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The Impact of International Economic Relations on Logistics Business Development

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Abstract. *The logistics industry accounts for a large part of the country's gross domestic product, so even a small change in the logistics sector can have huge consequences for the country and its economic level. Since the logistics business is an integral part of both national and international economic relations, it is important to study this sector and evaluate the opportunities for effective growth. The subject of this article is the factors influencing the international logistics business. The article aims to identify the factors that would facilitate the development of international economic relations between the Baltic States and South Korea in the logistics sector. After analyzing different factors, to achieve the goal of the article, it was decided to study the influence of customs, excise, minimum wage, changes in fuel prices, and the number of particulate emissions on the development of international economic relations in the logistics sector. Many of these indicators are becoming more and more relevant for the logistics sector, due to the new EU green policy perspective and the transition to renewable energy sources. In this study, it was chosen to conduct independent variable calculations between the Baltic States and South Korea. Using the ANOVA analysis method, the relationship between variables for international economic relations and logistics business development was determined. A test of Cook's measure was performed to find out whether there is an autocorrelation problem between the selected variables. Analyzing the literature, it was found that there is more than one factor that can affect international economic relations and logistics business. It has been proven that governments and international organizations have the strongest influence on the development of international economic relations. The calculations showed that the Baltic exports to South Korea are affected by all variables, i.e. fuel price changes, CO2 emissions, minimum wage changes, excise duties, customs duties and distance between the countries. Taking into account the obtained results, it could be recommended that the Baltic countries continue increasing the minimum wage, as this helps to promote greater consumption of goods, and strengthen political cooperation to reduce the level of tariffs applied by South Korea.*

Keywords: international economic relations, international trade, business development, international cooperation.

JEL Codes: B17, F29

1. Introduction

International cooperation is one of the most important aspects that can not only influence a country's geopolitical situation but also determine its economic level and its economic development. Trade and international economic cooperation are one of the most important components of the economy, with exports and imports accounting for the bulk of a country's gross domestic product in many cases. Logistics, imports, exports and international economic relations and cooperation are inseparable factors and factors which can influence each other closely.

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Logistics is one of the most important factors in the economic interconnection of different countries, not only in international political relations but also in the delivery of goods and products from one country to another. It is mostly used to improve international economic relations between trading countries (Approach, 2018). It should be understood that companies that invest in the logistics business not only increase the volume of transportation of goods, but also indirectly increase the volume of production, reduce transportation and production costs (Jereb & Jereb, 2017), help to better control the inventory in the warehouses (Zhang et al., 2018), and often increase the satisfaction of both customers and suppliers, and improve the company's corporate image (Jiang, Zhang, & Meng, 2021).

When it comes to international economic cooperation, it is important to emphasise that it is not limited to the import or export of certain services or goods from one country to another. If an economy were strictly made up of services and goods sold and bought, it could not function smoothly and efficiently (Herfeld, 2021). Therefore, when analysing international economic cooperation and the logistics business, an attempt is made to go beyond the concepts of imports or exports. International economic relations are a rather complicated and sophisticated term that can combine not only certain political situations and political cooperation but also economic cooperation between different countries and between different multinational companies (Watson, 2019). In order to support the expanding economic cooperation, it is necessary to have a certain infrastructure in place that can withstand and cope with the constantly rising costs of transport. In this case, when large-scale trade is carried out between different countries, the logistics sector plays a key role in helping to deal with the complexities of transport from one country to another. It is the logistics business that, by solving transport problems, helps to keep the product still competitive in the importing country (Skender, Zaninović, & Lolić, 2019). Even if there are excellent economic relations between cooperating countries, without the help of the logistics business, this cooperation would in many cases be irrelevant when it would not be possible to transport certain products or raw materials from one country to another (Jiang et al., 2021).

The logistics industry accounts for the largest share of a country's gross domestic product. This is because many companies, or even the country itself, are directly responsible for the growth or decline in gross domestic product by importing certain products, goods or raw materials from foreign countries (Jankovic & Block, 2019). International political and economic relations between trading countries are also important for smooth economic cooperation between different countries, especially in large-scale economic transactions and exchanges (Dimmelmeier, Heussner, Pürckhauer, & Urban, 2017). States often enact certain laws that facilitate logistics business, provide certain subsidies to businesses, or even change customs and excise duties to make international economic cooperation easier. Even the smallest change in the logistics sector can have enormous consequences for a country and its economic level. Such large-scale economic failures are most often and most severely felt by all taxpayers in a country. Any mistakes help to spread distrust of the state and its governance policies (Takács-Györgyb, 2020). State regulation of customs duties, excise duties, and the issuance of certain laws or regulations can often ease the burden on logistics businesses by reducing operating costs. As logistics business is an integral part of both national and international economic relations, it often receives a lot of attention and funding to enable the sector to operate and grow more efficiently (Hong, 2020).

The subject of this article is the factors influencing the international logistics business. The paper aims to identify the factors that would facilitate the development of international economic relations between the Baltic States and South Korea in the logistics sector. The objectives of the study are: 1) to identify the factors influencing international logistics business and international economic relations; 2) to develop a research methodology to determine the influence of the identified factors; 3) to use the developed methodology to

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assess the potential for the development of the Baltic-South Korea international economic relations in the logistics sector.

2. Literature review

Most companies involved in the transport of certain products, outputs or raw materials from one country to another are heavily dependent on cooperation between countries. This means that, in the event of certain international disagreements, there is always a risk that trade between cooperating countries may be reduced. This would have direct negative consequences for the logistics sector and companies involved in freight transport. States, through domestic and foreign policy assistance, try to maintain close and close political and economic relations on an ongoing basis. But other international cooperation organisations can help to develop international political and economic relations (Kim & Osgood, 2019).

When developing trade relations, countries often hope to improve international political relations between different countries. In the case of the Baltic States and South Korea, cross-border trade not only improves international economic relations between countries but also brings political benefits. This is due to the steadily increasing Baltic demand for certain products and raw materials, as well as the reduction of protectionist tariffs (Mon & Lim, 2019).

Actions and ideas initiated by the government itself play a key role in expanding international economic relations with foreign countries (Galadari, 2019). State initiative can be understood in many different ways, such as by enacting certain favourable laws, improving international relations with foreign countries, investing in domestic infrastructure, or even introducing certain changes to laws and regulations (Hampton & Adams, 2018). The existence of various elements within a country, such as fuel prices, customs duties, excise duties and many other things, can have a strong influence on international economic relations (Juliet, et al., 2020). The government is responsible for the importance and variation of these elements, and a change in these factors can have a significant impact on these spheres.

The most common and influential factors faced by international business are customs duties, taxes, quotas and, in exceptional cases, embargoes (Traverso & Schiavo, 2020). Customs duties remain one of the most frequently used taxation instruments. This tax is levied on every good, product or article that travels from one country to another (Kozyrin & Yalbulganov, 2019). This means that most products or products that are manufactured outside the country will be subject to customs duty. When analysing the destination of customs duties among the products exported by the Baltic countries to South Korea, it can be observed that the Baltic countries mainly export plastic, chemical and electronic products to South Korea, although the latter has imposed some of the highest customs duties on these particular products. In the case of South Korea, most of the duties are imposed to protect local businesses and the market, as foreign investors often want to penetrate the local market, potentially selling certain goods below market price (Osabuohien, Beecroft, & Efobi, 2018).

Another important tax is excise duty. This tax is one of several indirect taxes which, in most cases, consumers have to pay when they buy a particular good or product (Nguyen, 2019). Excise duties are usually introduced when a country hopes to raise more money for the state budget or is forced by certain regulations, such as the European Union (Futerman, 2020). It is also important to mention that excise duties, unlike customs duties, can be collected using another tax such as VAT. It should be noted that excise duties are often confused with customs duties because of their characteristics (Zoitsas, Valsamidis, & Toptsi, 2019). A customs duty is imposed to tax goods that are exported or imported from one country to another, while an excise duty is imposed by the government on goods that are produced within a country. It is also important to note that, unlike customs duty, excise duty is not levied on a wide variety of different and diverse goods,

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products and raw materials (Ranđelović & Bisić, 2021). Excise duties are mostly applied to a narrow group of products and raw materials, which are usually purchased in large quantities by consumers.

When it comes to international economic relations and the logistics sector, the focus is usually on the import or export of certain goods and products from one country to another. This means that the logistics sector can move certain products from one country to another using certain means of transport. Planes, ships, trains, commercial vehicles and trucks make international economic cooperation easier. It should be pointed out that changes in the price of diesel, petrol or aviation fuel can have a significant impact on the cost of certain services, goods or even raw materials. This means that as fuel becomes more expensive, freight transport services may also become more expensive (Kar & Datta, 2020). This means that the logistics sector can be under a lot of stress from changes in fuel prices, certain political or economic events such as the COVID-19 pandemic and the war in Ukraine (Golovko & Sahin, 2021). Fuel price volatility forces companies to continuously adjust the prices of their services to avoid making a loss (Zaman & Shamsuddin, 2017). Changes in fuel prices make it difficult not only for companies that provide logistics services but also for companies that use these services. Fuel price stability is extremely important for the logistics sector, as it is one of the sectors that consumes the largest quantities of fuel. Vehicles such as ships, tankers, trains, planes and heavy vehicles such as lorries consume very large quantities of fuel (Eydi & Alavi, 2019). Also, the ever-changing political environment, which is increasingly promoting environmental protection, and the reduction of the number of vehicles with internal combustion engines is becoming more and more relevant for the logistics sector, as almost all freight transport vehicles use internal combustion engines. Replacing freight vehicles with less polluting ones would require significant funds, which are not always available for the necessary investments (Abdul et al., 2017). This factor is becoming increasingly important as the EU has adopted new and stringent emission reduction targets which it aims to meet by 2030. For these reasons, the logistics sector is forced to react and adapt (Shee, Miah, & Vass, 2021).

Another important factor that can have a significant impact on international economic relations and the logistics business is the minimum wage. This is a certain minimum amount of money that must be paid to every person who works. The minimum wage is usually approved by the government and by a resolution of a tripartite council. Also, when a national minimum wage is set, it is not uncommon for government authorities to turn to international organisations that provide assistance in determining the appropriate minimum wage. One such organisation is the International Labour Organisation, or ILO for short (Blau, 2019). When it comes to minimum wages, it can often be perceived that they are only relevant for individuals, but in the logistics sector, minimum wages can be interpreted in two ways. This means that it can have both positive and negative effects on the supply and demand for products and services (Himmelreicher, 2020). A change in the minimum wage in the logistics sector can be perceived as negative. This is because the logistics sector usually provides certain services, the cost of which may also increase due to an increase in the minimum wage. This means that a rising minimum wage may reduce the demand for services provided by the logistics sector (Nguyen, 2021). A rising minimum wage may be perceived as a guarantee for the growth of a country's economic level, but the rising cost of logistics services may even discourage foreign investors, where the prices of the services provided would simply be too expensive (Hidayah et al., 2021).

The increased cost of services in the logistics sector not only forces foreign investors to reduce the scope for cooperation but also often encourages them to choose other foreign countries where labour is cheaper. Rising service prices also have a direct impact on product competitiveness. This means that when the cost of transport in the logistics sector rises, the cost of transported products is also affected. This negative impact can make the product uncompetitive in the importing country, which can lead to huge losses for entrepreneurs (Blau, 2019). But when the minimum wage is analysed, its continuous but slow increase can bring not only negative but also positive results. The greatest benefit that the logistics sector experiences

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through the minimum wage is through the prism of the individual citizen. This means that a rising minimum wage contributes more money to each family's household. It is a rising minimum wage that can help people save more and put money back into circulation, where consumers can buy more of the goods, products or services they want (Hidayah et al., 2021, Nguyen, 2021). To meet the growing interests of consumers, it is often the case that more products, raw materials or even certain services are imported and exported (Wang & Cheng, 2021). Such increased consumer demands and spending can directly increase the demand for services provided by the logistics sector.

International economic links between cooperating countries are not solely dependent on the logistics sector. International cooperation consists of many individual influencing elements such as culture, politics, economics, social indicators, geographical location and many other important factors (Abdul et al., 2020). International economic cooperation is also often based on the movement of certain goods, raw materials or services from one country to another. It is this movement of services and goods that is supported by the logistics sector, which helps to develop international economic relations. It is the direct and indirect support and assistance provided by governments to businesses and the logistics sector that helps to develop and improve international economic relations (Kozyrin & Yalbulganov, 2019). Every decision taken by a government must be wisely considered and taken when the impact of these decisions can affect every citizen, company or even international economic and political relations. This means that every decision taken by a government can not only help or hurt international economic relations but also have a major impact on the logistics sector (Abdul et al., 2020). The aim of the government is precisely to help expand international cooperation and economic relations and to try to establish new and beneficial relationships with other foreign countries. The stability of international economic relations depends to a large extent on the development strategies and ideas pursued by the government (Melnik et al., 2019). A good example of this would be Lithuania's initiative with Taiwan in the fourth quarter of 2021 and the political disagreements with China. Although Lithuania has established good political relations with Taiwan by opening an official representative office in Vilnius, Lithuania has received some sanctions from China, as well as a lot of pressure, which has not only affecting the country's economy but also its business community working with China, especially in the logistics sector. Maintaining good relations between cooperating countries can not only improve international economic relations between them, but it can also translate into a certain amount of economic growth between the cooperating countries. The development of good infrastructure is an important factor in which a country must necessarily invest to sustain a high level of freight traffic (Hunady & Pisar, 2021). The construction of good quality roads, the opening of new ports and terminals, investment in airports, and the upgrading of railways are mandatory, ongoing investments that help to keep the logistics sector running smoothly, and help it to develop and grow. In order to facilitate the operation of the logistics sector and to improve international economic relations between different countries, attention must also be paid to facilitating and simplifying access to information (Approach, 2018). The government is also responsible for making information available to the public so that the necessary data is available to engage in international trade with foreign companies. Easy access to the necessary information can make it easier for foreign investors to establish new or develop existing international economic relations with a country (Watson, 2019).

The government is not only responsible for developing infrastructure, adopting certain safety and quality regulations, or cooperating with foreign policy, but it is also responsible for approving and issuing certain laws (Crepaz, Hanegraaff, & Salgado, 2021). Depending on the law enacted, certain business sectors may begin to expand, diminish or even completely collapse. Often, the laws that are passed have the greatest impact on international economic relations or different business sectors. This is because, unlike a change in fuel prices or particulate emissions, laws apply to all businesses, regardless of their activities. Therefore, the

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adoption of certain laws or their corrections may indirectly affect the logistics sector (Kuenzel, 2017). The adoption of favourable laws helps businesses to operate more efficiently and can help them to reduce costs, find more potential customers, and establish new contacts with foreign countries, which can further help them to develop further international economic relations.

3. Methodology

After analyzing the different factors, it was decided to investigate the impact of customs duties, excise duties, minimum wages, changes in fuel prices and particulate emissions on the development of international economic relations in the logistics sector.

Many of these indicators are becoming increasingly relevant for the logistics sector, due to the EU's new green policy perspective and the shift towards renewable energy sources. For this study, it was chosen to carry out independent variable estimations between the Baltic States and South Korea. In this study, the variables are coded in the following order:

Y - Average Baltic exports to South Korea

X_1 - Change in average tariffs

X_2 - Change in average excise duty rates

X_3 - Diesel price developments

X_4 - Aviation fuel prices

X_5 - Particulate matter emissions from vehicles

X_6 - Baltic average minimum wage

In this study, Y is coded as a fixed variable - Baltic exports to South Korea, while all the remaining indicators X, are independent variables that will be used to examine the association between Y and X. It is also important to mention that when the impact of fuel prices is analyzed, the majority of vehicles use diesel fuel, but this has been separated into aviation fuel as well because the other dominant vehicle in the logistics sector is the aeroplane, which uses aviation fuel rather than diesel. Therefore, it will also be sought to investigate the impact of the change in the price of this fuel.

First, the variance, mean and standard deviation of the variables X and Y are examined. Once the above tests have been carried out, the results can be used to construct a descriptive statistics table. In order to construct this table, one of the first variables to be calculated is the variance (Lu et al., 2020):

$$s^2 = \frac{\sum(x_i - \bar{x})^2}{n-1}, \qquad (1)$$

here: s^2 - Sample variance;

x_i - the value of the i-th attribute of X;

$\bar{x}$ -the average of the sample;

n is the sample size.

Secondly, The ANOVA test can help to determine whether there is a relationship between different variables and whether there are statistically significant differences in the means between variables (Rouder et al., 2016). When an ANOVA test is performed, it is necessary to make certain assumptions, such as: that the variables are normally distributed, that the variables are independent, and that the variances of the variables are equal in order to obtain clear and correct results. It is also necessary when an ANOVA analysis is carried

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out, to have an appropriate hypothesis which will be used for further calculations (Gurvich & Naumova, 2021). Therefore, the following hypothesis is raised in this case:

$$\begin{cases} H_0: \mu_1 = \mu_2 = \mu_3 \ldots = \mu_n \\ H_1: at\ least\ two\ averages\ differs \end{cases}$$

The hypothesis contains two different indicators, H_0 and H_1. In the case of the ANOVA analysis, hypothesis H_0 states that the means of the independent variables selected for this study must all be equal to each other. Otherwise, the H_1 hypothesis, which states that at least two means are different, would take effect, which would reject the H_0 hypothesis.

Also, when an ANOVA analysis is carried out, it is important to calculate all the necessary component variables that influence each other and determine the further results of the study. Therefore, to carry out this study correctly, it is mandatory to calculate the intermediate indicators of the ANOVA in the following order (Gurvich & Naumova, 2021). Due to this order, the following intermediate variables (SSB, SST, MSW, MSB) will be calculated first: sum of squares of the groups, internal sum of squares, and sum of squares to allow for further calculations.

Once all primary and secondary ANOVA variables have been calculated using SPSS, it will be possible to obtain the final result of the analysis, which is expressed by the Fisher criterion (Gurvich & Naumova, 2021):

$$F = \frac{MSB}{MSW}, \qquad (2)$$

here: f is the Fisher criterion.

MSB - the internal variance estimates MSW- the external variance estimate

When the Fisher criterion is obtained, the Fisher distribution will also be searched to obtain the final result. Once the Fisher distribution has been obtained, the hypothesis of the ANOVA analysis raised earlier will be applied to test whether it is rejected or not. In the case of an ANOVA analysis, if the Fisher criterion is greater than the Fisher distribution, i.e. $F > F_{\alpha}$, then the H_0 hypothesis will be rejected, whereas in the opposite case, if $F < F_{\alpha,}$, then the H_0 hypothesis will not be rejected, confirming that at least two means differ (Güven et al., 2019). Also, by conducting ANOVA analysis with the help of "SPSS" program, the P value "Sig." is obtained, which can alternatively help to determine the results of the study, as well as Fisher's criterion. In this study, a utility coefficient of 0.05α will be used. This means that if the P-value obtained is less than 0.05, hypothesis H_0 will be rejected, confirming that there is a significant relationship between Baltic exports and minimum wage, customs duties or other variables.

The ANOVA analysis between the selected independent variables X and the fixed variable Y will be followed by a correlation test between the independent variables X_1, X_2, X_3, X_4, X_4 and X_6 and the fixed variable Baltic exports. The correlation coefficient is calculated according to the formula (Ali & Al-Hameed, 2022):

$$r_{xy} = \frac{n\sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n\sum x_i^2 - (\sum x_i)^2}\ \sqrt{n\sum y_i^2 - (\sum y_i)^2}}, \qquad (3)$$

here: r is the correlation coefficient;

x_i - independent variable;

y_i - dependent variable;

n - sample size.

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Once the correlation coefficient has been established, the aim will be to determine its strength and directionality. However, to establish a more precise correlation between Baltic exports and the identified variables, Table 1 below will be taken into account.

Table 1: Correlation coefficient strength table

Correlation coefficient	**|0 - 0,3|**	**|0,31 - 0,7|**	**|0,71 - 0,9|**	**|0,9 - 1|**
Contact	Weak	Medium	Strong	Very strong

(Source: Ali & Al-Hameed, 2022)

Finally, once the ANOVA and correlation analyses have been performed, further calculations will be carried out to perform the last tests, i.e., pairwise regression. When the regression test is carried out, the corresponding equation is set up (see Formula 4) (Korkmaz, 2021). This equation will be constructed to assess the potential relationship between Baltic exports and the variables selected for the study, such as excise duties, distance between countries, or other variables. Once the relationship between the selected variables in the regression study is established, the corresponding regression curve formula is constructed:

$$y = a_x + b, \qquad (4)$$

here: a - coefficient at x;

b - free member.

In addition, a Cook's measure test was carried out to investigate whether there is an autocorrelation problem between the selected variables. Autocorrelation can occur between the variables selected for the study when there is an undesirable correlation between the errors (Glu, 2019). To investigate whether there is a correlation between unwanted errors, the Durbin-Watson test will be performed.

4. Research results and discussion

This study aims to determine the impact of the independent variables X on the fixed variable Y. First, a descriptive statistics table is constructed (see Table 2):

Table 2: Descriptive statistics table for Y and X variables

	N	**Average**	**Standard deviation**	**95% confidence interval for the mean**		**Min.**	**Max.**
				Lower limit	Upper limit		
Y	31	28,6152	26,61363	18,8532	38,3771	1,93	79,97
$X_{1_plastics}$	31	9,4798	4,39787	7,8667	11,0930	4,85	19,10
$X_{1_Chemicals}$	31	4,3089	2,35641	3,4446	5,1732	1,41	11,13
$X_{1_Electronics}$	31	4,7949	2,79800	3,7686	5,8213	2,57	15,21
X_2	31	0,5052	0,04739	0,4878	0,5225	0,39	0,58
X_3	31	0,8890	0,33954	0,7645	1,0136	0,42	1,34
X_4	31	0,3268	0,14925	0,2720	0,3815	0,15	0,64
X_5	31	1032,1290	78,13354	1003,4694	1060,7886	862,00	1137,00
X_6	31	192,6232	151,71077	136,9753	248,2712	14,67	540,33
Total	279	141,5191	325,81859	103,1204	179,9178	0,15	1137,00

(Source: compiled by authors)

From the resulting table, it can be seen that the descriptive statistics of the identified independent variables X and the fixed variable Y were calculated. For this and subsequent analyses based on the

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independent variables X and Y, it is important to note that the data for X_1, i.e., the average customs duties for the Asian region, have been disaggregated in more detail to identify a more precise impact of the variables. This has been done because, according to the official, most recent Baltic export data, the Baltic countries mainly export to Asia, including South Korea, certain plastic products, chemical raw materials and certain electronics. For this reason, it was chosen to investigate in more detail the customs duties on Baltic exports from an Asian perspective to obtain more accurate results for this study, including descriptive statistics for Y and X variables. In Table 2, it can be seen that for the Y constant variable, the average export over 30 years amounts to about 28.6 million euros, while for $X_{1_plastics}$, i.e., the average duty granted by the Asian region to the Baltics for plastics products amounts to about 9.47%, the average duty on chemical products amounts to about 4.3%, and the average duty on electrical goods amounts to over 4.79%. Also, the average for X_2 is about 0.5 euro, the average for X_3 is 0.88 euro, while for X_4 it is only about 0.32 euro, the average CO2 emission is about 1032 million tons per year, and the average minimum wage is about 192.6 euro.

The standard deviation of each variable - "S" - is also calculated. The standard deviation of the Y variable is 26.6, the S for the independent variable $X_{1_Plastics}$ is 4.39, while $X_{1_Chemistry}$ is about 2.35 and $X_{1_Electronics}$ is about 2.79. The standard deviation of the variable X_2 is 0.04, the standard deviation of X_3 is 0.33, the standard deviation of X_4 is 0.14, the standard deviation of CO2 emissions is 78.13 and the standard deviation of X_6 is about 151.71. Once the standard deviation has been calculated, the variance of each variable is calculated. Using the data from the descriptive statistics table, the variance of the constant variable is found to be 707.56. The variances of the independent variables X are also calculated in the same way, where the variance of $X_{1_Plastics}$ is around 19.27, the variance of $X_{1_Chemistry}$ is around 5.52 and the variance of $X_{1_Electronics}$ is over 7.78, The variance of the variable X_2 is also calculated to be 0.0016, the variance of X_3 is 0.1089, the variance of X_4 is 0.0196, the variance of the variable X_5 for CO2 emissions is as high as 6104.29, while the variance of the average minimum wage in the Baltic countries is as high as 23015.92. From the above table (see Table 2), it can also be seen that the total variance of the independent variables X and the fixed variable Y is calculated in the same order, which is as high as 106152.15.

To see whether there were statistically significant differences between the means of the identified variables X and Y, an ANOVA test was performed and the corresponding table was obtained (see Table 3):

Table 3: ANOVA analysis between Baltic exports to South Korea and all independent X variables

	Square amounts	**Degree of freedom**	**Square of medians**	**Criterion F**	**P value**
Sum of squares of groups	28615991,624	8	3576998,953	1078,053	,000
sum of squares	895864,614	270	3318,017		
the total sum of squares	29511856,238	278			

(Source: compiled by authors)

Looking at the table (see Table 3), it can be seen that the primary indicators such as "SSB", which is over 286,151,991.62, were calculated first. The inner sum of squares was also calculated, which is only 895864.61; and the total sum of squares was calculated, i.e., "SST', which is over 29511856.23. Once the initial ANOVA indicators have been calculated, it is possible to obtain the following 'MSW' and 'MSB' indicators, as the results of the latter are needed to calculate these indicators. Looking at the results obtained from the ANOVA analysis table, it can be seen that the variance estimate for 'MSW' is around 3576998,95 whereas for 'MSB', the internal variance estimate is only 3318,01.

Once all the intermediate ANOVA variables have been calculated, the Fisher criterion is obtained. This is an indicator that will help to determine whether there is a relationship between the selected variables and

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whether there are statistically significant differences between the means of the variables. It can be seen from the table below (see Table 3) that the 'MSW' and 'MSB' indicators are used to obtain a Fisher criterion of 1078,05. Once the Fisher criterion is calculated, the Fisher distribution is also calculated in order to obtain the final results of the ANOVA analysis. The Fisher distribution is found in the following order:

$$F_{0,05}(8-1;279-8) \quad = \quad F_{0,05}(7;271) \approx 2{,}010$$

When all the data from the ANOVA analysis are available and the Fisher criterion and Fisher distribution are taken into account, hypothesis H_0 is rejected. This helps to confirm hypothesis H_1 when at least two means are different. This can be said because, given the survey data, $F > F_{0,05}$, i.e., 1078.05 > 2.010.

The study shows that there is a relationship between Baltic exports and selected variables such as minimum wage, customs duties or excise duties and that there are statistically significant differences between the means of the variables.

The correlation between the selected variables is then examined. This correlation test and the correlation coefficient r_{xy} itself help to determine the strength of the relationship between the selected variables. In this case, the correlation test will be carried out between the constant variable Y and the independent variables $X_{1_Plastics}$, $X_{1_Chemistry}$, $X_{1_Electronics}$, X_2, X_3, X_4, X_5 and X_6. The following correlation table of the variables was obtained (see Table 4):

Table 4: Table of correlation coefficients between selected Y and X variables

		$X_{1_plastics}$	$X_{1_Chemistry}$	$X_{1_Electronics}$	X_2	X_3	X_4	X_5	X_6
Baltic exports to South Korea	Correlation coefficient	-0,721	-0,415	-0,581	0,785	0,668	0,646	0,487	0,912
	P value	0,000	0,020	0,001	0,000	0,000	0,000	0,005	0,000
	N	31	31	31	31	31	31	31	31

(Source: compiled by authors)

First of all, from the correlation coefficients table (see Table 4), we can see the most important indicator, the P-value, which symbolizes that all variables are statistically significant for this study, as all variables have P-values less than the significance level of 0.05. When the significance of the variables has been checked, it can be seen that the data falls into two groups. One of these groups is customs duties, where customs duties decrease as Baltic exports increase. Applying the assumption, it can be argued that increasing Baltic exports to South Korea reduces existing protectionist tariffs. Also, due to decreasing tariffs, exports increase year by year. Since all the variables in the above table have a relationship with Baltic exports, the hypothesis is that hypothesis H_0 is rejected and hypothesis H_1 is accepted, since no variable can satisfy the condition of hypothesis H_0 - "$\rho = 0$".

Next, a pairwise and a polynomial regression will be carried out. However, it is important to note that before running both pairwise and polynomial regression tests, it is important to perform other important intermediate calculations that will help to identify whether there are unwanted outliers in the data and whether there are unwanted correlations between variables. For this reason, an outlier identification test is first performed. In this case, the Cook's measure test can help to identify whether unwanted outliers exist between the fixed variable Y and the independent variables $X_{1_plastic}$, $X_{1_Chemistry}$, $X_{1_Electronics}$ X_2, X_3, X_4, X_5 and X_6 which could distort the final results of the pairwise and multivariate regression analysis. In this case, the Cook's measure test produced corresponding results which show that there are no outliers among the selected variables, as there are no Cook's measure coefficients that exceed 1.

When the Cook's test is performed, the multicollinearity test is also performed. This test will be carried out until there is no longer any independent variable X that could cause a multicollinearity problem. It is also important to note that when there were several variables at the same time that caused a multicollinearity

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problem, only one was removed and the test was repeated. The variable with the highest VIF was removed first, the variable $X_{1_plastic}$. After the second multicollinearity table was constructed, it was decided to remove the variable X_3. The third multicollinearity table was constructed by removing the variable X_2. After removing the variable X_2, the last multicollinearity table was obtained (see Table 5):

Table 5: Fourth table of multicollinearity results for Y and X variables

Non-standardised coefficients		Standardised coefficients	The meaning of Stjudent's divider	P value	Collinearity statistics		
Regressors	Standard error	Beta			Tolerance	VIF	
Y	87,889	54,729		1,606	0,121		
$X_{1_Chemistry}$	-1,074	1,372	-0,095	-0,783	0,441	0,397	2,520
$X_{1_Electronics}$	-0,740	1,321	-0,078	-0,561	0,580	0,303	3,296
X_4	15,291	18,267	0,086	0,837	0,410	0,558	1,793
X_5	-0,084	0,048	-0,247	-1,746	0,093	0,291	3,432
X_6	0,160	0,021	0,914	7,687	0,000	0,414	2,418

(Source: compiled by authors)

When the last independent variable X_2, i.e., excise duty on diesel fuel, is removed, it can be seen that there is no longer any independent variable X that would cause an undesirable relationship with Baltic exports to South Korea (see Table 5). This is because there is no longer any variable that satisfies the condition of VIF ≥ 4. Therefore, from the multicollinearity table, it can be seen that only five independent variables will be used in the pairwise and multicollinear regressions, which are $X_{1_Chemistry}$, $X_{1_Electronics}$, X_4, X_5 and X_6.

Looking first at Table 4, it can be seen that the first statistically significant independent variable X that correlates with the fixed variable Y is $_{X1_Chemistry}$. Taking this into account and the last multicollinearity table (see Table 5), the first step is to establish the relationship between Baltic exports to South Korea and the duty imposed by the Asian region on chemical products (see Table 6):

Table 6: Pairwise correlation between Baltic exports to South Korea and the Asian region's duty on Baltic chemical products

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Durbin Watson test
1	0,415	0,172	0,144	0,201

(Source: compiled by authors)

Before a pairwise regression is performed, a pairwise correlation table is created. This table allows us to see the coefficient of determination, which allows us to decide whether it is possible to set up a pairwise or a polynomial regression equation. In this case, the coefficient of determination - R^2 - is 0,17. According to the rule - $R^2 > 0.20$, it can be said that in this case a pairwise regression cannot be constructed because $0.17 < 0.2$.

If the pairwise regression equation between the independent variable X_{1_Chemia} and Baltic exports to South Korea is not possible, the next regression will be performed between the variable $X1_{_Electronics}$ and the variable Y. As in the first pairwise regression, a pairwise correlation table is first constructed (see Table 7):

Table 7: Pairwise correlation between Baltic exports to South Korea and the Asian region's duty on electronics products for the Baltic States

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Durbin Watson test
1	0,581	0,337	0,315	0,434

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(Source: compiled by authors)

When a pairwise correlation table was constructed between the constant variable Y and the independent variable X1_Electronics, it can be seen that in this case, it is possible to construct a pairwise regression equation, because the coefficient of determination reaches around 0.33 when looking at the constructed model. This model can be used because it satisfies the condition R2>0,20. Also looking at the table, it can be seen that the tariffs imposed by the Asian region on electronic products explained about 33% of Baltic exports to South Korea. When the coefficient of determination meets the conditions of the study, it is possible to construct a table of pairwise regression coefficients between the selected variables (see Table 8):

Table 8: Coefficient values between Baltic exports to South Korea and the Asian region's duty on electronics products for the Baltic States

Model		Non-standardised coefficients B	P - value
1	Baltic exports to South Korea	55,106	0,000
	$X_{1_Electronics}$	-5,525	0,001

(Source: compiled by authors)

From the table of paired regression coefficients (see Table 8), it can be seen that the P-values of the variables are below the significance level of 0.05. Taking this criterion into account, a pairwise regression equation is constructed between the fixed variable Y and the independent variable $X_{1_Electronics}$:

$$y = 55{,}1 - 5{,}525x$$

This resulting pairwise regression equation can accurately reflect the impact of the Asian region's duty on electronics products on Baltic exports to South Korea. In this case, the Baltic countries can save as much as €44.3 million as a result of the decreasing tariffs on electronics products. This is because, in 2020, the duty rate was only about 1.35%. According to the above formula, if customs duties were reduced to 1%, the Baltic countries could save as much as €46.4 million on exports to South Korea. On the other hand, the Baltic countries would start to incur losses when exporting to South Korea if the duty rate for electronic goods exceeds 10%. This means that the Baltic countries would start generating a loss of 140 thousand euros per year if a 10% tariff rate were imposed. Therefore, from the equation and the trend of the data, it can be assumed and argued that the decreasing customs duties help the Baltic countries to collect more and more revenue from exports to South Korea.

A second pairwise regression equation between the fixed variable Y and the independent variable X is then constructed X_4. First, a pairwise correlation table is constructed between the selected variables (see Table 9):

Table 9: Pairwise correlation between Baltic exports to South Korea and the average price of aviation fuel in Europe

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Durbin Watson test
1	0,646	0,417	0,397	0,314

(Source: compiled by authors)

When the second pairwise correlation table between Baltic exports and the average price of aviation fuel in Europe was constructed, it can be seen that this model can also be used to construct a pairwise regression coefficient table, as the coefficient of determination is greater than 0.2. It can also be seen from the above table (see Table 9) that the average price of aviation fuel in Europe explains as much as 41.7% of Baltic exports to South Korea. Taking into account the data obtained, a pairwise regression coefficients table was also constructed (see Table 10):

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Table 10: Coefficient values between Baltic exports to South Korea and the average price of aviation fuel in Europe

Model		Non-standardised coefficients B	P - value
1	Baltic exports to South Korea	-9,016	0,328
	X_4	115,159	0,000

(Source: compiled by authors)

From the coefficient table, it can be seen that the value of the independent variable X_4 P is less than the 0.05 significance level. This allows us to construct a pairwise regression equation between Baltic exports to South Korea and the average price of aviation fuel in Europe:

$$y = -9{,}01 + 115{,}159x$$

The resulting paired regression equation shows a significant relationship between the average price of aviation fuel in Europe and Baltic exports to South Korea. The equation shows that, based on data for 2020, when the price of a liter of aviation fuel was €0.42, the Baltic countries earned an additional €39.6 million from exports to South Korea. While this increase shows the benefits to be gained, rising fuel prices may slow down export growth. This is because the cost of fuel and transport costs are included in the cost of goods or raw materials. In this case, where the distance between the countries under consideration is large, even the slightest change in fuel prices could have a significant impact on exports to South Korea, potentially making the product less competitive. If the price of fuel were to rise to €0.6 per liter, the Baltic countries could potentially earn an additional €56.3 million, but this would also increase the likelihood that the competitiveness of the goods or raw materials would be reduced in South Korea by reducing the volume of imports.

A third pairwise correlation coefficient table is then constructed between the fixed variable Y and the particulate matter emissions of vehicles (see Table 11):

Table 11: Pairwise correlation between Baltic exports to South Korea and vehicle particulate matter emissions

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Durbin Watson test
1	0,487	0,237	0,211	0,191

(Source: compiled by authors)

From the resulting pairwise correlation table between the fixed variable Y and the independent variable X_5, it can be seen that this model is suitable for use in the development of a pairwise regression equation, since R2 > 0.20. In this case, vehicle particulate matter emissions explained only about 23% of Baltic exports to South Korea. As the coefficient of determination allows, a table of paired regression coefficients is also constructed (see Table 12):

Table 12: Coefficient values between Baltic exports to South Korea and vehicle particulate matter emissions

Model		Non-standardized coefficients B	P - value
1	Baltic exports to South Korea	-142,515	0,019
	Co2 emissions $(X)_5$	0,166	0,005

(Source: compiled by authors)

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From the table above (see Table 12) it can be seen that the X_5 variable is still less than and equal to the significance level of 0.05. Taking this condition into account, a third pairwise regression equation is nevertheless developed:

$$y = -142{,}51x + 0{,}166$$

The third pairwise regression equation shows that rising carbon dioxide emissions contribute, albeit weakly, to the growth of Baltic exports to South Korea. This means that in 2020, when the EU emitted over 1082 million tons of CO2, it helped generate an additional €34.7 million in Baltic exports. On the other hand, while reducing CO2 emissions would be good for the ecology and would help the EU to meet its new targets for protecting nature and reducing pollution more quickly, if emissions were to fall to 750 million tons per year, the Baltic exports would lose over €16.7 million. Although rising CO2 emissions have a positive impact on exports, looking at the results from an ecological rather than an economic point of view and from the perspective of the logistics sector, especially in the long term, this could cause significant difficulties for the logistics sector. The EU is determined to drastically reduce CO2 emissions by 2030-2040. Many vehicle manufacturers are also determined to stop producing vehicles that use internal combustion engines by 2030-2040. This has the potential to become a huge problem and burden for the logistics sector, which will have to switch to less polluting or electric trucks, potentially requiring huge investments.

Finally, a final table of the pairwise regression coefficients between the fixed variable Y and the independent variable X_6 is produced (see Table 13):

Table 13: Pairwise correlation between Baltic exports to South Korea and the Baltic average minimum wage

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Durbin Watson test
1	0,912	0,832	0,826	0,808

(Source: compiled by authors)

From these data, it is also possible to construct a table of paired regression coefficients, as the coefficient of determination is 0.83 > 0.2. This coefficient of determination also suggests that the average Baltic minimum wage explains 83.2% of Baltic exports to South Korea. Taking these data into account, a final pairwise regression coefficients table is constructed (see Table 14):

Table 14: Coefficient values between Baltic exports to South Korea and the Baltic average minimum wage

Model		Non-standardised coefficients, B	P - value
1	Baltic exports to South Korea	-2,207	0,503
	Baltic average minimum wage X_6	0,160	0,000

(Source: compiled by authors)

The value of the independent variable X_6 P is 0, which allows the last - fourth - pairwise regression equation to be created:

$$y = -2{,}207x + 0{,}16$$

From the last pairwise regression equation, it is possible to determine how the Baltic minimum wage affects Baltic exports to South Korea. According to the data for 2020, when the average minimum wage in the Baltics was around €540, the increase in the Baltic minimum wage contributed the most to the increase in Baltic exports to South Korea, with an increase of around €79 million. This large increase can also be explained by the determination coefficient obtained, which explains 83.2% of Baltic exports to South Korea. If the average minimum wage in the Baltic States were to rise to €700, this would potentially raise an additional €103 million for the Baltic States. A rising minimum wage can encourage consumers to spend

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more and put money back into circulation. Increasing the affordability of goods and services may encourage entrepreneurs to participate more intensively in international trade by increasing exports and imports of certain products to meet the growing consumer demand for services and goods. Therefore, the results suggest that the minimum wage is the strongest contributor to the growth of Baltic exports to South Korea.

5. Conclusions

The literature review has identified a number of factors that can affect international economic relations and the logistics business. Governments and international organizations are the strongest influences on the development of international economic relations. The World Trade Organization assists countries in developing international economic relations and logistics business, monitors the smooth flow of international trade exchanges and monitors national trade policies. The government can enact laws favorable to the logistics sector and introduce regulations on the quality of goods, which can help attract more foreign investors. Also, low fluctuations in fuel prices, lower excise duties, increases in the minimum wage, and changes in particulate matter emissions can help to expand international economic links. Decreasing protectionist tariffs in South Korea are also a strong contributor to increasing Baltic exports to South Korea.

The calculations showed that all variables, i.e. fuel price changes, CO2 emissions, minimum wage changes, excise duties, customs duties and distance between countries have an impact on Baltic exports to South Korea. This can be said because the ANOVA test showed that the P-value is $< 0.05\alpha$. It was also found that decreasing customs duties in the Asian region helped to generate more profits for the Baltic countries, with customs duties of 1.35% saving as much as 44.3 million Euros. On the other hand, rising CO2 emissions, thanks to the logistics sector, generate €34.5 million more from exports. Assuming this is the case, this is due to the increasing use of commercial vehicles. Although this helps the State to raise more money from exports, in the long term it may have a negative impact on the logistics sector due to new EU environmental laws and targets.

It was also found that the rising minimum wage helps explain 83.2% of all Baltic exports to South Korea. Minimum wage increases contribute to an additional €79 million in revenue. Applying the assumption, it can be argued that a rising minimum wage encourages consumers to be more active in spending money to meet their needs, which can lead to increased exports and imports of goods between different countries, improving international economic relations between the Baltic States and South Korea. The rising price of aviation fuel, which explains as much as 41.7% of exports, contributes to an additional €39.6 million in Baltic exports. However, this may have a negative impact on the competitiveness of the commodity, as the rising cost of fuel is normally included in the cost of the commodity.

In light of the results, it could be recommended that the Baltic countries should continue to raise the minimum wage, which helps to promote greater consumption of goods, and through political cooperation, reduce the level of tariffs imposed by South Korea so that international economic ties between the cooperating countries can continue to expand, as the distance between the countries cannot be reduced.

6. References

[1] Abdul, S., Khan, R., Qianli, D., Songbo, W., Zaman, K., & Zhang, Y. (2017). Environmental logistics performance indicators affecting per capita income and sectoral growth: evidence from a panel of selected global ranked logistics countries. Environmental Science and Pollution Research, 24(2), 1518–1531. https://doi.org/10.1007/s11356-016-7916-2

ISSN: 2247-6172
Review of Applied Socio- Economic Research
(Issue 29 /2025), pp. 1-
URL: http://www.reaser.eu
e-mail: editors@reaser.eu

[2] Abdul, S., Khan, R., Streimikiene, D., Kumar, A., & Zavadskas, E. (2020). Measuring the impact of renewable energy, public health expenditure, logistics, and environmental performance on sustainable economic growth. SUSTAINABLE DEVELOPMENT, 28(4), 833–843. https://doi.org/10.1002/sd.2034

[3] Ali, K., & Al-Hameed, A. (2022). Spearman's correlation coefficient in statistical analysis. INTERNATIONAL JOURNAL OF NONLINEAR ANALYSIS AND APPLICATIONS, 13(1), 3249–3255.

[4] Approach, A. (2018). Evaluating Logistics Performances of Agricultural Prunings for Energy Production: A Logistics Audit. LOGISTICS-BASEL, 2(3). https://doi.org/10.3390/logistics2030019

[5] Blau, B. M. (2019). Price Clustering and Investor Sentiment Price Clustering and Investor Sentiment. Journal of Behavioral Finance, 20(1), 1–12. https://doi.org/10.1080/15427560.2018.1431887

[6] Crepaz, M., Hanegraaff, M., & Salgado, R. S. (2021). A golden key can open any door? Public funding and interest groups' access. West European Politics, 44(2), 378–402. https://doi.org/10.1080/01402382.2019.1697592

[7] Dimmelmeier, A., Heussner, F., Pürckhauer, A., & Urban, J. (2017). Making the incommensurable comparable: a comparative approach to pluralist economics education. EUROPEAN JOURNAL OF ECONOMICS AND ECONOMIC POLICIES-INTERVENTION Volume14 Issue2 Page250-266, 14(2), 250–266.

[8] Eydi, A., & Alavi, H. (2019). Vehicle Routing Problem in Reverse Logistics with Split Demands of Customers and Fuel Consumption Optimization. Arabian Journal for Science and Engineering, 44(3), 2641–2651. https://doi.org/10.1007/s13369-018-3311-2

[9] Futerman, A. G. (2020). An Austrian critique of the neoclassical approach to indirect taxes. REVIEW OF AUSTRIAN ECONOMICS.

[10] Galadari, A. (2019). Forum for Social Economics Sustainable Economics: Understanding Market and Government Roles Sustainable Economics: Understanding Market and Government Roles. Forum for Social Economics, 0932(2), 176–193. https://doi.org/10.1080/07360932.2017.1356345

[11] Glu, M. (2019). K-AUTOCORRELATION AND ITS APPLICATIONS. COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, 68(1), 672–685. https://doi.org/10.31801/cfsuasm

[12] Golovko, A., & Sahin, H. (2021). Analysis of international trade integration of Eurasian countries: gravity model approach. Eurasian Economic Review, 11(3), 519–548. https://doi.org/10.1007/s40822-021-00168-3

[13] Gurvich, V., & Naumova, M. (2021). Logical Contradictions in the One-Way ANOVA and Tukey-Kramer Multiple Comparisons Tests with More Than Two Groups of Observations. SYMMETRY-BASEL, 13(8). https://doi.org/10.3390/sym13081387

[14] Güven, G., Gürer, Ö., Şamkar, H., & Şenoğlu, B. (2019). A fiducial-based approach to the one-way ANOVA in the presence of nonnormality and heterogeneous error variances. JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, 89(9), 1715–1729. https://doi.org/10.1080/00949655.2019.1593985

[15] Hampton, S., & Adams, R. (2018). Energy Research & Social Science Behavioural economics vs social practice theory: Perspectives from inside the United Kingdom government. Energy Research & Social Science, 46, 214–224. https://doi.org/10.1016/j.erss.2018.07.023

[16] Herfeld, C. (2021). Understanding the rationality principle in economics as a functional a priori principle. Synthese, 198(s14), 3329–3358. https://doi.org/10.1007/s11229-020-02730-z

[17] Hidayah, N., Ahmat, C., Kim, J., & Arendt, S. W. (2021). Examining the Impact of Minimum Wage Policy on Hospitality Financial Performance Using Event Study Method. International Journal of Hospitality & Tourism Administration, 1–25. https://doi.org/10.1080/15256480.2021.1938785

ISSN: 2247-6172
Review of Applied Socio- Economic Research
(Volume 29, Issue 1 /2025), pp. 1- 18
URL: http://www.reaser.eu
e-mail: editors@reaser.eu

[18] Himmelreicher, R. (2020). Characteristics Contributing to Low- and Minimum-Wage Labour in Germany. JAHRBUCHER FUR NATIONALOKONOMIE UND STATISTIK, 240(2–3), 161–200.

[19] Hong, B. (2020). A demand and supply game exploring global supply chains. The Journal of Economic Education, 51(1), 42–51. https://doi.org/10.1080/00220485.2019.1687373

[20] Hunady, J., & Pisar, P. (2021). INNOVATION AND INVENTION IN THE EU BUSINESS SECTOR: THE ROLE OF THE RESEARCH AND DEVELOPMENT EXPENDITURES. INTERDISCIPLINARY DESCRIPTION OF COMPLEX SYSTEMS, 19(2), 168–188. https://doi.org/10.7906/indecs.19.2.1

[21] Jankovic, I., & Block, W. (2019). Private Property Rights, Government Interventionism and Welfare Economics. REVIEW OF ECONOMIC PERSPECTIVES, 19(4), 365–397. https://doi.org/10.2478/revecp-2019-0019

[22] Jereb, B., & Jereb, B. (2017). Mastering logistics investment management 1. TRANSFORMATIONS IN BUSINESS & ECONOMICS, 16(1), 100–120.

[23] Jiang, J., Zhang, D., & Meng, Q. (2021). Impact analysis of investment coordination mechanisms in regional low-carbon logistics network design. Transportation Research Part D, 92(February), 102735. https://doi.org/10.1016/j.trd.2021.102735

[24] Jiang, Y., Lai, P., Chang, C., Yuen, K. F., Li, S., & Wang, X. (2021). Sustainable Management for Fresh Food E-Commerce Logistics Services. SUSTAINABILITY, 13(6).

[25] Juliet, I., Kusi-Sarpong, S., Huang, S., & Vazquez-Brust, D. (2020). Evaluating the factors that influence blockchain adoption in the freight logistics industry. Transportation Research Part E, 141. https://doi.org/10.1016/j.tre.2020.102025

[26] Kar, A., & Datta, P. R. (2020). Logistics Cost Dynamics in International Business: A Causal Approach. FOREIGN TRADE REVIEW, 55(4), 478–495. https://doi.org/10.1177/0015732520947861

[27] Kim, I. S., & Osgood, I. (2019). Firms in Trade and Trade Politics. ANNUAL REVIEW OF POLITICAL SCIENCE, 22, 399–417.

[28] Korkmaz, M. (2021). A study over the general formula of regression sum. NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, 37(1), 406–421. https://doi.org/10.1002/num.22533

[29] Kozyrin, A., & Yalbulganov, A. (2019). Alteration of Time Limits of Performance of Tax Liability in the Russian Tax and Customs Law. PRAVO-ZHURNAL VYSSHEI SHKOLY EKONOMIKI, (4), 31–51. https://doi.org/10.17323/2072-8166.2019.4.31.51

[30] Kuenzel, D. J. (2017). WTO dispute determinants. European Economic Review, 91(November 2015), 157–179. https://doi.org/10.1016/j.euroecorev.2016.09.010

[31] Lu, K., Liang, C., Hsieh, M., & Lee, Y. (2020). An effective hybrid variance reduction method for pricing the Asian options and its variants. North American Journal of Economics and Finance, 51(April 2019), 100961. https://doi.org/10.1016/j.najef.2019.04.004

[32] Melnik, T., Kudyrko, L., & Samsonova, L. (2019). CONTRACTUAL RELATIONS IN THE NEW ECONOMIC. BALTIC JOURNAL OF ECONOMIC STUDIES, 5(3), 116–124.

[33] Mon, Y. Y., & Lim, S. (2019). Multiplex Relations between States: Coevolution of Trade Agreements and Political Alliances. SUSTAINABILITY, 11(14), 1–24.

[34] Nguyen, D. X. (2021). Minimum Wages and Firm Exports: Evidence from Vietnamese Manufacturing Firms * I. Introduction. EAST ASIAN ECONOMIC REVIEW, 25(1), 99–121.

[35] Nguyen, H. H. (2019). Impact of Direct Tax and Indirect Tax on Economic Growth in Vietnam. JOURNAL OF ASIAN FINANCE ECONOMICS AND BUSINESS, 6(4), 129–137. https://doi.org/10.13106/jafeb.2019.vol6.no4.129

ISSN: 2247-6172
Review of Applied Socio- Economic Research
(Issue 29 /2025), pp. 1-
URL: http://www.reaser.eu
e-mail: editors@reaser.eu

[36] Osabuohien, E. S., Beecroft, I., & Efobi, U. R. (2018). Global trade and trade protection in a globalised world. Transnational Corporations Review, 0(0), 43–52. https://doi.org/10.1080/19186444.2018.1436650

[37] Ranđelović, S., & Bisić, M. (2021). With cross - border arbitrage. Empirica, 48(2), 507–532. https://doi.org/10.1007/s10663-020-09478-2

[38] Rouder, J. N., Engelhardt, C. R., Mccabe, S., & Morey, R. D. (2016). Model comparison in ANOVA. PSYCHONOMIC BULLETIN & REVIEW, 1779–1786. https://doi.org/10.3758/s13423-016-1026-5

[39] Shee, H. K., Miah, S. J., & Vass, T. De. (2021). Impact of smart logistics on smart city sustainable performance: an empirical investigation. INTERNATIONAL JOURNAL OF LOGISTICS MANAGEMENT, 32(3), 821–845. https://doi.org/10.1108/IJLM-07-2020-0282

[40] Skender, H. P., Zaninović, P. A., & Lolić, A. (2019). The Importance of Logistics Distribution Centers as Nodes in Logistics Networks. POMORSTVO-SCIENTIFIC JOURNAL OF MARITIME RESEARCH, 33(2), 149–157.

[41] Takács-Györgyb, K. (2020). The impact of the relationship between the state, state Institutions and tax payers on willingness to pay tax. SERBIAN JOURNAL OF MANAGEMENT, 15(1), 69–80. https://doi.org/10.5937/sjm15-21750

[42] Traverso, S., & Schiavo, S. (2020). Fair trade or trade fair? International food trade and cross-border macronutrient flows. World Development, 132, 104976. https://doi.org/10.1016/j.worlddev.2020.104976

[43] Wang, H., & Cheng, Z. (2021). Journal of Economic Behavior and Organization Mama loves you: The gender wage gap and expenditure on children's education in China. Journal of Economic Behavior and Organization, 188, 1015–1034. https://doi.org/10.1016/j.jebo.2021.06.031

[44] Watson, A. (2019). Financial Frictions, the Great Trade Collapse and International Trade over the Business Cycle. OPEN ECONOMIES REVIEW, 30(1), 19–64.

[45] Zaman, K., & Shamsuddin, S. (2017). Green logistics and national scale economic indicators: Evidence from a panel of selected European countries. Journal of Cleaner Production, 143, 51–63. https://doi.org/10.1016/j.jclepro.2016.12.150

[46] Zhang, D., Zhan, Q., Chen, Y., & Li, S. (2018). Joint optimization of logistics infrastructure investments and subsidies in a regional logistics network with CO 2 emission reduction targets. Transportation Research Part D, 60, 174–190. https://doi.org/10.1016/j.trd.2016.02.019

[47] Zoitsas, A., Valsamidis, D., & Toptsi, T. (2019). Indirect Auditing Methods for Individuals Subject to Income Tax. ECONOMIES OF THE BALKAN AND EASTERN EUROPEAN COUNTRIES, 385–400. https://doi.org/10.18502/kss.v4i1.6001

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