter one she is unadapted and disconnected from the team and the organization. Moreover,

the prominence of the exile phenomenon, as we found out, is associated with problems encountered during online onboarding in different organizational structures. It should be noted that the identified features that allow us to evaluate the effectiveness of online onboarding and typologize employers depending on the efficiency level achieved, ought to be tested on representative samples using quantitative analysis methods.

It should be noted that in our study, a group of informants whose online onboarding ended up in layoff turned out to be omitted. It seems important to analyze this group's experience of online onboarding in further research, since it will allow us to consider online onboarding as an independent process.

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Influence of conflicts of interests on Russian companies' performance

ABSTRACT.

Over the past two years the Russian economy has witnessed a growing number of corporate conflicts that is a fundamental part of corporate governance; however, insufficient research has been dedicated to this market. This paper investigates conflicts of interests and their influence on Russian companies' performance. The general purpose of the study is to analyze the concentration of large shareholders' shares and dividend payments and their impact on corporate performance. The sample comprises 90 listed Russian companies covering the period from 2009 to 2021. Regression analysis is used, and fixed-effects models are estimated to empirically test the research question. The results show a negative effect of the conflict between the largest shareholder and minorities on the return on assets and a positive effect on the Tobin's ratio. There is no effect of conflicts between the two largest shareholders on firm performance. The conflict between shareholders and creditors increases the return on assets.

Keywords: *conflicts of interest; ownership structure; performance; corporate governance; large shareholders.*

The structure of ownership and conflicts of interests in developed markets has been in the research focus due to a significant impact of the effective management of disagreements on business performance. Previous papers have developed a great variety of tools to evaluate possible effects of concentrated ownership on the company's efficiency. One prevalent method employed to examine corporate conflicts involves estimating panel data models.

However, there is some evidence that no researchers apply econometric methods to analyze modern Russian companies. Besides, most foreign authors seem to focus on the classical "principal-agent" problem (a conflict between managers and shareholders). Only a few authors investigated the "principal-principal" problem (a conflict between shareholders), which is more typical for Russia, but the results obtained seem outdated.

The purpose of this paper is to analyze the percentage of shares held by large shareholders and dividend payments and their impact on firm performance.

In order to achieve the goal, the following objectives were formulated:

- 1) to analyze the scientific literature devoted to conflicts of interests in developing economies;
- 2) to make hypotheses about the selected types of conflicts;
- 3) to form a database containing 90 Russian listed companies;
- 4) to test the hypotheses by evaluating panel data models;
- 5) to interpret results and draw conclusions.

The research question of this paper is to investigate how conflicts of interests between large and small shareholders, several large shareholders, and between shareholders and creditors influence Russian companies' performance.

Numerous attempts have been made to provide a firm basis to the research into the conflicts of interests in the corporate environment, particularly the Russian corporate environment, characterized by significant institutional transformations. After the mass privatization in the 1990s, most companies focused on achieving long-term results that satisfy interests of a wide group of stakeholders rather than a small group of individuals [10, p. 29]. The consequence of such changes was an increased demand for competent management of business processes, namely corporate governance.

The alignment of the interests of various parties in a company (shareholders, employees, counterparties, customers, and others) is recognized as a fundamental element of corporate governance [18, p. 159], whose well-designed system is intended to minimize disagreements between participants about the economic activities of the firm and to prevent corporate conflicts or conflicts of interest (COI).

Stepanov and Gabdrakhmanov [22, p. 45] revealed the following types of corporate conflicts: between large and small shareholders, between small shareholders and management/board of directors (including in a state-owned company), among large shareholders, between shareholders and creditors. The authors argue that two main factors influence the emergence of various types of conflicts: the institutional environment, including national laws and culture, and the ownership structure in the company. A high level of concentration is more common in countries with poor shareholder protection and high private benefits of control [16, p. 1145].

Enikolopov and Stepanov [6, p. 243] highlight the following peculiarities of the Russian institutional environment:

- 1) weak legal institutions;
- 2) high private benefits of control;
- 3) underdeveloped capital markets;
- 4) high level of ownership concentration;
- 5) significant share of state ownership in companies engaged in strategic industries.

Business expansion demands that owners transfer the control over the company to hired managers who are skilled and experienced to run their business. A greater discrepancy of interests and asymmetric information results in a principal-agent problem as managers have incentives to infringe owners' interests [8, p. 330]. Corporate governance allows mitigating the negative consequences of this problem.

In a conflict with managers, large shareholders are "victims" because they are forced to control management to avoid misconduct toward cash [13, p. 493]. Management has discretion over cash, and therefore it is easy for them to benefit at the expense of a top shareholder.

In a conflict between large and small shareholders (a principal-principal problem) large owners are "aggressors" that tend to infringe the minorities' rights [13, p. 493; 21, p. 2298]. Stepanov and Gabdrakhmanov [22, p. 45] claim that controlling shareholders are not interested in maximizing shareholder equity as they have an opportunity to carry out transactions that benefit them but abuse minority shareholders. These transactions may include transfer pricing, asset expropriation and stock dilution [17, p. 13]. Harford et al. [12, p. 354] prove that controlling owners are enabled to reap private benefits from running a company.

This conflict is typical for underdeveloped institutional environments with low dividends and poor protection of minority shareholders as weak legal institutions and problems with property rights cut costs of opportunistic behavior [14, p. 56]. There are various ways to expropriate small shareholders by large blockholders: mergers and acquisitions [3, p. 524], management remuneration [24, p. 791], and raising more debt [7, p. 89].

Numerous prior investigations emphasize that the ownership structure of most Russian companies includes several large shareholders [15, p. 119; 17, p. 4]. A scope of disputes over management methods, business processes, and profit distribution may force them into a conflict that have both negative and positive impact on firm performance. The advantages of conflicts among large shareholders include the mutual control as they limit each other from opportunistic actions and prevent project implementation violating the interests of other parties [11, p. 2]. Moreover, voting for important decisions, large shareholders compete for minorities' votes to gain their support that creates benefits for small owners [1, p. 2]. Some authors suggest that the ownership structure with large shareholders can reduce agency costs, increase efficiency, and raise additional investments [23, p. 144; 20, p. 463]. Concentrated ownership, however, may lead to delays in making and implementing key decisions [11, p. 2], a fierce struggle for control and distract board of directors from developing long-term strategies [17, p. 14].

When raising debt capital to finance its activities, a company may face a conflict between creditors and shareholders. Makarova and Elkov [19, p. 67] claim that creditors are interested in maintaining the current level of risk and capital structure as it guarantees a fixed income to cover liabilities. They have incentives to hedge against adverse effects of uncertain future earnings as a source of loan repayments. Shareholders and managers, by contrast, strive to make high profits and maximize company's value in the long run. They are inclined to vote for high-risk projects that contribute to a high profit margin and comply with goals of owners and managers [4, p. 322]. This conflict is typical of Russian enterprises due to the predominance of bank loans in the sources of external financing.

Bradley and Roberts [2, p. 27] show that a conflict between creditors and shareholders manifest itself in the following cases:

- 1) underinvestment problem. Owners and managers are obliged to make payments from the cash flows generated by investment projects in favor of creditors. They are thus forced to abandon projects due to the lack of sufficient funding and possible bankruptcy;

- 2) overinvestment problem. Shareholders undertake high-risk projects even with negative net present value (NPV) because they are only liable to the extent of their share in the equity. These projects impair the debtholders' welfare because the possibilities of a borrower to cover the debt are reduced. Improvements in the owners' welfare and deteriorations in the lenders' welfare associated with overinvestment decrease company's value;

- 3) the debt issuance of a higher priority. Financing new risky projects, most shareholders tend to issue a new debt of a higher priority because existing lenders demand a higher interest rate. In this case, the risk of default is shifted to the previously issued debt that essentially finances a new investment project. To prevent this problem, lenders impose covenants, in particular promises to refrain from specified actions that impede investment activities and business management;

- 4) dividend payments. As a rule, shareholders prefer to finance investment projects at the expense of borrowed funds. They do not tend to direct the net profit to these activities as it is a source of dividend payments to shareholders, thereby transferring more risks to creditors whose welfare is redistributed to the owners [5, p. 282].

Makarova and Elkov define wealth redistribution as "an improvement of one group's welfare at the expense of another group's welfare" [19, p. 72]. The researchers note that this situation indicates a decrease in company value due to agency costs. The maximum value of the firm is achieved through maximized welfare of both shareholders and creditors [9, p. 282]. Any

deviation from this equilibrium declines company's value. Thus, a conflict between shareholders and creditors accompanied by a wealth redistribution has a negative impact on the market value.

To conclude, corporate conflicts have an ambiguous impact on financial indicators. On the one hand, large shareholders have incentives to control each other and managers and contribute to the long-term growth of the company. On the other hand, they are likely to be risk averse that reduces investment activity and company value. Conflicts are considered to delay the decision-making process and expropriate minority shareholders. Conflicts between shareholders and creditors disrupt the equilibrium of maximized wealth and thus declines company value.

Based on the literature review, three hypotheses were put forward:

- 1) conflicts between the largest shareholder and minorities have a negative impact on the companies' performance;
- 2) conflicts between the two largest shareholders have a positive impact on the companies' performance;
- 3) conflicts between shareholders and creditors have a negative impact on the companies' performance.

There are various approaches to measuring a conflict between shareholders. Most researchers appear to focus on the percentage of shares held by the largest shareholder. It is relevant to a sample containing many companies with a high share of ownership of the largest shareholder. The second approach involves the Herfindahl-Hirschman index that takes into account the asymmetric distribution of shares.

This research uses the percentage of shares held by the largest shareholder and the second largest shareholder as a measure of a conflict between shareholders. The shareholding structure of most Russian companies combines stakes of minorities in American Depositary Receipts (ADRs), therefore it is impossible to collect data for their individual shares.

Additionally, there are numerous methods to investigate a conflict between shareholders and creditors. The market-to-book ratio shows the company's growth potential that leads to the asymmetric information faced by creditors in an agency conflict. Bond covenants can decrease a size of dividend payments, which means a poorer welfare of shareholders. The other approach involves dividend payments to net income ratio as the size of these payments leads to a wealth redistribution between shareholders and creditors.

This paper employs the dividend payments to net income ratio to analyze a conflict between shareholders and creditors since it enables leveraging available data and considering the Russian institutional settings.

The choice of a model is caused by the panel data applied. The sample consists of 961 observations of 90 listed Russian companies in the period from 2009 to 2021. It includes information about the financial indicators and capital structure. Panel financial data comprises unobservable individual characteristics of firms, such as corporate culture, a product range, a quality of corporate governance. Fixed effects models were chosen to address the problem of endogeneity.

Variable	Model 1 dependent variable ROA	Model 2 dependent variable the logarithm of Tobin's Q
Share of the largest shareholder	-0,061* (0,0348)	0,5743*** (0,2038)
Share of the 2nd largest shareholder	-0,1192 (0,1502)	0,0945 (0,8783)
Share of the largest shareholder * Share of the 2nd largest shareholder	0,2766 (0,2701)	0,3832 (1,58)
Dividend payments to Net Income	0,0661*** (0,0238)	0,2181 (0,1397)
Logarithm of age	0,0329** (0,0138)	-0,5044*** (0,0809)
Logarithm of size	0,047*** (0,0138)	0,285*** (0,0815)
Financial leverage	-0,0362*** (0,0106)	-0,2018*** (0,0627)
ROA	–	1,2293*** (0,2212)
Share of the government	0,001 (0,0301)	-0,217 (0,1761)
Share of the oligarchs	-0,045* (0,026)	0,0734 (0,1521)
Intercept	-0,4218*** (0,1285)	-2,0561*** (0,7569)
Number of observations	792	792
R2-within	0,0753	0,1285
F-statistic	6,32***	10,28***

Table 1. Regression model estimates

Significance level: * – 10%, ** - 5%, *** - 1%.

The results are presented in Table 1. The share of the largest shareholder is significant for both models with different signs. The share of the second largest shareholder and the joint effect are insignificant. Dividend payments to net income ratio are significant for the first model with a plus sign.

The research findings reveal that not all hypotheses have been proved. First, conflicts between the largest shareholder and minorities have a negative impact on the companies' performance, but only on a return on assets (ROA), while Tobin's Q is positively influenced. This could be explained by a high concentration of ownership that contributes to resolving conflicts between managers and shareholders, which, in turn, increases the company value.

Second, disagreements between two large shareholders do not significantly influence the financial performance of an enterprise since most large Russian companies belong to a single majority shareholder and the stake of the second shareholder is not essential.

Third, conflicts between shareholders and creditors prove to positively influence companies' return on asset. The dividend payments to net income ratio, which is used in the research, may not only indicate the conflict existence. High dividends are likely to be used as a signal for potential investors, whose finances tend to contribute to increased profit and ROA.

To summarize, conflicts of interest is an essential part of the company's operation. An effective system of corporate governance aims to mitigate differences of views and improve firm efficiency. Therefore, the study of conflicts and ownership structure seems to be of particular importance for researchers and managers.

Nevertheless, there is a research gap that involves the lack of sufficient empirical analysis based on modern Russian companies and application of the existing approaches to developing markets. Hopefully, this study fills the literature gap and sheds light on possible consequences of different conflicts. The key findings figure out that the impact of corporate conflicts on the performance depends on the ownership structure.

This paper has a number of limitations since the sample for some companies lacks a piece of financial information and the shares of minority shareholders are not considered. Hence, possible areas of future research may bring value by expanding the sample to cover the missing financial indicators.

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Special Nonlocal Problems for the One-Dimensional Transport Equation

ABSTRACT.

This paper presents a study of a time-nonlocal problem for the one-dimensional transport equation on a semiaxis using semigroup theory. The problem is considered in a Banach space over the field of complex numbers. We study the case in which the function defining the incoming flow is identically zero. We also indicate necessary conditions for the semigroups obtained during solving the problem to be superstable, i.e., have an infinite negative exponential type. In this paper the results of the article [7] are used. In that article, a general method for solving similar nonlocal problems for differential equations in a Banach space has been presented. It was required to confirm the theory of [7] by a numerical study for the transport equation. The superstability of semigroups is a significant advantage in solving the problem since it allows us to have a wide choice of input data. Taken this approach, the problem can be solved by using a simple iterative method that can be easily implemented in practice. It is also shown that the solution is represented by a rapidly converging Neumann series. A high efficiency of this method has been confirmed during numerous computational experiments.

Keywords: transport equations, superstable semigroups, iteration method, time-nonlocal problem, superstability conditions, Neumann series.

The transport equation is one of the fundamental equations in mathematical physics. It describes the transportation of physical quantities (for example, mass, energy, radiation) in an environment. The solution of various problems for the transport equation is used in numerous fields of science and technology, from astronomy and hydrodynamics to medicine and industry. Linear inverse problems for the transport equation often arise in applied mathematical physics.

In this paper, we study a nonlocal inverse problem for the one-dimensional transport equation on a semiaxis. A method for solving this problem is considered in the case when the function that specifies the incoming flow is identically zero. It is required to determine the initial state of the system according to a known nonlocal condition. The main goal of this study is to develop an algorithm for solving the problem and to conduct numerical experiments testing this algorithm.

While studying the problem, we primarily use the result obtained in the article [7], which suggests a general algorithm for solving a linear nonlocal problem for a differential equation in a Banach space. We also use information from the paper [9], where we study conditions for generation of a superstable (quasi-nilpotent) semigroup by a differential transport operator. In this work, it has been demonstrated that under certain conditions imposed on the function that defines

the transport coefficient, we can obtain a quasi-nilpotent semigroup. The method of solving the problem with the help of superstable semigroups makes it possible to widely vary the input data. Theoretical information about quasi-nilpotent semigroups was taken from the article [1].

In this paper, a general method for solving the nonlocal problem is presented and explicit resolving formulas are obtained. Also, information from functional analysis and the theory of semigroups has been used (see [2], [4], [6]). Further, the work of the constructed algorithm is tested on specific examples modeled using the Python programming language. Numerous experiments have been carried out with various inputs. In preparation of this work, materials [1] - [9] from the references were used.

First, we shall formulate several concepts from functional analysis necessary for further study of the inverse problem in terms of the semigroup theory. Let E denote complex Banach space.

Definition 1

A family of linear bounded operators $U(t)$, $t \geq 0$, mapping the Banach space E into itself, is said to form a *semigroup of class C_0* , if:

1. $U(0)$ is the identity operator,
2. $U(t_1 + t_2) = U(t_1)U(t_2) = U(t_2)U(t_1)$ for any $t_1, t_2 \geq 0$,
3. $\|U(t)f - f\| \rightarrow 0$ when $t \rightarrow +0$ for any element $f \in E$.

Definition 2

Operator A , given by a formula

$$Af = \lim_{t \rightarrow 0+} \frac{U(t)f - f}{t} = \left. \frac{d}{dt} [U(t)f] \right|_{t=0+},$$

with a domain of definition

$$D(A) = \left\{ f \in E \mid \exists \lim_{t \rightarrow 0+} \frac{U(t)f - f}{t} \right\},$$

is called a *generator of the semigroup $U(t)$* .

Definition 3

Linear bounded operator $B: E \rightarrow E$ is called *quasi-nilpotent* if its spectral radius $r(B)$ equals zero:

$$r(B) = \lim_{k \rightarrow \infty} \sqrt[k]{\|B^k\|} = 0.$$

Definition 4

A semigroup $U(t)$ of class C_0 is called *superstable* (or *quasi-nilpotent*), if it has an infinite negative exponential type:

$$\omega_0 \equiv \lim_{t \rightarrow +\infty} \frac{\ln \|U(t)\|}{t} = -\infty.$$

This means that for any $\alpha > 0$ there is a constant $M = M_\alpha \geq 1$, such that

$$\|U(t)\| \leq Me^{-\alpha t}, \quad t \geq 0.$$

We consider a forward problem for the transport equation on semiaxis:

$$\begin{cases} u_t + u_x + \sigma(x)u = 0, & x \geq 0, \quad t \geq 0, \\ u(0, t) = \gamma(t), \\ u(x, 0) = u_0(x). \end{cases}$$

Here $\sigma(x)$ denotes a given absorption coefficient and $\gamma(t)$ is a given incoming flow. The initial condition $u_0(x)$ is also considered to be given. It is required to find the problem's

solution $u(x, t)$. The physical interpretation of the function $u(x, t)$ is the density of the transported substance.

There is an explicit resolving formula for $u(x, t)$:

$$u(x, t) = \begin{cases} \gamma(t - x) \exp\left(-\int_0^x \sigma(x - s) ds\right), & 0 \leq x \leq t, \\ u_0(x - t) \exp\left(-\int_0^t \sigma(x - s) ds\right), & t < x < +\infty, \end{cases}$$

for all $t \geq 0$.

Further we set $\gamma(t) \equiv 0$. Now, let us consider a time-nonlocal problem:

$$\begin{cases} u_t + u_x + \sigma(x)u = 0, & x \geq 0, \quad t \geq 0, \\ u(0, t) = 0, \\ \int_0^T \eta(t)u(x, t)dt = u_1(x). \end{cases}$$

Here $\eta(t)$ denotes a given weight function. The function $u_1(x)$ is also considered to be given. To find an unknown function $u(x, t)$, it is sufficient to restore its initial state $u(x, 0) = u_0(x)$.

Special conditions $\sigma(x) \geq 0$, $\lim_{x \rightarrow +\infty} \sigma(x) = +\infty$ provide the convergence of the algorithm. Further we assume that they are satisfied.

The solution method is as follows. Let $E \equiv L^1(\mathbb{R}_+)$.

A transport operator with absorption

$$A = -\frac{d}{dx} - \sigma(x), \quad x \in [0, +\infty),$$

with a domain of definition

$$D(A) = \{f \in AC_{loc}(\mathbb{R}_+): f \in E, Af \in E, f(0) = 0\}.$$

generates a semigroup of resolving operators:

$$U(t)f(x) = \begin{cases} 0, & 0 \leq x \leq t, \\ f(x - t) \exp\left(-\int_0^t \sigma(x - s) ds\right), & t < x < +\infty. \end{cases}$$

This semigroup sets a solution of the forward problem with the initial state function $f(x)$ when $\gamma(t) = 0$ in the space $E \equiv L^1(\mathbb{R}_+)$. The semigroup is quasi-nilpotent (see [7], [9] for details).

The function $u_0(x) = u(x, 0)$ can be found from an operator equation:

$$\beta u_0 - B u_0 = g,$$

where

$$\beta \equiv \eta(0) \neq 0, \quad g(x) = -A u_1(x),$$

$$B = \eta(T)U(T) - \int_0^T \eta'(t)U(t)dt,$$

$$u(t) = U(t)u_0.$$

(For the derivation of the operator equation, see [7].)

The specified operator B is quasi-nilpotent (see [1] for details). Therefore, we get u_0 as a Neumann series converging rapidly in L^1 -norm:

$$u_0 = \sum_{k=0}^{\infty} \frac{1}{\beta^{k+1}} B^k g = \frac{1}{\beta} g + \frac{1}{\beta^2} B g + \frac{1}{\beta^3} B^2 g + \dots$$

The conditions on the absorption coefficient $\sigma(x)$ allow us to vary widely the input data and almost not limit ourselves in the choice of the weight function $\eta(t)$.

Let's also consider the matching conditions. There are several possible situations:

- 1) $u_1 \in D(A)$, then $u_0 \in E \equiv L^1(\mathbb{R}_+)$ and $u(t) = U(t)u_0$ is generalized solution of the problem.
- 2) $u_1 \in D(A^2)$ ($u_1 \in D(A)$, $Au_1 \in D(A)$), then $u_0 \in D(A)$ and $u(t)$ is classical solution of the problem in terms of semigroup theory.
- 3) $u_1 \notin D(A)$, then the problem is insolvable.

In the model we are considering, we can obtain sufficient matching conditions.

Situation 1

$$u_1 \in C^1[0, +\infty), \quad u_1(0) = 0, \quad u_1 \in L^1(0, +\infty), \quad u_1' + \sigma u_1 \in L^1(0, +\infty).$$

In this case a generalized solution exists.

Situation 2

$$\begin{aligned} u_1 \in C^2[0, +\infty), \quad u_1(0) = u_1'(0) = 0, \quad u_1 \in L^1(0, +\infty), \\ u_1' + \sigma u_1 \in L^1(0, +\infty), \\ u_1'' + 2\sigma u_1 + (\sigma' + \sigma^2)u_1 \in L^1(0, +\infty). \end{aligned}$$

Here we assume that the derivative $\sigma'(x)$ exists almost everywhere. In this case a classical solution exists. Then $u_0(0) = 0$ and the resulting function $u(x, t)$ will be continuous.

For the monotone convergence of the solution, the following conditions must be met:

- 1) $\eta(t) > 0, \quad \eta'(t) \leq 0 \Rightarrow B \geq 0,$
- 2) $g(x) \geq 0 \Rightarrow u_1'(x) + \sigma(x)u_1(x) \geq 0.$

If $g(x) \geq 0$ and the above-mentioned conditions on the $\eta(t)$ are met, then the convergence will be monotone. If $g(x) < 0$ somewhere on the considered segment, then convergence can be non-monotone. Therefore, these conditions are sufficient.

The approximate value $\tilde{u}_0(x)$ is effectively restored by the iteration method. Based on this, a computer program in the Python programming language was prepared. This program works according to the following algorithm.

Given the operator A and the function $u_1(x)$, we find the function $g(x)$ using the formula

$$g(x) = -Au_1(x), \quad g_0 = \frac{g(x)}{\beta}.$$

Acting on it by the semigroup $U(t)$ (i.e., substituting it as an initial condition in the forward problem), we find $U(t)g(x)$. Next, we substitute the resulting array of values into the formula for the operator B and calculate operator Bg ,

$$g_1 = g_0 + \frac{Bg}{\beta^2}.$$

At the next stage, we substitute the values of the operator Bg into the forward problem as an initial condition, then find BBg and so on,

$$g_n = g_{n-1} + \frac{B^n g}{\beta^{n+1}}.$$

The stop condition is the difference between the last two calculated terms of the series by less than 1%. It is sufficient to calculate a finite number of terms in the Neumann series, since the values of the terms decrease rapidly due to the properties of the operator B (see details in [7]).

In this work, a lot of computational experiments were performed, which confirmed the high reliability of the chosen method. The program sets the necessary mathematical functions and performs calculations according to the algorithm, as well as the visualization of the results. Let us specifically explain that in this program the values $u_0(x)$ are initially set, then the values $u_1(x)$ are calculated through them, after which the values $\tilde{u}_0(x)$ are restored using the algorithm and are compared with the initially set ones. The method makes it possible to vary the weight functions. During the experiments, the following were chosen:

- $\eta(t) = 1$
- $\eta(t) = \frac{1}{1+t^2}$
- $\eta(t) = (1+t)^2$
- $\eta(t) = 1+t$

To demonstrate a working example, let us take the last function from this list.

Input data:

$$\sigma(x) = \ln_+(x-3) = \begin{cases} 0, & 0 \leq x \leq 3, \\ \ln(x-2), & x \geq 3, \end{cases}$$

$$u_0(x) = 10x^2e^{-x},$$

$$\eta(t) = 1+t,$$

$$T = 2, \quad 0 \leq x \leq 20.$$

In this case $\beta = \eta(0) = 1$.

Number of iterations $N = 19$.

Convergence will be non-monotone as $\eta'(t) = 1 \not\leq 0$.

The graph of the solution of the direct problem $u(x, t)$ for various t for such data:

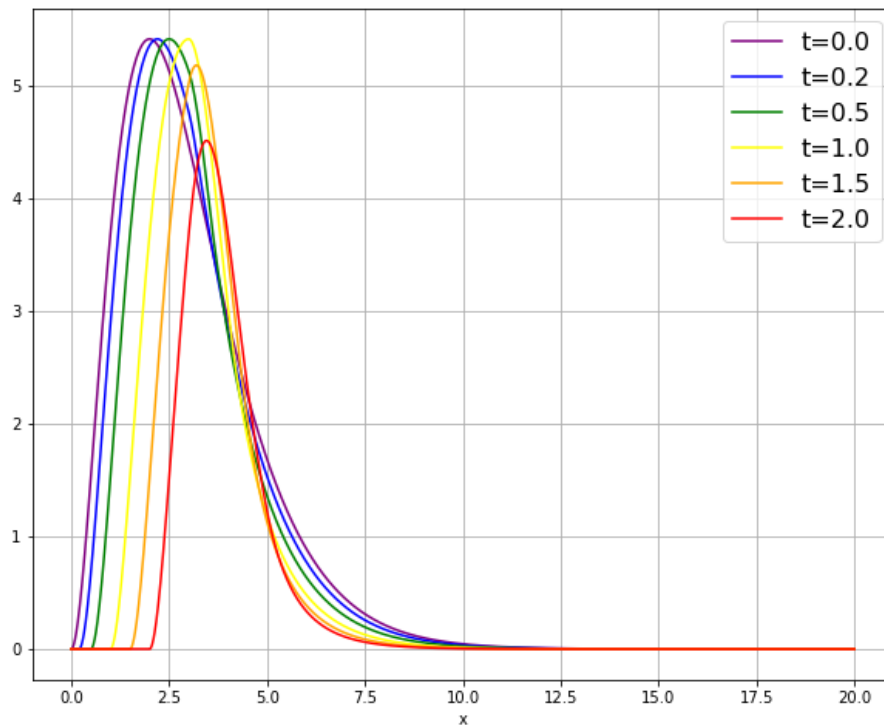


Fig. 1: Function $u(x, t)$.

Program results:

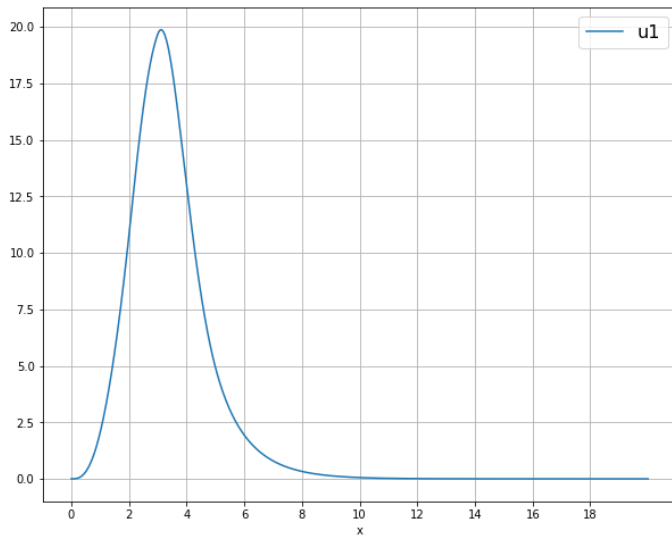


Fig. 2: Resulting function $u_1(x)$.

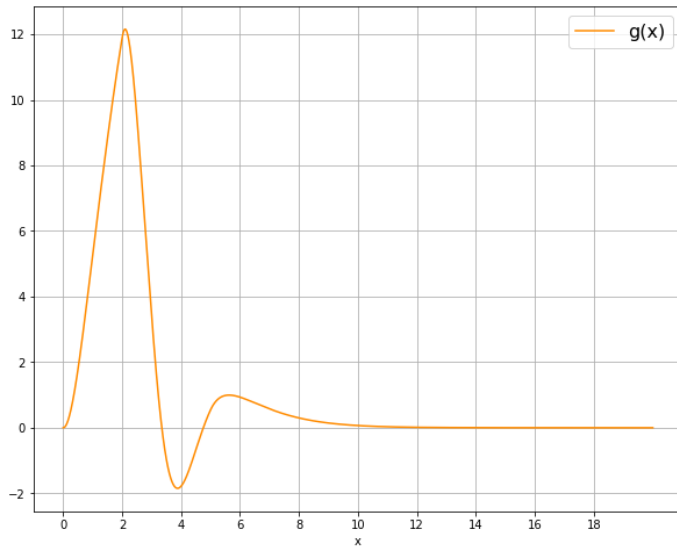


Fig. 3: Function $g(x)$.

It can be seen that $g(x) \leq 0$ somewhere, which also implies that the solution is non-monotone.

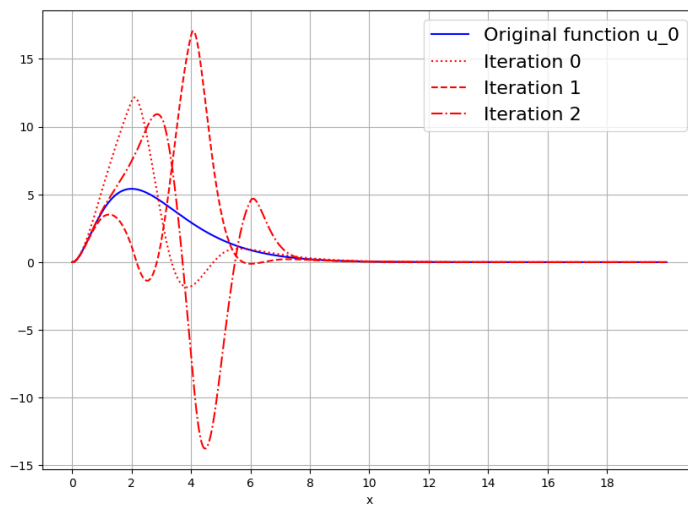


Fig. 4: Original function $u_0(x)$ and solution iterations.

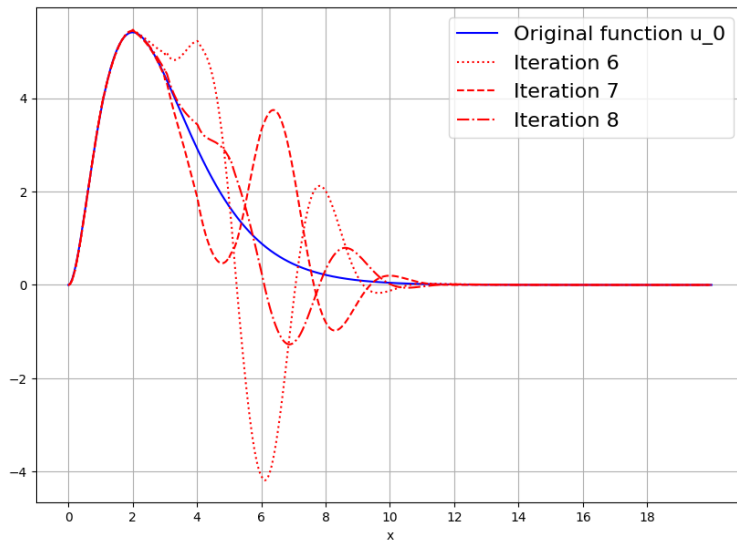


Fig. 5: Original function $u_0(x)$ and solution iterations.

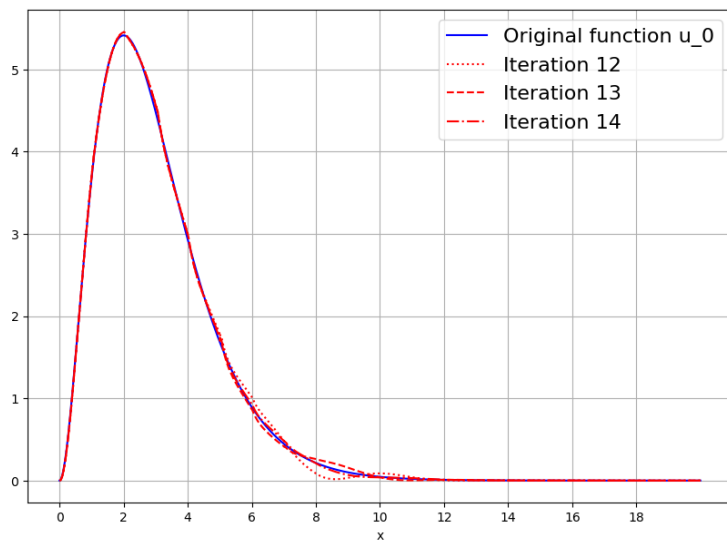


Fig. 6: Original function $u_0(x)$ and solution iterations.

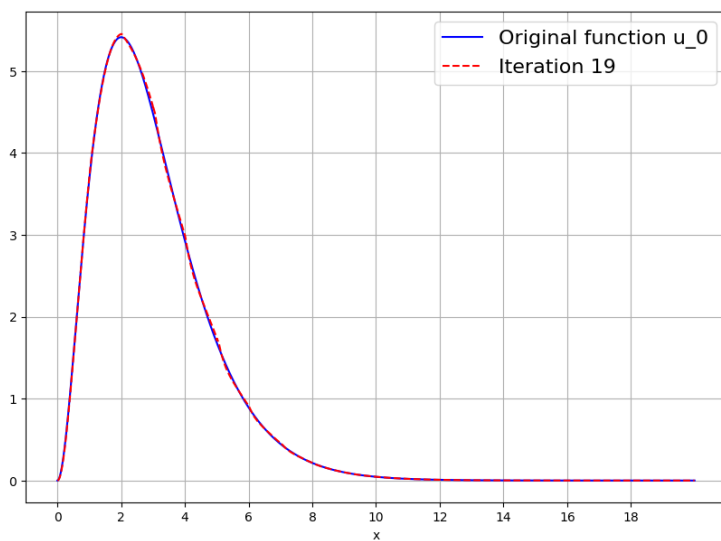


Fig. 7: Original function $u_0(x)$ and solution iterations.

We managed to obtain the exact solution in 4 iterations.

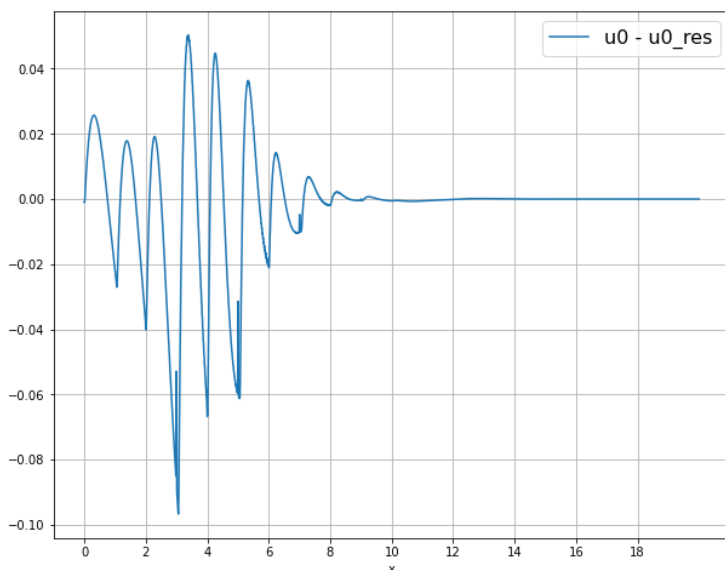


Fig. 8: Difference between original and restored values of $u_0(x)$

As you can see from the last graph, the error in calculating $u_0(x)$ is less than 1%.

In this paper, we have studied a time-nonlocal problem for the one-dimensional simple transport equation with a zero incoming flow.

- A theoretical scheme for solving a nonlocal problem has been developed and explicit resolving formulas have been obtained.
- Based on the obtained formulas, an algorithm for solving a nonlocal problem has been developed.
- A computer program has been written that implements a theoretical algorithm and visualizes the results of calculations.
- A series of computational experiments has been carried out for various values of the input data, confirming the high reliability of the algorithm.
- Matching conditions for a nonlocal problem have been studied.
- On a particular example, the convergence rate of the algorithm has been studied and an estimate has been given for the required number of iterations. The monotonicity of the solution convergence has also been investigated.

As a result of this work, all the set goals have been achieved and the study can be considered completed. In further research, it is planned to study the problem with a non-zero input flow, as well as to obtain an estimate for the convergence rate of the algorithm in general case.

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Initial Public Offering process in the organisations: theory vs. practice

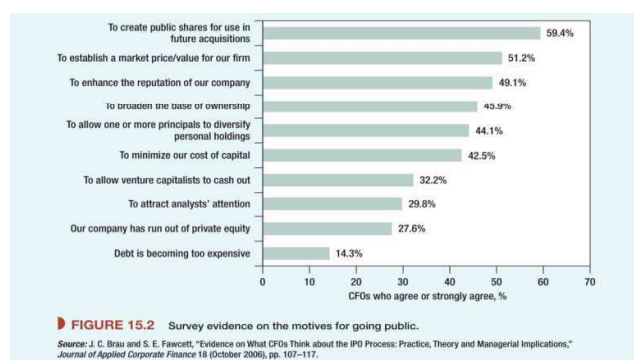
ABSTRACT.

This article is devoted to examining the IPO process and its peculiarities. The decision of the company to go public is always perilous because there is no guarantee of successful future performance. Moreover, as the examined practice of the companies in different industries and countries posit, the IPO is typically prone to underperformance in the first 3 to 5 years after the IPO. This phenomenon is explained in the other studies by the changing investors' perceptions. However, the success of the IPO is heavily dependent on the other factors that affect the company from the inside and outside. This paper will consider the main steps needed to be implemented to conduct the IPO properly, which include the sufficient pre-IPO preparation process, examination of the adequate price of the shares to be set for the investors by the company, the reason for the underpricing strategy, and the importance of the after-IPO step. Additionally, I will summarise the existing theories explaining IPO underpricing and underperformance. Finally, I will analyze a controversial example: Ferrari's IPO in 2015.

Keywords: *Initial Public offering (IPO) process; public companies; underpricing; underperformance; Ferrari IPO.*

What is an IPO?

The IPO is the process of the company “going public”. It is the first time that its shares are sold to public investors and subsequently traded on the stock market. This decision always stays ambiguous for the entity: The outcome could be positive, meaning the company will enhance, or negative when the business will experience a downturn. There are a lot of reasons behind this process and the conflict of interest takes place (between the issuing firm, the underwriter, and investors). Ideally, when the set of actions implemented is precisely determined and the risks and opportunities are accurately assessed, it leads to a range of significant benefits for the company's performance. They include the raised capital for business, increased transparency, liquidity, marketability, and a solid basis for acquisitions and mergers. Let us initially examine the process of conducting an IPO



Plot 1. Reasons for going public

IPO process

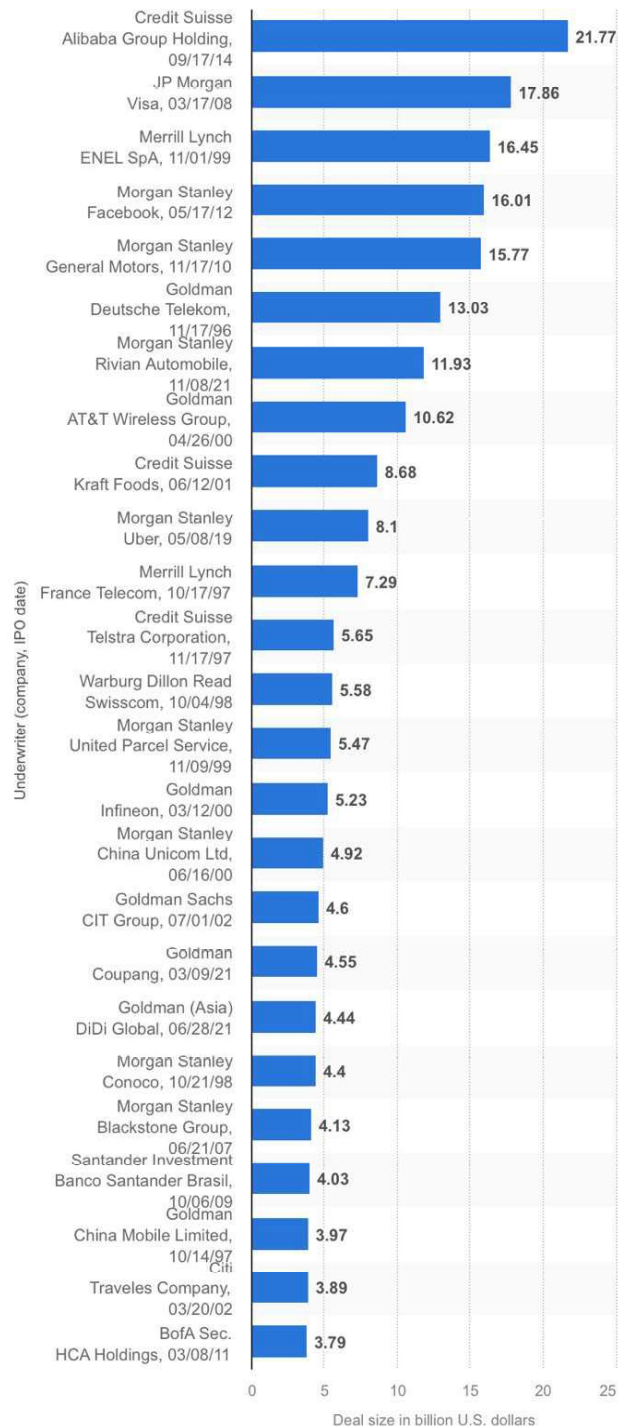
Before the IPO is decided to be conducted, the company should consciously evaluate the current state and the perspectives of the business. This step is called pre-IPO transformation and usually, it takes 2 years to complete it. To ensure the maximization of the shareholders' value, the company implements different strategies to reorganize the internal structure, plan the future business strategy, and prepare itself for new standards and rules it will have to comply with as a public company. For example, it will be mandatory for a company to prepare its financial statements in the end of the reporting period, get the audit report and share them with all the stakeholders, so that they will be able to assess the results a company has reached and understand the risks that could arise in the future that could affect their wealth.

The second step is the IPO process. Just before going public, the entity should accurately find out the appropriate price of the shares issued. To make the process more professional and effective, the bank is selected by the corporation to play the role of the underwriter and advisor. It functions as a broker between the company and the investors. The underwriter should fill in the mandatory documentation (engagement letter, letter of intent, underwriting agreement, registration statement (consisting of the prospectus and the private fillings), and the red herring document). Moreover, at this stage, the underwriter's gross spread is determined (the formula: *Gross spread = Sale price of the issue sold by the underwriter – Purchase price of the issue bought by the underwriter*). To understand the demanded stock price, the underwriters go on roadshows (called the dog and pony shows – lasting for 3 to 4 weeks) to market the shares to institutional investors. Afterward, one of the most important parts of the IPO process takes place — setting the price of the stocks. The concept of underpricing is referred to the abnormal initial returns that exist due to the closing price of the first day of trading being significantly higher than the offer price [15]. The company encounters the dilemma of offering shares at a higher price or cutting its desire and selling more at a lower price. The investment bank is ultimately the one determining the offer price. They are the ones that have to balance the issuing firm's wish for a high initial return and the buyers, the investors, craving to buy as cheaply as possible [6]. Finally, if all the previous stages are completed successfully, the company will issue its shares to the public.

The most common explanations for the underpricing are [15]:

1. The winner's curse hypothesis (there's the information advantage of the informed are investors, the uninformed investors will buy only with the significant underpricing; moreover, the informed investors are also likely to buy the underpriced shares; this tendency will be followed by the uninformed investors, which will create great demand).
2. The market feedback hypothesis (the investors will be compensated with the underpriced shares because of revealing trustful information during the roadshows).
3. The bandwagon hypothesis (the first people are attracted by the low price and, therefore, other people also will be affected by this phenomenon and buy the shares).
4. The signaling hypothesis (“underpricing leaves a good taste”).

The third step of the IPO process is completed by the underwriters. The underwriter provides analyst recommendations, and after-market stabilization, and creates a market for the stock issued. The last step is the transition to market competition, which starts 40 days after the IPO, once the “quiet period” (managers can't make forecasts or express any opinions about the value of the company) ends. The investors start orientating themselves by looking at the market performance of the shares. The underwriters can provide estimates regarding the earning and valuation of the issuing company.



Plot 2. Underwriters of the largest US IPOs (as of 2022)

There is an evidence in the studies previously conducted that after the IPO during an approximately three-year time period, the IPOs tend to underperform. Ritter documented this anomaly in the long-run performance of US IPOs [16]. He summarised the average holding period return for a sample of 1,526 IPOs of common stock in 1975–1984 as 34.47% in the three

years after going public. Similar outcomes were received by the studies observing other countries. The formula for calculating the underperformance is the following:

Long run performance = (closing price after x – closing price day 1)/Closing price day 1

The closing price after X days is subtracted from the closing price on the first day, this sum is divided by the closing price on the first day. The shown result is the performance of the stock in percent.

In 1998, Ritter proposed behavioral theories partially explaining the underperformance [15]:

1. The divergence of opinion hypothesis [8]

There are 2 types of investors: optimistic and pessimistic about the future cash flows and potential growth of IPOs. In uncertain conditions, the valuations of an optimistic investor will be higher than those of a pessimistic investor. The first ones will buy the shares on the first days after the start of the trading and, hence, determine the price. Afterward, the information will be more available in the market. This will lead to the narrowing of the divergence of opinions and, therefore, to the reduction of the market price and underperformance.

2. The impresario hypothesis (fads hypothesis) [1]

A negative relationship between long-run performance and initial returns can be expected because of the artificially created extra demand for the stocks which diminishes rapidly just after IPO. It is caused either by the intentional underpricing strategy implemented by the underwriters or by the “hot” market conditions [2], meaning the generated immense cyclical tendency of the companies in the same industry to go public, which is followed by significant underpricing and long-run underperformance.

3. The window of opportunity hypothesis

The extra optimism of the investors about the firm’s value drives the price of the shares. Therefore, issuers have the incentive to sell shares at a price higher than the fair one, seizing the «window of opportunity».

The aforementioned theories are not 100% applicable in realistic conditions. We will look at an interesting example representing the ambiguity of the IPO outcomes. It will show us that the success of the IPO depends on a lot of internal and external factors in the short and long periods.

The Ferrari case

In 2015, Ferrari, an Italian luxury sports car manufacturer, went public. The IPO was conducted on the 20th of October, and it was one of the biggest IPOs in 2015. When Ferrari decided to go public, it was already tremendously well-known around the world. It was always perceived as a luxury brand, keeping its uniqueness throughout the years. The customers of a company are extremely wealthy people who can afford themselves to purchase the cars of a high-end class. Therefore, buying Ferrari’s shares was considered a chance to get a small piece of something posh. Ferrari began trading on the New York Stock Exchange (NYSE) under the ticker “RACE.” It is no surprise, the hype was sky-high. The shares were issued at 52 USD per share, the highest burden of a share price interval. The shares were underpriced since the closing price on the first day was equal to 55 USD. It is important to mention that the company traded only 10% of its shares. Now, let’s find out what happened in the following month and years and what were the causes of this phenomenon.

As can be seen in the graph (plot 3 and plot 4), just after going public, the stock prices started declining, and during the first 4 months, they plunged by 41%. As Loughran and Ritter stated, the first 6 months is when the underperformance is developing, reaching its peak after around 18 months [13]. We could have expected this kind of trend based on the theory. Additionally, the underperformance, as posited by Loughran and Ritter (1995), should be eliminated after 5 years of the IPO [13]. Notwithstanding, the reality is different. After the share price had reached a horrifying 32 level, it started increasing steadily, reaching the 55 price level, being equal to the IPO’s offering one, in approximately 1 year (12 months). In 2017 the trend started upsurging. During 2018, the share price was falling again, and based on my predictions, even went beyond the lower limit of forecasted values (plot 3). Nevertheless, compared to its peers in the same

sector and S&P 500, Ferrari was leading and gathering momentum (plot 4). Additionally, even though the price of the shares was experiencing a downturn, it still was much higher than the initial price (55 USD/share). Summing up, there is no evidence of long-lasting underperformance.

Now, we should examine what was happening beyond the IPO process. First of all, a sharp decline in the share price continuing for 4 months after the IPO was most likely followed by external events affecting the overall industry, because other companies, such as Ford, were following the same trend. Additionally, the IPO was an expectative event, the investors were highly overoptimistic about the company’s rapid growth (the happened underpricing confirms this idea). At the same time, there was no reason for the company’s skyrocketing growth, because its biggest priority is to make sure they remain special. (In 2015, before it went public, Ferrari had sold just 7,000 a year, compared to Ford (F) which sells two-plus million cars a year.) Secondly, the company’s performance since the IPO was noticeably successful (the revenues, the adjusted net profit, the adjusted EBITDA, and the adjusted EBIT were going up almost every year since the IPO), which was the consequence of the increased prices for the cars, and extra cars’ issue. In terms of Ferrari’s employees, by 12/03/2019 the company had 3587 employees, which represents an increase of 25.51% from October 2015 to 12/03/2019. Even facing global crises caused by COVID-19 and the Ukrainian conflict, the price of the shares was fluctuating at a level higher than that of peers. These reasons give me the right to posit that the company’s stock price did not underperform because of the strong position of Ferrari in the market.

The inference that could be made from looking at this example is the following: There is not always a direct dependence between a company’s underpricing strategy and the following long-run underperformance; I would assert the IPO is a process depending on the multiple factors and conditions, and the one being solid enough is the prosperity of the business.

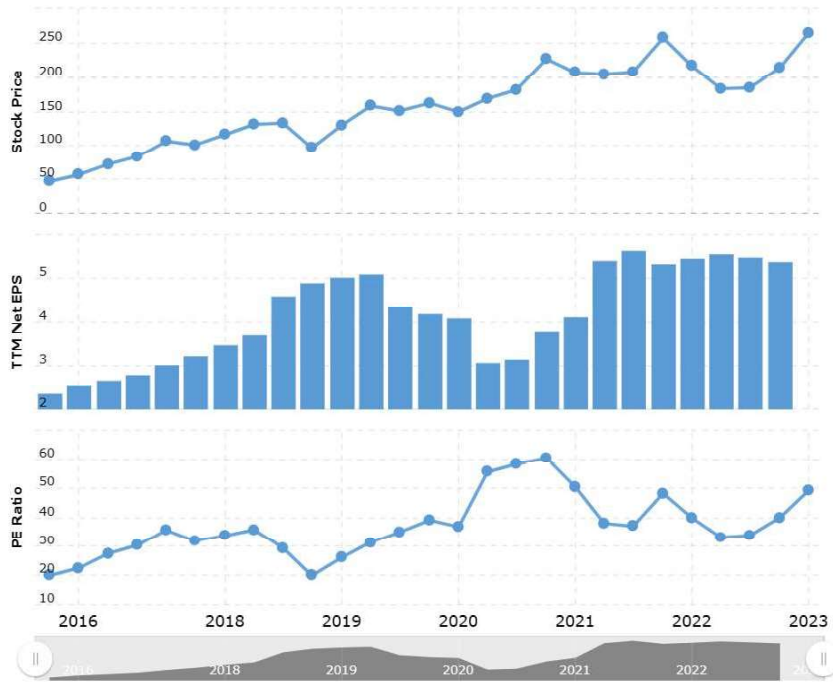
Appendices



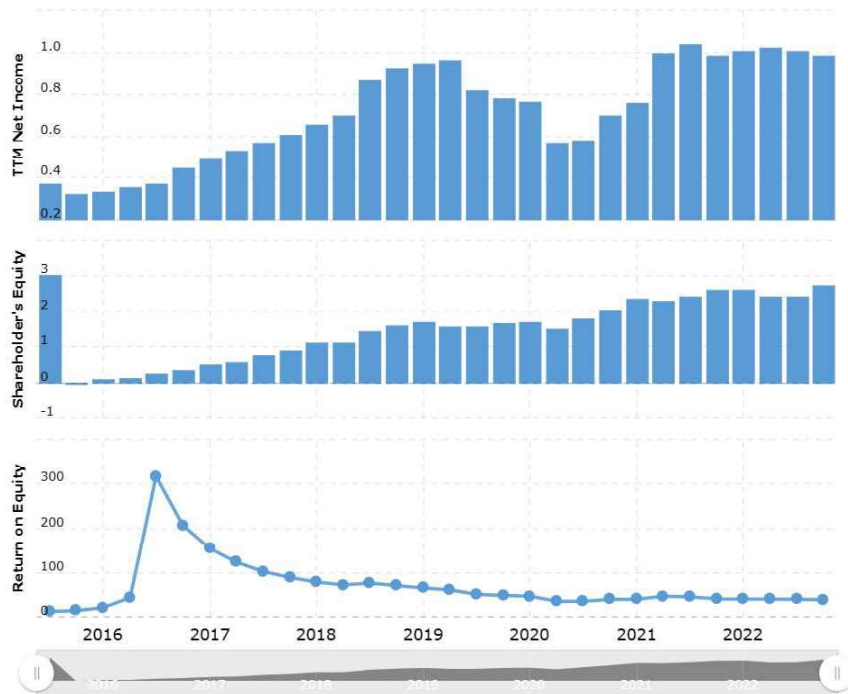
Plot 3. Ferrari stock price predictions for 2018



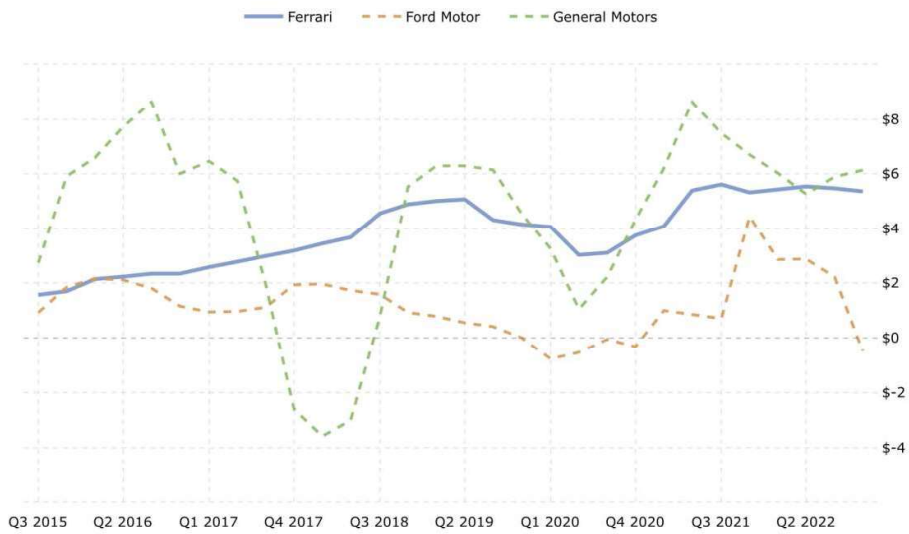
Plot 4. RACE performance comparing to Ford, General Motors, and S&P 500



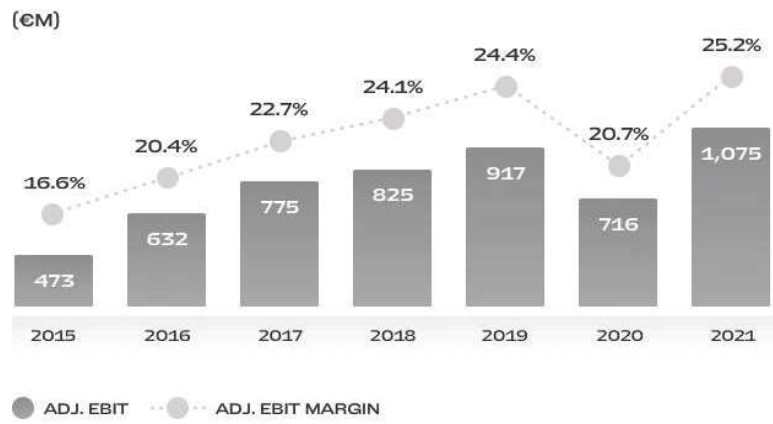
Plot 5. Price/Earnings Ratio performance



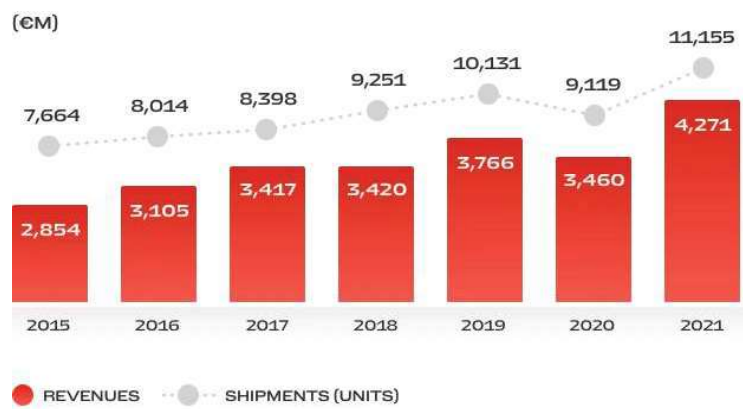
Plot 6. Return on equity performance



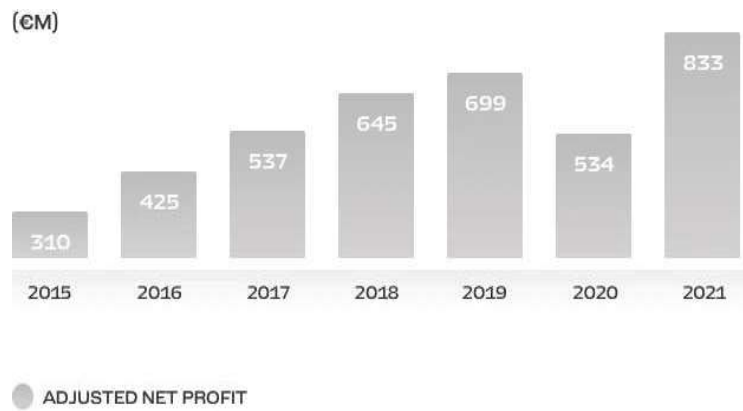
Plot 7. Earnings per share performance



Plot 8. Adjusted EBIT performance



Plot 9. Revenues performance



Plot 10. Adjusted net profit performance



Plot 11. PE ratio comparison with Ford and General Motors

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Linguocultural analysis of advertising in Russia and China with the development of educational materials for creating cross-cultural advertisements

ABSTRACT.

Within the framework of the present study, Russian and Chinese advertisements are taken into account to determine stylistic devices and ways of reflecting culture through content. The distinctions and similarities between the cultures of these countries have been debated for several years. However, insufficient emphasis has been placed on how culture and language are expressed through advertising, as well as how cultural variations determine the choice of particular advertising strategies. Thus, this paper addresses the impact of cultural variations on the selection of specific marketing techniques, language methods of influence, and content in Russian and Chinese enterprises' advertising campaigns. That is why the purpose of this study is to find linguistic and cultural differences in Chinese and Russian advertising that should be considered and used as source materials for further creation of advertising that takes into account cultural peculiarities in order to devise educational materials. Qualitative and quantitative approaches to analysing Chinese and Russian advertising are used in this study. Advertising content and discourse analysis are examples of qualitative approaches. Quantitative approaches incorporate survey findings analysis. This study identified the main cultural differences and similarities between the two nations, and as a consequence, educational materials on advertising across cultures were created.

Keywords: *linguocultural analysis; cross-cultural advertising; stylistic devices; discourse analysis; content analysis; China; Russia; educational materials.*

The growing interest in marketing has increased the need for culturally sensitive advertising that meets the needs of target audiences in Russia and China. Several authors in the field, notably Kotler [7; 8], one of the most prominent figures in marketing, swiftly disputed Levitt's assertion that cross-cultural advertising could be standardised in his fundamental article "The Globalization of Markets" [11] and later, by some other researchers [6; 14]. As a result, conversations concerning the disparities and cultural parallels between Russia and China have been ongoing for a while. However, there has not been much focus on how language and culture are communicated via advertising or how cultural differences may presuppose the choice of certain stylistic devices in the advertising content. Thus, the goal of this research is to determine linguistic and cultural differences in advertising of the countries under consideration that should be recognised to serve as a basis for the production of culturally relevant advertising and educational resources following the findings of this study. To achieve this goal, several issues are addressed, namely the differences in the content of Russian and Chinese advertisements, their

influence on a product's representation in advertising related to intercultural theories, and the stylistic devices utilised in advertising in the analysed countries. Lastly, the perception of different Russian and Chinese advertisements by Russian audiences is comparatively studied utilising a survey results' interpretation.

The literature on the research topic serves as an empirical base for the analysis in this study. First, it seems crucial to consider the notion of advertising. It is derived from the Medieval Latin verb "*advertere*" — to call attention to products or services via a specific spoken or written public statement [2, p. 1]. According to the work of Hofstede et al. [4, p. 6], culture can be defined as "*the collective programming of the mind that distinguishes the members of one group or category of people from others*". Next, it seems essential to move on to the notion of cross-cultural marketing. The term can be defined as "*marketing communication among consumers or customers whose culture differs from that of the marketer's own culture in at least one fundamental aspect of cultures such as language, religion, social norms and values, education, and lifestyle*" [16, p. 114]. Cross-cultural marketing has primarily been the focus of several researchers' studies on the interrelation between culture and advertising [11; 18; 17]. The main conclusion of most of these studies correlates to the idea that an advertisement must appeal to the customer's cultural sensibilities [5].

Hofstede's works [3; 4] have had an extensive effect on cross-cultural research in marketing. Hofstede's study initially focused on four cultural dimensions, such as power distance, individualism, uncertainty avoidance, and masculinity. The researcher later identified long-term vs short-term orientation [3]. In addition, a sixth component, indulgence, was included to complete the classification [4]. Several scholars have researched all the existing dimensions concerning marketing, observing their impact on consumer behaviours and advertising content [12; 18; 19]. The research on this topic, however, seems to be unrelated to the unique characteristics of Chinese and Russian advertising. Apart from this, Nisbett [13] discovered that culture influences people's perceptions of the world. East Asian nations, called holistic, are inclined to pay close consideration to their environment and background information. Furthermore, a new study by Shabalina et al. [15] concludes that China, as well as Russia, are to be characterised as countries with a prevalence of holistic thinking patterns. As a result, some goods by brand extensions might bear certain negative or positive characteristics depending on the parent brands' reputation and context [12, p. 538].

It is accepted that cultural homogeneity enables some substantial promotional and financial advantages [1, p. 1]. Nevertheless, an increasing number of studies have questioned the claim that culture, particularly local, does not have any significant influence on advertising. Consequently, considering cultural differences is essential for a business to thrive in foreign markets [1, p. 25; 14, p. 59].

Because the majority of advertisements rely on texts, it seems relevant to comment on the concept of advertising discourse. Advertising discourse is often used to persuade people to purchase a specific good or utilise a service [2, p. 1]. As a result, the main objective of any marketing effort should be to compel the audience to vividly recall the advertising message because of the advertisement's effect on the ideas, emotions, and actions. Therefore, strategies reminiscent of the ones utilised in poetry are commonly employed in the advertising discourse [17], particularly, a variety of stylistic devices, on four levels – lexical, phonographical, syntactic, and phraseological [9], for example, rhythm, rhyme, assonance, consonance, alliteration, metaphor, hyperbole, and others.

According to the studied theoretical base, the field of cross-cultural advertising in the given countries seems to be understudied. Consequently, it may be hypothesised that there are substantial culturally driven distinctions and similarities in the ways the products are promoted in the countries. Given this, it also seems reasonable to anticipate that educational materials for marketing professionals might be insufficient for proper employment preparation, in particular, in a cross-cultural setting.

The linguocultural aspects of marketing in Russia and China were studied to respond to this research's objective and to understand more about culturally appropriate advertising. Both qualitative and quantitative techniques were used to analyse advertising in China and Russia. Content analysis, which focused on advertising texts and visuals, was one of the qualitative methodologies used to study the cultural contrasts and similarities between the commercials in the two countries. The theory on stylistic devices [9] was then utilised to conduct discourse analysis to find some frequently employed stylistic devices in Russian and Chinese commercials.

Both content and discourse analyses were useful methods for identifying trends in the texts of advertisements and content development, which supplied clear and organised data that demonstrated the differences and similarities between the analysed countries' cultures.

Table 1. The Most Frequently Used Stylistic Devices in Russian and Chinese Advertising

Stylistic Devices on a Lexical Level	Russian Example	Chinese Example
Epithets	“самые роскошные” (the most luxurious); “блестящих” (shiny); “питательный” (nutritious); “индивидуальный” (individual); “шелковистые” (silky); “ослепительный” (dazzling); “великолепно” (fabulous); “просто” (simply).	“柔亮” (delicate and bright); “强韧” (bouncy); “领导” (leading); “干枯” (dry); “毛糙” (rough), “黯哑” (dull), “脆弱” (fragile), “深层” (intensive).
Occasionalisms	“#ELSELFIE”	–
Neologisms	“МакЗавтрак” (McBreakfast)	“吉士蛋麦满分” (jí shì dàn mài mǎnfēn) (McMuffin with a custard egg)
Hyperbole	“ослепительный блеск” (dazzling brilliance); “ваш малыш почувствует только любовь” (your baby will only feel love) – in the context of baby diapers advertisement	“步行可达. 到店秒取” (bùxíng kě dá dào diàn miǎo qǔ) (Pick it up in seconds. At a store within walking distance.)
Metaphors	“ваш малыш почувствует только любовь” (Baby diapers advertisement)	“浅梦星河” (qiǎn mèng xīnghé) (bright dream of the milky way)
Stylistic Devices on a Syntactic Level	Russian Examples	Chinese Examples

Short Sentences	“Новая эра. Новые скорости.” (A new era. New speeds.)	“步行可达. 到店秒取” (bùxíng kě dádào diàn miǎo qǔ) – Pick it up in seconds. At a store within walking distance
Parallelism	“питает без утяжеления” “делает волосы послушными и шелковистыми” “придает ослепительный блеск” (nourishes without weighting, restores and transforms hair from roots to ends, makes hair manageable and silky, gives a dazzling shine)	“强韧摸得到, 柔亮看得到” (resilient by touch, seemingly soft and bright) “家得宝团队匠心工艺质造” (jiādébǎo <...> zào) (Craftsmanship and quality of Home Depot team)
Anaphora	“ПРОСТО КАША, ПРОСТО ВЕЛИКОЛЕПНО” (JUST PORRIDGE, JUST GREAT); “Новая эра. Новые скорости.” (A new era. New speeds.)	“牛油果香辣鸡腿堡 (Spicy chicken leg salad with avocado)牛油果香辣鸡肉卷” (Chicken roll with avocado and spices)
Stylistic Devices on a Phraseological Level	Russian Examples	Chinese Examples
Phraseologisms	“Кто рано встал, того и завтрак!” (The early bird catches the worm) “от корней до самых кончиков” (from the roots to the very ends)	“一绿爆红” (yī lǜ bào hóng) (green – wildly popular)
Stylistic Devices on a Phonetic Level	Russian Examples	Chinese Examples
Consonance	“самых роскошных, блестящих” (the most gorgeous, lustrous); “восстанавливает и преображает”	–

Alliteration	“ЛЮБИТЬ. ИГРАТЬ. СПОКОЙНО СПАТЬ” (TO LOVE. TO PLAY. TO SLEEP SOUNDLY.)	–
A combination (Rhythm, rhyme, consonance)	“ЛЮБИТЬ. ИГРАТЬ. СПОКОЙНО СПАТЬ” (TO LOVE. TO PLAY. SLEEP QUIETLY.)	“强韧摸得到 (qiángrèn mō dédào) (resilient by touch) 柔亮看得到” (róuliàng kàn dédào) (seemingly soft and bright) “家得宝团队匠心工艺质造” (Craftsmanship and quality of Home Depot team)

As a result of the linguistic analysis of Chinese advertising, the following conclusions were made:

Despite the tonality of the Chinese language, a prevalence of phonetic stylistic devices was not found. However, it should be emphasised that the sample size was comparatively insignificant (12 advertisements), and access to Chinese advertisements was limited. In addition, it should be noted that phonetic stylistic devices were, nevertheless, noticed in several advertisements in a combination rather than as separate devices. Accordingly, it cannot be denied that, given the phonetic features of the Chinese language, such prominent techniques as rhythm, rhyme, and consonance (see appendices 2, 9, 12) were used relatively commonplace, presumably to produce a positive effect on the overall impression of advertising, as well as enhance its memorability. On the lexical level, it can be seen that in all examples, Chinese advertising specialists often use epithets (from two to nine epithets in each advertisement). Similes have not been found, while there was an abundance of set phrases. On the text organisation level, there was one outstanding feature: in 7 out of 8 advertisements, short subparagraphs and enumerations were utilised. In addition, there could be observed headings, enlarged fonts and other graphical stylistic devices. From a syntactical point of view, one can note the fact that the sentences were mostly short. Only one advertisement featured a long text (see Appendix 3). Anaphora and parallelism could be observed in several promotions (see appendices 9; 2). During the analysis of the texts of Russian advertising, the following features were identified at different levels:

In Russian advertising, an almost identical number of epithets as in Chinese advertising was observed at the lexical level, ranging from 1 to 8 in each advertisement. There also were occasionalisms, neologisms, and metaphors (see appendices 1, 7, 10). At the syntactic level, the sentences were most often short (less than ten words), except for the advertisement in Appendix 4, where the body text’s length totals 25 words. Moreover, other stylistic devices were used: parallelism and anaphora (see appendices 4, 7). On the phraseological level, the most prominent stylistic devices were phraseologisms (see Appendix 7). Short sentences were identified as the most commonly used stylistic choices on the text organisation level. Additionally, all of the analysed advertisements featured slogans and catchy headlines. To conclude, in both languages, stylistic devices on the lexical level, especially epithets, were most commonly used by advertising specialists. However, there also are some peculiar features intrinsic to Russian advertisements: occasionalisms, neologisms, as well as the usage of phonetic stylistic devices separately rather than in combination, in comparison with Chinese advertisements, where occasionalisms are not present, and various phonetic stylistic devices are used simultaneously. This may be explained by the tonality of the Chinese language.

The next stage in gathering more precise and thorough data was to poll the responses of individuals to various examples of Russian and Chinese advertising. At the same time, the respondents assessed the overall impression from several Russian and Chinese advertisements, the degree of trust invoked by the advertisement, colour schemes, as well as their interest in buying a particular product. This comparative study demonstrated Russian and Chinese commercials' effect on Russian individuals, allowing estimates about their preferences for certain advertisements to be made. This was analysed based on Hofstede's [3] and Nisbett's [13] theories. As a result, the methodologies also included a contrast analysis, which was sufficient for identifying linguocultural differences in Russian and Chinese advertising. The survey was completed by 42 people, and 21.4% of the respondents were not familiar with the topic of advertising that takes into account the cultural characteristics of the target audience. Among the possible answers to the question about the benefits of the educational course on working with the Chinese target audience, the most common was the one featuring the need for the course – 83.3% of respondents.

Summarising all the information received, it can be stated that among the advertisements for personal care products, the most favoured in terms of overall impression, degree of trust in the product, colours and desire to purchase the product was the advertisement of the Chinese brand *Rejoice* (see Appendix 3). In the smartphone advertisements section, *the iPhone 11* advertisement in China (see Appendix 5) appeared to be the most effective compared to other products in this category. The next step was to analyse fast food advertising. Among all advertisements, *McDonald's* advertisement (see Appendix 8) in China was the most popular among the surveyed. Finally, among the ads for baby diapers, the one with the lowest scores of 3.4 out of 5 was the Chinese ad for baby diapers (see Appendix 12). The most positively evaluated advertising is *Pampers* in Russia (see Appendix 10).

In the last question regarding the assessment of each of the advertisements as the best in each category, the majority of respondents (57.1%) singled out *Rejoice* branded perfume advertisement among personal care products, *McDonald's* advertisement in China was the most popular within the category of fast food restaurants (47.6%), and *iPhone 11* advertisement in China took the leading position among smartphones (40.5%), while among the advertising of baby hygiene products, *Pampers* advertising in Russia (33.3%) was considered to be the best from the point of view of the respondents.

Thus, based on the results obtained, we can conclude that Russian students were not only interested in taking an educational course on advertising in China and Russia, but they also could evaluate foreign and local advertising and make their inferences regarding the best advertisement. Russian students chose as the best advertisement of choice not only Russian examples in the category ratings but also Chinese ones, which indicates the possibility of application of a cross-cultural approach in advertising in Russia and China.

The last step was to find the main cultural differences and similarities in the ways the products were promoted. According to G. Hofstede's [3; 4] theory on the dimensions of culture, both Russia and China are collectivistic countries with high levels of power distance and a long-term orientation, scoring low in indulgence. In line with those dimensions, certain characteristics inherent to both Chinese and Russian advertisements were identified, proving the interconnection between the ways a product is marketed and culture. During the analysis, several common features were outlined, namely a frequent utilisation of celebrity endorsements, a reliance on the theme of relationships between people, and emotions. Besides, listings of the key characteristics in the advertisement texts were identified as a common feature. It could also be specified that marketing specialists should use special offers and promotions, as those were also used in certain advertisements.

As regards the main cultural differences, according to G. Hofstede [3; 4], Russia is a country with high femininity and uncertainty avoidance rates, as opposed to China. The analysis of several advertisements showed certain contrasting features. The main distinguishing

characteristic of Chinese advertisements, as it is a masculine culture, is a focus on how the product can affect social status and its connection to ambition. At the same time, because Russia is a country with a more feminine culture, status was not as important as in China. Thus, the main idea of an advertisement should rely more on interpersonal relationships. Moreover, Russia is a country with a higher level of uncertainty avoidance; therefore, the target audience is more likely to buy a product with a detailed description from a trusted brand, while the Chinese are more willing to purchase new products with innovative features.

To conclude, several distinctive and common characteristics inherent to Chinese and Russian advertising were identified based on intercultural communication theories and an analysis of Chinese and Russian advertising examples. Furthermore, the purpose of this study was to create teaching materials based on the research findings, which were collected using a multiple-method approach, in particular, both qualitative and quantitative techniques such as discourse, stylistic, and content analyses. As a result, a series of lectures on culturally competent advertising in the countries that were studied was designed to fill the gap in the current body of knowledge. Based on the responses received as a result of a survey among representatives of Russian and Chinese culture, a linguistic and cultural analysis of 12 advertisements and existing theories and studies, the following online course plan was proposed and designed:

1. Cultural characteristics of China (G. Hofstede's theory)
 - 1.1. Theoretical online course: "Chinese Culture and Contemporary China."
 - 1.2. Chinese national holidays
 - 1.3. National holidays food
2. An identification of the target audience concerning G. Hofstede's theory of intercultural communication
 - Module 2.1. The application of the buyer persona method
 - Module 2.2. Conducting marketing presentations in Chinese
3. Linguistic features of Chinese advertising text.
4. Strategies applicable to cross-cultural advertising in Russia and China

With an emphasis on the already existing theoretical base, the results of the survey, its analysis, as well as a linguocultural study of 12 Chinese and Russian advertisements on various thematic blocks, it became possible to identify the main modules from which the plan of the educational course was drawn up. The videos and podcasts were compiled from the *ChinesePod* and *Coursera* educational platforms, as well as from the *YouTube* platform. In addition, reading materials based on empirical research were included in the work. In collaboration with colleagues, who successfully tested the developed course, exercises for consolidating and practising the received theoretical information and new vocabulary were developed by the author of this work. Thus, the key objective of this research and project work has been completed.

In addition, further prospects could be highlighted for the development of this online course. First of all, it is worth noting that this course can be improved and expanded in terms of theoretical and practical bases, namely adding empirical research on related topics, as well as developing more exercises aimed at consolidating the acquired knowledge. Moreover, this course can be transferred to an interactive platform, where its completion could become more convenient.

To conclude, culture plays an important role in the creation of advertising because it is compiled from the set of values, preferences, traditions, and behaviours that shape the audience's perception of advertising. The use of cultural elements in advertising can be a very effective way to establish an emotional connection with the consumer and may help create an appealing image of a product or service. Cross-cultural advertising is a type of advertising that is created with attention and sensitivity to the differences in culture and traditions of different countries and even regions. Creating cross-cultural advertising strategies allows companies to take into account these differences and tailor their advertising campaign for maximum effectiveness in each country. The goal of this research endeavour was to undertake a linguistic and cultural study on

advertising in Russia and China, along with the creation of an educational course on cross-cultural advertising. The main theoretical aspects of cultural linguistics, advertising and marketing were studied in the theoretical part. The peculiarities of Russian and Chinese cultures were considered, and the features of the advertising markets of these countries were compared. Also, an analysis of the communicative strategy in advertising was carried out, and the methods of cross-cultural advertising were studied.

In the first stage of the practical part of the study, advertising materials in Russia and China were analysed. Differences in approaches to the creation of promotional materials in these countries were identified, as well as general principles that can be used in cross-cultural advertising. As a result of the study, a linguocultural analysis of advertising in Russia and China was carried out, and the features of the advertising markets of these countries were studied. The study revealed significant differences in culture and communication strategies that can influence the creation of promotional materials. Moreover, the most commonly used stylistic devices utilised in advertising in the analysed countries were identified, as well as the differences and similarities in their employment. Lastly, the perception of different Russian and Chinese advertisements by Russian audiences was comparatively studied utilising a survey results' interpretation.

In the second stage, an educational course was developed to help marketers and linguists create cross-cultural advertising. This material included a description of the cultural characteristics of Russia and China, as well as recommendations for creating advertising effectively in both the Russian and Chinese markets. The practical value of this educational course was that it could be useful for students who have to interact with China to perform advertising tasks, especially in cases of localising advertising for Russian brands and adapting it to not only their needs, but also to the Chinese target audience's. Apart from instilling necessary skills of working with the Chinese target audience into students, the course aims to improve their Chinese language skills: relevant vocabulary acquisition in combination with representative advertising and marketing research and presentation skills. In the course of the work, the set goals were achieved. Linguistic and cultural analysis of advertising in Russia and China was carried out, cultural characteristics of each country that could influence the perception of advertising were identified, and recommendations were developed for creating cross-cultural advertising. Thus, this work is of practical importance for students planning to connect their future work with the field of marketing since the creation of effective cross-cultural advertising can lead to an increase in sales and can strengthen the brand's position in the market. Besides, based on the result of this work, scholars might become interested in the issues of cross-cultural marketing and extend the realm of research by applying theories related specifically to marketing studies.

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Appendices

Appendix 1

强韧摸得到
柔亮看得到

“我换洗发水了，你呢？”
巴黎欧莱雅代言人：范冰冰

深层修复系列 5
INTENSIVE REPAIR 5
5大受损 1个对策

1 干枯
2 分叉
3 毛糙
4 黯淡
5 脆弱

欧洲护发领导品牌

你值得拥有。
L'ORÉAL PARIS

Appendix 2

ПИТАТЕЛЬНАЯ СИЛА 6 МАСЕЛ РЕДКИХ ЦВЕТОВ
ДЛЯ САМЫХ РОСКОШНЫХ, БЛЕСТЯЩИХ ВОЛОС

НОВИНКА

ELSEVE
РОСКОШЬ 6 МАСЕЛ
питательное питание

ELSEVE
МАСЛО

ИНДИВИДУАЛЬНОЕ РЕШЕНИЕ
ДЛЯ РОСКОШНОГО ПИТАНИЯ ВОЛОС:

- ПИТАЕТ БЕЗ УТЯЖЕЛЕНИЯ, ВОССТАНАВЛИВАЕТ И ПРЕДОХРАНЯЕТ ВОЛОСЫ ОТ КОРНЕЙ ДО САМЫХ КОНЧИКОВ
- ДЕЛАЕТ ВОЛОСЫ ПОСЛУШНЫМИ И ШИШКАРИКИМИ
- ПРИДАЕТ ОСВЕЖИТЕЛЬНЫЙ БЛЕСК

ВЕДЬ ВЫ ЭТОГО ДОСТОИНЫ.

L'ORÉAL PARIS

ВОЛОСЫ
ЛИШЕНЫ
ПИТАНИЯ
ПРЕОБРАЗИТЕ ИХ
#ELSELFIE

Кришна Шейна

Appendix 3



Appendix 4



Appendix 5



Appendix 6



Appendix 7



**Кто рано
встал, того
и завтрак!**

МакЗавтрак™.
А теперь есть и каша!

Только в Макдоналдс®, участвующих в программе МакЗавтрак™. До 10:00.

Вот что я люблю™

ОСТОРОЖНО:
ГОРЯЧО!

ПРОСТО
КАША
ПРОСТО
ВЕЛИКОЛЕПНО

ОТЛИЧНОГО
ДНЯ!

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Appendix 8



Appendix 9



Appendix 10



Appendix 11

Pampers
幫寶適 一級幫

最高級 360° 超透氣
日本產院首選 NO.1 #

日本產院首選 NO.1

最高級 360° 超透氣

幫寶適 360° 超透氣

日本產院首選 NO.1

★ 新升級 ★

日本產院首選 NO.1

★ 新升級 ★

★ 2015年7月，幫寶適與衛生部認可的日本有馬利之無菌市場專家協會JHQA，數度年自P&G統計比較權威

1000ml 吸收量
SUCTION

3s 吸收速度
SPEED

輕薄透氣
THIN

鎖水性强
LOCK

棉柔亲肤
RELAXED

Appendix 12

五大匠心设计

家得宝团队匠心工艺质造

1000ml 吸收量
SUCTION

3s 吸收速度
SPEED

輕薄透氣
THIN

鎖水性强
LOCK

棉柔亲肤
RELAXED