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**AmurCon 2021: International Scientific Conference****EXPORT PROMOTION DIRECTIONS AND EVALUATION  
INDICATORS**

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**Abstract**

The article describes the export support system, including directions, measures, and support institutions at the federal and regional levels. Particular attention is paid to the study of indicators for assessing the performance of exports. The relevance is due to the expansion of systemic financing of export promotion programs, which requires the formation of a methodological base for assessing the effectiveness of budget funds allocated for export promotion programs' financing. Based on a study of domestic and foreign practice, the levels of the promotion measures impact on exports are revealed: state, region, industry, economic entity. At the state and regional level, the goal of export promotion is to increase its value, especially in the field of non-resource non-energy exports. In this regard, the basis for assessing the effectiveness of support is a regression model between the indicators of expenditures export promotion programs and volumes of regional exports. The study showed that the direct relationship between the volume of financing of export promotion programs and its volume is insignificant. That indicates the need for a comprehensive assessment of the results of export promotion based on a system of indicators.

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## 1. Introduction

In the circumstances of a rather difficult competitive situation in the international market as well as non-economic factors' influence on the conditions of international trade and pandemic crisis export promotion has a crucial role in the international activity of national companies' development (Geldres-Weiss & Monreal-Perez, 2021).

Industrial countries have extensive experience in export promotion. First export promotion agencies (EPAs) appeared in Finland in 1919 (Lederman et al., 2010), and in such countries like the USA, South Korea, European countries more than 50 years ago. The export promotion system in Russia is of particular interest since not long ago. In the last decade, in 2012, the formation of an export promotion system and a mechanism for its functioning began. The country has formed a two-tier export promotion system, which includes various subjects at the federal and regional levels and a wide range of promotion measures (Shlyk & Titova, 2018). Instruments for promoting and developing exports are combined into 2 groups - financial measures (loans, insurance, guarantees) and non-financial measures to support exports (information and consulting, promotional and organizational, including exhibition and fair activities promotion). In addition, several projects and programs are being implemented to support exports. The register of financial support institutions includes, first of all, ROSEKSIMBANK JSC, Vnesheconombank, EXIAR JSC. Among the export promotion entities, one can also name the Ministry of Economic Development of Russia (promotional and organizational, including exhibition and fair activities promotion), the Ministry of Industry and Trade of Russia (Corporate programs to improve competitiveness, exhibition, and fair activities promotion), SME Corporation, Industry Development Fund, Russian Direct Investment Fund, REC group of companies (Investment Lift Program), Industrial Development Fund (Development Projects Program), trade missions of the Russian Federation in foreign countries (non-financial promotion measures), REC JSC (support for export deliveries), regional Export Support Centers (services in the field of starting and developing exports), etc.

In 2020, the formation of an export promotion system was completed, the digital platform "My Export" with the "One Window" technology was launched, which provides exporters with the services in the field of foreign economic activity, provided by the authorities, as well as JSC "REC" and other organizations, through the exporter's account. In 2022, the information system should cover all stages of the export cycle and all relevant departments (Artemenko & Titova, 2021). In 2021, new measures to support exporters were approved.

The main purpose of export promotion in Russia according to the State program "International cooperation and export" is to increase the share of non-energy products in export and the share of industrial and agricultural export in GDP. Regional agencies have similar objectives. For example, the main objective stated in the national program of Khabarovsk Krai "International, interregional and exhibition and congress activities development" is international cooperation and export promotion. Evaluation of the effectiveness of export promotion is carried out according to the corresponding target key indicators.

Foreign countries also use a wide range of export promotion measures. But still, there is no common approach to the assessment of the results of these programs. Researches use different indicators

and criteria to assess the success of export promotion programs implementation. The reasons are the following.

First, the aims of export promotion depend on the administration level. The state government has the aim to increase the national export volume and improve its product structure. The main indicators, in this case, are export volume, export growth rate, share of different commodities in total exports. The regional government aims to balance the region's external trade, integrate the region in global production chains, encourage businesses to participate in international business activities and increase employment, etc. For private businesses several groups of indicators can be used (Freixanet, 2011; Mota et al., 2021):

- economic indicators (international sales, profits, market share, etc.);
- non-economic indicators (the number of export destinations, the number of export commodities and product structure of exports, etc.);
- specific indicators (export aims achievement, export strategy effectiveness, satisfaction with export results, etc.).

Second, at different internationalization stages firms' goals are different. For potential exporters, it is important to make the first steps and to get the first export contract. For an experienced company, the success may be expressed by increasing the number of export markets, introducing new products to the foreign market, opening foreign subsidiaries, etc. (Brooks & Van Biesebroeck, 2017; Malca et al., 2020).

In this case, export promotion programs' evaluation is based on different indicators (Catanzaro & Teyssier, 2020; Smith & Bellew, 2006).

## **2. Problem Statement**

Promotion system development in Russia is quite dynamic. New tools appear and existing ones are improved. Funding for export promotion programs is increasing. As a particular example, only in the Khabarovsk Territory for the period from 2014 (when this item of expenditures became a level in the regional budget) to 2020, its total amount increased to almost 271.5 million rubles.

In this regard, the issue of assessing the effectiveness of export promotion measures is of great importance. Its modern concept is the main issue in the priority project "International Cooperation and Exports" (currently a national project), the purpose of which is to increase the indicators of non-primary non-energy exports of goods and the number of exporters, including small and medium-sized businesses. The following statements confirm this. In 2019, by order of the Ministry of Economic Development of Russia N594 of September 25, 2019, a detailed list of key performance indicators of regional export promotion centres was determined, including the volume of supported exports of small and medium-sized enterprises (SMEs), the number of SMEs that received services and concluded export contracts with the assistance of the center. In 2020, by order of the Government of the Russian Federation N 3579 of December 29, 2020, recommendations for the formation and application of key performance indicators of development institutions), including a contribution to non-resource non-energy exports were approved. Among the development, institutions are the Russian Export Center, which participates in the implementation of state policy in the field of development and export promotion, the main target indicators of which are initially the volume of supported exports through the Center's support tools and the number of exporting companies covered by the centre's support measures. Thus, only the fulfilment of

the established planned indicators according to the approved list is assessed, which does not answer the question of the correlation between the indicators of the support funding provided and its result. It is also necessary to mention the words of D. Medvedev at the meeting of the Presidium of the Council under the President of the Russian Federation for Strategic Development and Priority Projects on September 27, 2016, that the procedure for export promotion should allow enterprises to make profits, and it should also be linked to industrial priorities. Of course, other indicators and appropriate methods to assess export promotion results, in this case, are needed.

It is obvious that to assess export promotion, it is necessary to form a methodological basis for a system of indicators and a methodology for their calculation, which is emphasized by most researchers in their works.

### **3. Research Questions**

Researchers, foreign and Russian, did not come to a consensus on what indicators should be used to assess the effectiveness of export promotion and what criteria should be taken as a basis (Lederman et al., 2010; Martincus, 2010). It is noted that if there is a wide range of support measures that are in demand differently in different areas and enterprises of different sizes, the performance criteria cannot be the same (Sokolova et al., 2019).

At the same time, such indicators as the relationship between export promotion expenditures and export volumes are used for evaluation (Urumov, 2017; Wilkinson & Brouthers, 2000). At the same time, foreign authors point to the presence of a significant positive relationship between the state export promotion expenditures and its volume (Lederman et al., 2010). It should also be noted that the regional expenditures on export promotion are more effective than the corresponding expenditures from the federal budget (Knobel & Loshenkova, 2018).

Based on the above, the following working hypotheses of the study were identified:

- there is a positive relationship between the volume of export promotion programs funding and its volumes, especially in the sector of non-resource non-energy exports;
- an increase in funding for regional export promotion programs has an impact on the volume of exports of the region;
- an assessment of the tightness of the relationship between the financing of export promotion programs and its volumes gives controversial results.

### **4. Purpose of the Study**

The purpose of this study is to determine the degree and direction of the impact of export promotion programs financing on the indicators of the volume of exports and non-resource non-energy exports of the Khabarovsk Territory in the period 2014-2020.

### **5. Research Methods**

This study considered the methodological approaches to the evaluation of the State export promotion influence on export performance, applied by foreign (Catanzaro & Teyssier, 2020; Lederman

et al., 2010; Martincus, 2010; Smith & Bellew, 2006) and Russian authors to solve various problems (Urumov, 2017).

The study used a correlation-regression analysis based on an estimate of the least-squares model. Correlation analysis reveals the tightness of the relationship between two variables. In this case, for the analysis, we will use the export promotion funding and exports in value terms. Since the analysis is based on standard deviations of random variables, the units of measurement do not matter to the result, therefore, there is no need to translate the indicators into one currency. The correlation coefficient ( $r$ ) is always between -1 and +1. The closer its absolute value  $|r|$  to 1, the higher the correlation between the variables under consideration is.

The following formula is used for correlation coefficient calculation:

$$r_{xy} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}} \quad (1)$$

where

$r_{xy}$  – correlation coefficient;

$x_i$  – Khabarovsk territory budget expenditures for export promotion in  $i$  – period;

$\bar{x}$  – average Khabarovsk territory budget expenditures for export promotion for the period 2014-2020;

$y_i$  – Khabarovsk territory export volume in  $i$  – period;

$\bar{y}$  – average Khabarovsk territory export volume for the period 2014-2020.

Correlation is considered strong if the coefficient exceeds 0,7.

Further analysis is carried out based on a linear regression model. For the regression analysis, export promotion expenditures were considered in USD based on Central Bank data of currency exchange rate for the period 2014-2020 (Table 1).

The regression equation is as follows:

$$y_t = a + \beta_1 * x_t + \beta_2 * x_{t-1} + \varepsilon_t \quad (2)$$

where

$y_t$  – dependent variable (non-primary non-energy exports of the Khabarovsk Territory);

$x_t$  – independent variable (Khabarovsk territory budget expenditures for export promotion in  $t$  – period);

$x_{t-1}$  – Khabarovsk territory budget expenditures for export promotion in previous  $t - 1$  – period;

$\beta$  – regression coefficient;

$\varepsilon$  – residual.

The least-squares method is used to estimate the parameters of the equation. The calculations were performed using the Statgraphics program.

To assess the impact of export promotion expenditures on its volume, three equations were considered.

$$1) Y_t = a + \beta_1 * x_t + \varepsilon_t \quad (3)$$

$$2) Y_t = a + \beta_1 * x_t + \beta_2 * x_{t-1} + \varepsilon_t \quad (4)$$

$$3) Y_t = a + \beta_2 * x_{t-1} + \varepsilon_t \quad (5)$$

The first equation (Ur 1) deals with the situation when the expenditures on export promotion, carried out in the current year, affect its volume. The second equation (Ur 2) considers the situation when the export promotion funding of the current and the previous year affect its volume. The third equation shows the situation when the expenditures for supporting exports of the previous year affect its volume in the current year.

For the assessment, we used data from the budget expenditures of the Khabarovsk Territory for the export promotion program for the period from 2014 to 2020. Earlier data is not available, as special budget items for export promotion were not allocated. It is important to mention that export promotion funding is based on the State Khabarovsk territory program “International, interregional and exhibition and congress activities development”, which includes co-financing from the Federal and regional budget. Export promotion expenditures till the year 2024 will be sourced from the Federal budget by 32%, and from the regional budget – by 68%. The data of the volume of regional exports for the same period was also used. Since the main goal of developing the region's exports is to diversify it, as well as to increase the share of non-primary exports, it was necessary to assess the relationship between the costs of supporting exports and the volumes of non-primary non-energy exports of the Khabarovsk Territory. The sources of statistical data are Khabarovsk territory laws on the regional budget, Russian export center data on non-primary non-energy exports, and Khabarovsk territory Export promotion Centre data. The initial data are presented in table 1.

**Table 1.** Data on the export promotion expenditures and Khabarovsk territory exports, 2014-2020

Index	2014	2015	2016	2017	2018	2019	2020
Khabarovsk territory exports, mln USD	1437,7	1145,4	1546,2	2138,8	2573,4	1340,0	1356,3
Non-primary non-energy exports of the Khabarovsk Territory, mln USD	556,68	504,66	928,96	1350,65	1528,86	895,92	963,79
Export promotion expenditures, th. Rub	5800,0	5802,0	8209,9	17247,3	90539,9	78084,9	65449,14

Source: authors' calculations based on Russian export center statistics, export promotion center of Khabarovski Krai statistics, Khabarovsk Krai budget 2014-2020.

## 6. Findings

The calculations gave the following results: the correlation coefficient between the export promotion funding and the volume of exports in the Khabarovsk Territory was 0.38. This is a rather low indicator, which shows that the financing of export promotion programs in the Krai does not significantly affect the volume of the region's exports. This result is explained by the commodity structure of Khabarovsk Krai exports, where a significant share belongs to raw materials, which is not in general

subject to support. It should be noted that the correlation coefficient calculated according to data up to 2018, that is, before the pandemic, was 0.85.

The correlation coefficient between the volume of non-primary non-energy exports and the financing of support programs was 0.56. This also indicates a weak correlation between exports and export promotion programs' funding.

The study of linear regression, which makes it possible to assess the intensity of the relationship between the financing of export promotion programs in the Khabarovsk Territory and the value of exports, gives the following results, presented in table 2.

**Table 2.** Calculation results

Indicator	Ur 1	Ur 2	Ur 3
Intercept	1401,4	1537,6	1876,1
$\beta_1$	414,4	903,0	
$\beta_2$		-884,8	-371,62
F-statistics	1,26 (0,31)	4,17 (0,13)	0,68 (0,45)
$R^2$	0,20	0,73	0,14

The equations received are as follows:

$$1) Y_t = 1401,4 + 414,4 * x_t$$

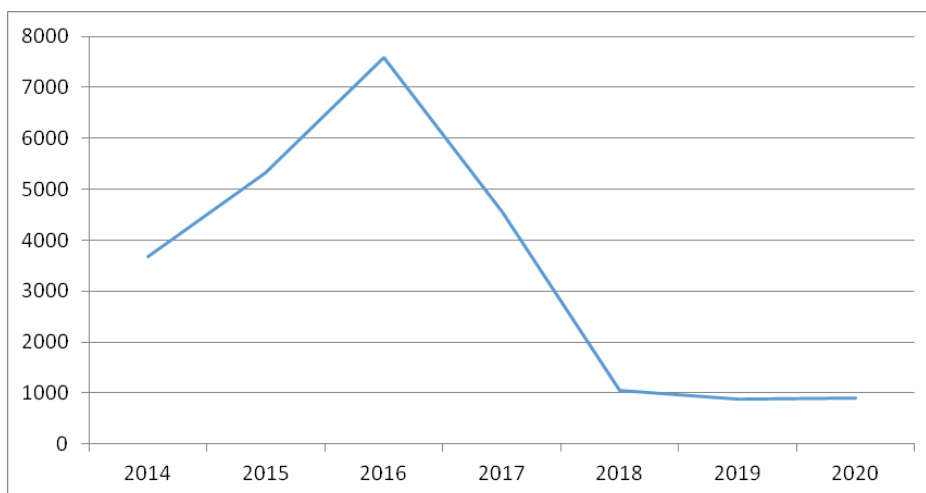
$$2) Y_t = 1537,6 + 903 * x_t - 884,8 * x_{t-1}$$

$$3) Y_t = 1879,1 - 371,62 * x_{t-1}$$

Calculations indicate that none of the equations is significant according to Fisher's criterion, even though the second equation has a fairly high coefficient of determination ( $R^2 = 73\%$ ).

The results obtained indicate an insufficient degree of relationship between the costs of supporting exports and their volumes in the Khabarovsk Territory.

The calculation of export volume for one ruble of export promotion funding gives the following result, shown in figure 1.



**Figure 1.** Several exports for 1 USD export promotion expenditures in Khabarovsk territory

As we can see from table 1 and figure 1, in 2018 export promotion funding increased significantly (15 times compared to the year 2014) but the exports growth rate was only about 180%. In the following years, both indicators were decreasing. In 2020 with the pandemic crisis region's exports dropped by almost 50 % to the level of 2018. And non-primary non-energy exports lost more than 60% of their volume. At the same time, export promotion expenditures decreased only by 28%. This explains the low correlation between export promotion expenditures and the export performance of the region.

Thus, the results of calculating the correlation coefficients between the costs of supporting exports in the Khabarovsk Territory and the volume of exports illustrate their difference when analyzed for different periods. The correlation coefficient calculated from data up to 2018 was 0.85. Considering that the correlation is high when the value of the indicator is more than 0.7, we can talk about the impact of export promotion programs financing in the Krai on the volume of regional exports. The obtained results of calculating the correlation coefficient according to the data up to 2020 do not demonstrate a significant dependence of these indicators, it was 0.38.

## 7. Conclusion

The research allowed to obtain the following conclusions:

- there is a positive relationship between the indicators of government spending on export promotion and the volume of exports, non-resource high-tech exports;
- the results of the study, in contrast to the conclusions of foreign authors, do not show the presence of a stable significant positive relationship between the amount of funding to support the region's exports and the volume of exports, as well as non-resource high-tech exports;
- a more significant positive relationship between export support costs and export volumes, non-resource high-tech exports in the region was revealed in a shorter period.

This is due to several reasons, including a significant effect on the change in the volume of exports of factors not related to export promotion programs funding. In the period under consideration, the COVID-19 pandemic was postponed by six months, a year, the completion of the implementation of export projects started with the assistance of the regional export promotion center. Either these export projects have not been completed.

The study showed that it is advisable to assess the effectiveness of export support not only by focusing on the key target indicators of the export promotion system but on a wider list of areas and levels. Including research on the effectiveness of financing in the context of individual support measures. At the same time, it is obvious that certain promotion measures do not directly affect the increase in export volumes, but their effect is directly manifested in another area, while export growth is already an indirect effect. In addition, it should be noted that at the enterprise level, the assessment of export promotion measures primarily depends on the motive (and, accordingly, the goal) of the export transaction, which they managed to implement with their help, and the performance indicators corresponding to them. There is also an industrial particularity of exports, which can increase or decrease the effectiveness of certain export promotion measures. All of the above confirms the need to develop a methodological apparatus for assessing the effectiveness of export support measures.



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