EVALUATING THE EFFECT OF VARIOUS INSTITUTIONS ON FOREIGN TRADE OF SELECTED COUNTRIES

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ABSTRACT

In this article, the effectiveness of various legal institutions, including market-creating institutions, market-regulating institutions, market-stabilizing institutions, and market-legitimizing institutions, the business has been accurately quantified based on scientific theories. To quantify the impact of institutional variables The required annual data related to these variables for the period 2014-2005 have been collected in selected countries. The data panel model has been used to estimate the effect of independent and control variables on the dependent variable of foreign trade. Before estimating the model, pre-estimation tests including the Durability test, etc., and F-Limer tests were performed to determine whether the model was integrated. The results of estimating the models regarding the effectiveness of different types of institutions show that; the impact of market regulators on trade in both groups of countries is positive and significant and the impact of market stabilization institutions on foreign trade has a positive impact only in the group of Asian countries, with the increase in the levels of this type of institution, the share of trade in this group of countries increases.

Keywords: Institution. Business, and gravity model. Classification.

AVALIAÇÃO DO EFEITO DE VÁRIAS INSTITUIÇÕES NO COMÉRCIO EXTERIOR DE PAÍSES SELECIONADOS

EVALUACIÓN DEL EFECTO DE DIVERSAS INSTITUCIONES EN EL COMERCIO EXTERIOR DE DETERMINADOS PAÍSES

RESUMO

Neste artigo, a eficácia de várias instituições jurídicas, incluindo instituições de criação, regulação, estabilização e legitimadoras de mercado foi quantificada com precisão com base em teorias científicas. Para quantificar o impacto das variáveis institucionais foram coletados os dados anuais necessários relacionados a essas variáveis para o período 2014-2005 em países selecionados. O modelo do painel de dados tem sido utilizado para estimar o efeito de variáveis independentes e de controle sobre a variável dependente do comércio exterior. Antes de estimar o modelo, foram realizados testes de pré-estimativa, incluindo o teste de Durabilidade, etc., e testes F-Limer para determinar se o modelo foi integrado. Os resultados da estimação dos modelos quanto a eficácia de diferentes tipos de instituições mostram isso; o impacto dos reguladores de mercado no comércio de ambos os grupos de países é positivo e significativo e o impacto das instituições de estabilização de mercado no comércio exterior tem um impacto positivo apenas no grupo dos países asiáticos, com o aumento dos níveis desse tipo de instituições, a participação do comércio neste grupo de países aumenta.

Resumo

En este artículo, la eficacia de varias instituciones legales, incluyendo las instituciones de creación, regulación, estabilización y legitimación del mercado, se cuantificó con precisión sobre la base de teorías científicas. Se recogieron los datos anuales necesarios relacionados con estas variables para el periodo 2014-2005 en países seleccionados. El modelo de panel de datos se ha utilizado para estimar el efecto de las variables independientes y el control sobre la variable dependiente del comercio exterior. Se realizaron pruebas de pre-estimación, incluyendo la prueba de durabilidad, etc., y pruebas de F-Limer para determinar si el modelo estaba integrado. Los resultados de la estimación de los modelos con respecto a la efectividad de los diferentes tipos de instituciones lo demuestran; el impacto de los reguladores del mercado en el comercio en ambos grupos de países es positivo y significativo y el impacto de las instituciones de estabilización del mercado en el comercio exterior sólo tiene un impacto positivo en el grupo de países asiáticos, con el aumento de los niveles de tales instituciones, la participación comercial en este grupo de países aumenta.

Relacionados com o assunto: Instituição. Negócio e modelo de gravidade. Classificação.

Relacionados con el tema: Institución. Modelo de negocio y gravedad. Clasificación.

1This article is an excerpt from the doctoral dissertation of Mr. Rahman Mirzaeian which was done in Razi University of Kermanshah and Dr. Kiomars Sohaili was its supervisor.
**INTRODUCTION**

Differences in the nature and performance of institutions are one of the reasons for differences in the level of development of countries. Institutions can appear as a factor in promoting economic development by forming a motivational structure and providing a suitable platform for productive activities or, on the contrary, play a role as a deterrent by creating deviations from production, increasing transaction costs, and increasing investment risk. According to international trade theories, trade development can increase economic growth and prosperity through an international division of labour, specialization, and comparative advantage. The development of trade can lead to the development of exports of high-scale economies of scale, and such conditions undoubtedly lead to improved prosperity and increasing economic growth.

This study intends to examine the channels of influence of legal institutions in foreign trade to be able to explain the role of legal institutions in foreign trade and examine how this process.

**METHODS**

International trade theories usually consider trade as a function of price, non-price and institutional variables. Institutions are formed by humans to guide the interaction of individuals with each other and can significantly reduce costs in the exchange process. Institutions reduce uncertainty and increase market competition by creating a stable structure for human interactions because “Institutions determine costs and therefore affect the profitability and justifiability of economic activities” (NORTH, 1991, p.27). The nature of the institutions that govern these relationships affects the direction and extent of the business. Institutions can appear as a factor in promoting economic development by forming a motivational structure and providing a suitable platform for productive activities or, on the contrary, play a deterrent role by creating deviations from production, increasing transaction costs, and increasing investment risk. “A comprehensive understanding of the factors affecting international trade realized in the past, present, and future requires a detailed analysis of the institutions governing exchange relations or the basis of international trade” (GRIFF, 1992, p. 132). Institutions directly influence trade orientation by influencing the willingness of economic agents to engage in international trade, as well as indirectly by influencing the economic variables affecting trade.

**Figure 1.** Channels of institutions’ impact on business

![Diagram of institutions' impact on trade](image)

**Source:** Researcher inference.

“In examining the governing institutional structure and framework in underdeveloped countries, high transaction costs have led to a lack of productive economic activity and thus a repetition of the poverty cycle. ‘In most of these countries, due to the instability of property rights, poor enforcement, barriers to entry, and monopoly restrictions, companies that seek to maximize profits are driven to have less capital, short-term horizons of production and trade, and small-scale production’ (NORTH, 1988, p. 114).
In general, to achieve economic development, institutional development is necessary to reduce transaction risks and costs, and the two strengthen or weaken each other in two ways." (NORTH, 1988, p. 55). Therefore, reforming the institutional structure is necessary for the development of foreign trade.

Types of institutions include market-creating institutions, market-regulating institutions, market-stabilizing institutions, and market-legitimizing institutions influencing foreign trade. A quantitative and accurate scientific explanation of the impact of institutional factors on foreign trade is important, which this article has addressed. To quantify the impact of institutional variables, including market-creating institutions, market-regulating institutions, market-stabilizing institutions, and market-legitimizing institutions, the required annual data on these variables for the period 2005-2004 have been collected in selected countries. This study, while identifying and explaining the effect of various institutions on foreign trade and how the process, its effects, and components, raises the following question: "What are the institutional prerequisites for foreign trade, its channels, and channels of influence? What are the extent and manner of impact, the segregation of effects, and the degree of importance of each of them?"

BACKGROUND

Nagheli and Madaah (2017) experimentally analyze the effect of political institutions on Iran’s exports to important trading partners in West Asia in the framework of the gravity model using the integrated data model, which shows the results; Institutional variables (political institution) along with indicators of economic freedom and financial freedom have a positive effect on Iran’s exports to West Asian trading partners. Kimiae and Arbab Afzali (2016) investigated the effect of institutional factors and components of knowledge-based economy and price variables on the exports of emerging economies during the period (1996-2016). The results of the panel data method show a positive and significant effect of good governance index on exports. Rezazadeh and Rahimian Booger (2015) have used the panel data model for 34 countries during the period 1996-1996 to investigate the role of the quality of institutions and natural resource rents on the growth of exports of developing countries. The results indicate a direct relationship between improving the quality of the institutional environment and export growth in these countries. Crimean Azerbaijan et al. (2013) Using the panel data approach examine the impact of the governing institutions’ index on the selected trade of the OIC member countries during the period 1996-2011. The results confirm the influence of government institutions on trade. Azarbayjani et al. (2011) in a study aimed at investigating the effect of corruption on trade in selected Middle Eastern countries in the years 2002 to 2008 using the model of gravity and panel data method concluded that; A one percent reduction in corruption in the exporting country would increase exports by 3.53 percent.

Also, a one percent reduction in corruption in the importing country leads to a 2.27 percent increase in trade in the exporting country. Shahabadi et al. (2011) analyze the relationship between governance index, competitiveness, and economic growth of 111 countries from three groups of developed, newly industrialized, and developing during the period (1996-2006), the results of which show that; better governance performance among countries increases the ratio of exports of high-tech goods to total exports, as well as the ratio of value-added of the factory sector to total value-added and their share of world production, exports and imports are increasing. Khandwal et al. (2012) examined the effect of trade restrictions on exporters between 2000 and 2000.
The results show that; improving the performance of inefficient institutions that impose trade restrictions on export firms, and in particular, removing trade quotas and increasing economic freedom, have a positive effect on improving productivity, lowering the price of exported goods, increasing competitiveness, and increasing export volumes. Gany et al. (2006) examine the impact of export determinants, Imports, and total trade focusing on institutional factors such as government effectiveness, rule of law, the quality of laws and regulations, and corruption control for the six Pacific Islands over the period 1990-2004. The results show that the improvement in the quality of variable institutional factors is important for improving the level of trade.

De Groot et al. (2004) a study examined the effects of governance index on bilateral trade between countries. In this study, they used 1998 cross-sectional data and the gravity model. In this study, six indicators of government accountability, political stability, and government efficiency, rule of law, and control of corruption have been used. According to the research findings, improving the performance of institutions increases trade by 30 to 44 percent and in countries with similar institutions, the volume of trade increases by 13 percent compared to countries with different institutions. Luchinko (2004) in a study on the relationship between institutional quality and international trade using cross-sectional data. The results show that institutional differences are the determining factor of business flows.

Dollar and Cray (2002) used composite data to examine the effect of institutions on trade, which showed that Countries with better institutions, along with countries with higher trade volumes, grow faster, and institutions can increase trade in the short term. Johnson and Nerdas (2002) used the three indicators of corruption control, rule of law, and proper efficiency to examine the impact of domestic institutions on business flow. In this study, the effect of economic institutions and infrastructure on trade freedom (measured by the share of trade in national income) was once considered and in the second part, the effect of economic institutions and infrastructure in the model of gravity was tested. Based on the results of this study, we cannot speak with certainty about the effect of institutions on business.

**METHODOLOGY**

This research uses a combination of descriptive methods, causal analysis, and econometrics. The type of applied study and the method of collecting the required information and data from registration and library sources and other domestic and foreign statistical sources, which has been studied and analyzed by the method of documentation and content analysis, the theoretical foundations of institutional relations, and trade. Then, by specifying the model, the effect of institutions in foreign trade is evaluated using econometric methods based on panel data and eviews software in the period 2005-2004 for two groups of selected Asian countries and member countries of the Organization for Economic Cooperation and Development.

**Analysis of relationships between institutions and trade**

With the advancement of technology and increased productivity, the volume of global trade has increased dramatically. Despite this increase in trade, conventional trade theories state that the current volume of trade does not indicate the use of all available potentials and that the volume of exchanges should be greater than the current volume. In the international economics literature, this issue is referred to as the "lost trade puzzle" (DE GROOT et al., 2003, p. 1). From the point of view of institutional analysis, trade between political and economic units is based on a sequence of political and economic exchange relations and a combination of these relations. Because "institutions determine costs and therefore affect the profitability and justifiability of economic activities." (NORTH, 1991, p. 27). Therefore, the nature of the institutions that govern these relationships affects the direction of trade and its extent. Unfortunately, the study of governing institutions of trade is not on the agenda of international trade theory. According to international trade theory, trade is influenced by the relative abundance of resources, technology, preferences, and the nature of competition in international markets. However, historical institutional analysis shows that understanding how to determine the actual amount of trade, not its potential, requires institutional analysis. (GRIFF, 1992, p. 128).

During the business revolution, institutions constrained decision-makers behaviour and determined the relationships between profitability and efficiency in exchange relationships that created or developed business. Thus, these institutions determined the efficiency, volume, and geographical distribution of business flows and then affected trade by influencing institutional, political, and social development (GRIFF, 1992, p. 132). Today's international trade is influenced by institutions such as the commodity market is dominated by the international accumulation and dissemination of knowledge, the relationship between foreign investors and governments, and the relationship between producers and distributors and the overseas supply chain. A comprehensive
understanding of the factors affecting international trade realized in the past, present, and future requires a detailed analysis of the institutions governing exchange relations or the basis of international trade (GRIFF, 1992, p. 133). North considers institutions as the main reason for the difference in the development of countries. In his book Institutions, Institutional Change, and Economic Performance, he describes his theories that the evolution of the institutional framework of society leads from stagnation to economic success (NORTH, 1990, p. 56). He also considers the root causes and factors of economic growth and development to be institutions that reduce transaction costs and increase productivity through the specialization of exchange activities and processes. (NORTH, 1990, p. 10). Hall and Jones define these policies and institutions as ensuring contract enforcement, protection of personal property, the rule of law, and an independent judiciary. (HALL, JONES, 1999, p. 84).

Ajamoglu et al. (2005) introduce the guarantee of the implementation of property rights for the whole society, which strengthens the motivation to invest, innovate and participate in economic activities, as the institutional structure of society. (AJAMOGLU et al., 2005, p. 9). Anderson and Young (1993) state in a theoretical analysis that; The weakness of the institutional environment of countries in guaranteeing the implementation of contracts affects such as the application of tariffs on risk-averse traders and therefore reduces the volume of trade. Robert and Taybot (1997) argue that; The issue of contract enforcement is very important, especially when traders have high overhead costs.

The weakness of the institutional environment in the implementation of contracts, with the increase of these costs, leads to major problems in the ability to continue business and thus has a wide impact on trade. Roderick (2002) considers weak contract enforcement as one of the main obstacles to the expansion of international trade. This is especially important in international exchanges where the parties to the contract are from different countries and under different judicial and political systems. Anderson and Markweiler (2002) provided empirical evidence for the effect of the quality of the institutional environment on business volume. According to them, the weakness of the institutional environment increases the price of export goods. This reduces foreign demand and reduces exports.

Anderson and Markweiler (1997) also state that the impact of institutions on the risks associated with international exchanges can be another channel of institutions’ impact on international trade. Insecurity prevents trade from taking place even in the presence of mutual interests. Insecurity not only has a direct impact on trade volume, rather but also diverts the factors of production from the productive sectors to the protection of property rights by creating deviations in the optimal guarantee of resources. Thus, strong institutions that prevent widespread insecurity help expand exports. Roderick (1995) and Al-Badawi (1998) argue that institutions, in addition to their direct effects on trade, can influence the flow of trade by influencing the components that affect trade. According to many researchers, investment is one of the most important components affecting trade. On the other hand; According to many experts, the quality of institutions is one of the factors affecting investment (BRENTY, WOODER, MOARROW, 1995; COCK, KIEFER, 1995).

Some researchers believe that; Weak institutions hurt productivity and growth (HALL, JONES, 1995; OLSEN et al., 2000). Low productivity is one of the barriers to competitiveness. As a result, countries with weak institutional environments face major problems in improving productivity and increasing competitiveness. Of course, the expansion of exports and trade volume in these countries is facing more obstacles. How institutions affect economic performance through the lens of transaction costs and conversion costs provides the basis for a generalization of new institutionalism.

In the new institutionalism, the points of influence of institutions in economic performance, i.e. exchange costs and conversion costs, are generalized or, in other words, multicultural. The important point is that; Institutions are purely cultural and historical elements, and defined man is influenced by cultural elements both through institutions and through mental structures. In other words, new institutionalism has been able to generalize and transform into a theoretical apparatus by using the way institutions enter economic performance and that with the entry of institutions as temporal-spatial-cultural-historical elements to reach an acceptable degree of adaptation to reality (NAYEB, 2011, p. 142).
Figure 3. Mutual mechanism of institutions and trade

Source: Research Findings

Conceptual Model

Figure 4. Conceptual model of research

Source: Research Findings.

Data Collection Method

GDP statistics of countries, the degree of openness of countries (ratio of total exports and imports to GDP) have been prepared from the World Bank 1 website. Statistics on the Consumer Price Index (CPI) are collected from the Central Bank, the exchange rate from the International Monetary Fund, the population from the United Nations Population Division, and economic freedom indicators from the HERITAGE FOUNDATION. Country distance data from TIMEANDDATE.COM and export statistics between countries from COMTRADE.UN.ORG.

Model description
In this section, the discussion of the effectiveness or ineffectiveness of institutions in trade in two selected groups of OECD countries and selected Asian countries is examined. The model of De Groot et al. (2003) is used for estimation. The model considered in this research is as follows:

\[
\text{LNX}_{ijt} = \beta_0 + \beta_1 \ln\text{GDP}_{it} + \beta_2 \ln\text{GDP}_{jt} + \beta_3 \ln\text{POP}_{it} + \beta_4 \ln\text{TEC}_{it} + \beta_5 \text{ER}_{it} + \ln\text{INS}_{it} + \ln\text{INS}_{jt} + \beta_6 \ln\text{DIS}_{ijt} + \beta_7 \text{LANG}_{ij} + \beta_8 \text{BOR}_{ij} + \epsilon_{ijt}
\]

Where \( \text{LNX}_{ijt} \) represents the natural logarithm and \( \text{GDP}_{it} \) represents the trade flow between countries \( i \) and \( j \) during period \( t \). In other words, it represents the number of exports from country \( i \) to country \( j \) and are \( i \) and \( j \), respectively, of the country's GDP. \( \ln\text{POP}_{it} \) represents the population in countries \( i \) and \( j \). Indicates the geographical distance between the center of the two commercial sides. Distance increases shipping costs. As the distance increases, the possibility of trade between the two countries decreases, because partners who are far apart naturally need more time and money to exchange goods, which sometimes leads to a cost equal to the intrinsic value of the goods. Virtual variables \( \text{INS}_{it} \) and \( \text{INS}_{jt} \) represent the common boundary between business parties. Virtual variable \( \text{DIS}_{ijt} \) represents the common language between business parties. Variables \( \text{TEC}_{it} \) and \( \text{TEC}_{jt} \) represent the exchange rate in exporting and importing countries. And \( \text{ER}_{it} \) expresses institutional quality in two countries, \( i \) and \( j \), respectively. is also a model disruption that has a mean of zero and a specific variance.

Analyzing the impact of market creators and other institutions on trade

To answer, the framework of institutional analysis based on Roderick (2005)'s definition of institutions is used. Roderick (2005) divides institutions into four groups. These four types of institutions are: 1- Institutions that create the market 2- Market regulating institutions 3- Market stabilization institutions 4- Institutions that legitimize the market. The starting point of analysis in this segmentation is the recognition that markets are not created, regulated, stabilized, and justified by themselves. In addition to institutions that protect property rights and enforce contracts, economies need institutions that facilitate the exchange to create the right incentive structure to strengthen and stabilize the economy and develop trade.

Market-creating institutions; Are institutions that protect property rights and guarantee the obligation to enforce contracts. These types of institutions refer to the rule of law, the quality of law enforcement, the implementation of contracts, the risk of confiscation of property, how political officials change, and the like.

Market-regulating institutions; Institutions that prevent market failure. If there are fraudulent and anti-competitive practices in the market, despite incomplete and asymmetric information, or when transaction costs in the process of economic performance prevent the internalization of external effects of the use of new technology in the firm (Or other non-financial factors), the market mechanism fails.

Market stabilization institutions: Institutions that provide resilience to shocks. These institutions reduce inflationary pressures and instability at the macroeconomic level and prevent financial crises. Institutions that legitimize the market; Institutions that redistribute resources and contain social conflict and provide social support in the event of shocks (Roderick, 2005).

Model and test method

The four Rule of Law (MM), Regulation (MR), Government Efficiency Index (MS) and Transparency Index, Right to Comment and Accountability (ML) indicators from the World Bank Good Governance Indicators will be used as indicators of market creators, market regulators, market stabilizers and market legitimizers, respectively.

Control variables

The control and explanatory variables used in this section (according to the econometric method) are among the macro variables including GDPit, GDPjt, TECit, and TPit, respectively, of the GDP of the \( 1 \)st country, GDP of business partnership, technology and trade policy. This part of the article includes two models, which are:

The first model; Assessing the effectiveness of a variety of entities (market creators and other entities) in trade in selected OECD countries. The second model; Assessing the effectiveness of a variety of institutions (market creators and other institutions) in trade in selected Asian countries.

Test model

To investigate the effect of different institutions on business, Gani and Perasad (2006) model are used which considers total trade as a dependent variable and GDP, GDP of trading partners, exchange rate, technology, trade...
policy, and institutional factors as independent variables, which are introduced as follows:

\[ T_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 GDP_{jt} + \beta_3 TEC_{it} + \beta_4 TP_{it} + \beta_5 RE_{it} + \beta_6 INS_{it} + \epsilon_{it} \]

wherein \( T_{it} \) Total trade, \( GDP_{it} \) GDP, \( GDP_{jt} \) GDP of trading partners, \( TEC_{it} \) technology, \( TP_{it} \) The country's trade policy, \( RE_{it} \) exchange rate, \( INS_{it} \) Institutional index of the country \( i \) at period \( t \), \( \epsilon_{it} \) Error term. GDP is one of the indicators affecting trade because the improvement and development of trade become stronger with the domestic economy. It points out that economic conditions are conducive to investment and encourages people to participate in the production and trade of goods and services. GDP (\( GDP_{it} \)) and GDP of trading partners (\( GDP_{jt} \)) are considered as a means of measuring income that as GDP increases, consumers will consume more domestic and foreign goods.

Technology (\( TEC_{it} \)) is very important in economic behavior and has significant effects on the volume, direction, and composition of international trade. Technology with the increase of new products has a direct effect on the composition and growth of international trade (POOR MOGHIM, 2011). Since the difference in production technology is one of the basic principles and comparative advantage, the technology variable has entered the model. Differences in technology between countries can be the basis of trade. In general, the interpretation of technology by trade is that countries export products in which they have a comparative advantage.

The spread of new technology is also one of the most important issues in business. Imports of capital goods that contain foreign technology increase the penetration of new technology into the country and thus improve the business position (GANI, PERSAD, 2006). The exchange rate (\( RE_{it} \)) is considered as a determinant of international trade in goods and services. The price paid for a unit of foreign currency in terms of common domestic currency is called the exchange rate (ROOZBEHAN, 2006). Trade policy (\( TP_{it} \)) can determine the degree of extroversion or introversion of countries. An extroverted trade strategy is that trade and industrial policies do not discriminate between production for domestic markets and the production of export goods, or between the purchase of domestic goods and foreign goods. In contrast to the introverted business strategy is; Industrial and commercial incentives to produce more for the benefit of the domestic market than foreign markets. Extroversion, on the other hand, links the domestic economy to the global economy. Evidence suggests that extroverted trade policy has been more successful than introverted trade policy (GANI, PERSAD, 2006).

### Results

Analysis of the Impact of Types of Institutions (Market-Creating Institutions and Other Institutions) on Trade in Selected OECD Countries

The model is specified as follows:

\[ LnX_{ijt} = \beta_0 + \beta_1 LGDP_{it} + \beta_2 LGDP_{jt} + \beta_3 LTEC_{it} + \beta_4 LTP_{it} + \beta_5 RE_{it} + \beta_6 MM_{it} + \beta_7 MR_{it} + \beta_8 MS_{it} + \beta_9 ML_{it} + \epsilon_{it} \]

| Table 1 | Introduction of variables in the model |
|---------|---------------------------------------|
| **Row** | **Variable name** | **Variable type** | **Symbol** |
| 1       | The logarithm of trade flow between countries \( i \) and \( j \) during period \( t \) | Dependent | \( LnX_{ijt} \) |
| 2       | The logarithm of the index of institutions that create the country's market \( i \) | Independent | \( MM_{it} \) |
| 3       | The logarithm of the index of market regulators \( i \) | Independent | \( MR_{it} \) |
| 4       | The logarithm of the index of market stabilization institutions \( i \) | Independent | \( MS_{it} \) |
| 5       | The logarithm of the index of institutions of market legitimacy of the country \( i \) | Independent | \( ML_{it} \) |
| 6       | The variable logarithm of the country \( i \) | Independent | \( LGDP_{it} \) |
| 7       | The variable logarithm of the country \( j \) | Independent | \( LGDP_{jt} \) |
| 8       | Country technology variable logarithm \( i \) | Independent | \( LTEC_{it} \) |
| 9       | The variable logarithm of the country's trade policies \( i \) | Independent | \( LTP_{it} \) |
| 10      | Real exchange rate variable | Independent | \( RE_{it} \) |

**Source:** Researcher Calculations

In this study, after unit root tests to evaluate the reliability of the model, the co-integration (collective) test of the model panel data, Limer F test to detect the use of the money method (pool) or panel (panel), and Hausman test (Hausman Test) to select the model of fixed effects or random effects of the model estimation results are.
Evaluating the effect of various institutions on foreign trade of selected countries

Table 2: Results of model estimation

| Row | Variable | Coefficient | Standard deviation | Statistics T | The significance level |
|-----|----------|-------------|--------------------|--------------|-----------------------|
| 1   | LGDP_i   | 0.490       | 0.072              | 6.742        | 0.000                 |
| 2   | LGDP_j   | 1.165       | 0.268              | 4.341        | 0.000                 |
| 3   | RE       | 0.537       | 0.062              | 8.432        | 0.000                 |
| 4   | LTEL     | 1.234       | 0.030              | 40.555       | 0.000                 |
| 5   | LTP      | 0.641       | 0.344              | 4.426        | 0.000                 |
| 6   | lnMM     | -0.538      | 0.25               | -6.655       | 0.000                 |
| 7   | lnMR     | 0.288       | 0.078              | 3.683        | 0.0004                |
| 8   | lnMS     | -0.441      | 0.307              | -1.12        | 0.0001                |
| 9   | lnML     | -0.076      | 0.54               | -0.493       | 0.6226                |
| 10  | R^2      | 0.941       |                    |              |                       |
| 11  | DW       | 0.874       |                    |              |                       |
| 12  | F        | 0.000       |                    | 26.87        |                       |

Source: Researcher Calculations.

Based on the results of model estimation to examine the impact of four types of institutions (market creators and other institutions) on trade in the OECD group, Model coefficients for variables of market creators, market regulators, and market stabilization institutions have been significant. The coefficients of the model were positive and significant for the variables of market regulating institutions, the results of which show that; In case of a one percent increase in institutional levels in this group of countries by 0.288 percent, the share of trade will increase. The model coefficients were positive and significant for market-creating institutions and market-stabilizing institutions, indicating that; if it increases by one percent at the institutional level in this group of countries, it will reduce the share of trade by 0.538 and 0.441 percent, respectively. In estimating the coefficient of the GDP model of the exporting country, the GDP of trade parties, technology, and exchange rate, and trade policies have a significant and positive effect on trade which is consistent with the material presented in economic theories and the theoretical foundations of research. In this model, the influence of market creators, market stabilization institutions, and market regulators have the most impact, respectively.

Analysis of the impact of different types of institutions (market creators and other institutions) on trade in the group of selected Asian countries

Model specification:

\[ \ln X_{ijt} = \beta_0 + \beta_1 \cdot \text{LGDP}_i + \beta_2 \cdot \text{LGDP}_j + \beta_3 \cdot \text{LTEC}_it + \beta_4 \cdot \text{LTP}_it + \beta_5 \cdot \text{RE}_it + \beta_6 \cdot \text{MM}_it + \beta_7 \cdot \text{MR}_it + \beta_8 \cdot \text{MS}_it + \beta_9 \cdot \text{ML}_it + \epsilon_it \]

Table 3. Introduction of variables in the model

| row | Variable name | Variable type | Symbol |
|-----|---------------|---------------|--------|
| 1   | The logarithm of trade flow between countries i and j during period t | Dependent | LnXijt |
| 2   | The logarithm of the index of institutions that create the country's market | Independent | MM_it |
| 3   | The logarithm of the index of market regulators i | Independent | MR_it |
| 4   | The logarithm of the index of market stabilization institutions i | Independent | MS_it |
| 5   | The logarithm of the index of institutions of market legitimacy of the country i | Independent | ML_it |
| 6   | The variable logarithm of the country i | Independent | LGDPI |
| 7   | The variable logarithm of the country j | Independent | LGDPj |
| 8   | Country technology variable logarithm i | Independent | LTECit |
| 9   | The variable logarithm of the country's trade policies i | Independent | LTPit |
| 10  | Exchange rate variable | Independent | REit |

Source: Researcher Calculations.

Based on the results of model estimation in the group of selected Asian countries to examine the impact of various institutions (market creators and other institutions) on trade, the model coefficients for the variables of market regulators and market stabilization institutions have been positive and significant. These results show that; In case of a one percent increase in institutional levels, this type of institution in this group of countries will increase the share of trade by 0.380 and 0.129 percent, respectively. Also, the results of model estimation show...
that; the institutional coefficient of market-creating institutions and market-legitimizing institutions in this group of countries was negative and in case of a one percent increase in the institutional levels of this type of institutions in this group of countries, the share of trade will decrease by 0.235 and 0.220 percent, respectively. In estimating this model, the coefficient of variables of GDP of the exporting country, GDP of trade parties, trade policy, and exchange rate on trade is significant and has a positive effect which is consistent with the material presented in economic theories and the theoretical foundations of research. In this model, the effect of the technology variable was not confirmed.

**CONCLUSION**

International trade theories consider trade to be a function of price, non-price, and institutional variables. Therefore, reforming the institutional structure is necessary for business development. Based on the results of model estimation to examine the impact of four types of institutions (market creators and other institutions) on trade in the OECD group, Model coefficients for variables of market creators, market regulators, and market stabilization institutions have been significant. The coefficients of the model were positive and significant only for the variables of market regulating institutions, the results of which show that; in case of a one percent increase in institutional levels in this group of countries by 0.288 percent, the share of trade will increase. The model coefficients were negative and significant for market-creating institutions and market-stabilizing institutions, indicating that; if it increases by one percent at the institutional level in this group of countries, it will reduce the share of trade by 0.538 and 0.441 percent, respectively. Based on the results of model estimation in the group of selected Asian countries to examine the impact of four types of institutions on trade, the model coefficients for the variables of market regulators and market stabilization institutions have been positive and significant. These results show that; in case of a one percent increase in institutional levels, this type of institutions in this group of countries will increase the share of trade by 0.380 and 0.129 percent, respectively. Also, the results of model estimation show that; the institutional variable coefficient of market-creating institutions in this group of countries is negative, and if it increases by one percent at the institutional level, this type of institutions in this group of countries will reduce the share of trade by 0.235 percent.

**Policy suggestions and recommendations**

According to the research results, the necessary orientation for institutional reforms seems necessary. According to institutional arguments, in the absence of institutions that protect property rights and regulate the implementation of contracts, it is not possible to create an efficient market, and despite the missing markets, it will not be possible to achieve sustainable development. Institutions that ensure macroeconomic stability are also essential for business development.

Based on the results of the model test, market regulators are significant in both groups of countries (OECD countries and Asian countries) and have a positive impact on trade in both groups.

Based on the results of the model test, market stabilization institutions were significant in both groups of countries (OECD countries and Asian countries) but it has a positive effect only in the group of Asian countries and with the increase of the levels of this type of institutions, the share of trade in this group of countries increases.

Based on the results of the model test, market legitimizing institutions in both groups of countries (OECD countries and Asian countries) its effectiveness was not confirmed.

In terms of the effectiveness of various institutions (market-creating institutions and other institutions) in trade can be said;

In the OECD group of countries, the influence of market-creating institutions, market-regulating institutions, and market-stabilizing institutions have the greatest effect, respectively.

In the group of Asian countries, the most impact is related to market regulation institutions and market-creating institutions, followed by the impact of market stabilization institutions.

The results obtained for the group of Asian countries (of which the Islamic Republic of Iran is also a part of this group) show that; Apart from market-legitimizing institutions, the other three institutions in question affect trade, and the influence of market-regulating and stabilizing institutions is positive. Market-stabilizing institutions (such as efficient monetary and financial institutions) in Asian countries have an impact on trade and its impact is also
The results of this study show that; Market regulators are a must for all groups of countries. Based on the results of this research in the group of Asian countries, of which Iran is also a member, among the four mentioned institutions, the results show that; Market regulators and market regulators influence trade. As a result, if the countries of this group, including Iran, want an oil-free economy and sustainable and high growth, it is necessary to create, develop and strengthen market-regulating institutions and market-stabilizing institutions. Market regulators and market stabilization institutions are the focus of priority. Strengthening market regulators and market stabilization institutions is essential for the Iranian economy. Because Iran's economy is an economy based on oil revenues and is a rent economy in which the central bank does not have the necessary independence and widespread government fiscal indiscipline leads to macroeconomic instability. As a result, governments need to focus on reforming market-regulating institutions and market-stabilizing institutions (efficient monetary and financial institutions).

According to the research results, the necessary orientations for institutional reforms seem necessary. According to institutional arguments, in the absence of institutions that protect property rights and regulate the implementation of contracts, it is not possible to create an efficient market, and despite the missing markets, it will not be possible to achieve sustainable development. Institutions that ensure macroeconomic stability are also essential for business development.

According to the results of the research, in the group of developing countries, of which Iran is also a member, the results show that institutions have an impact on trade. Consequently, if the countries of this group, including Iran, want oil-free trade and sustainable and high growth, the creation, development, and strengthening of institutions is essential. Based on the results of research and confirmation of the impact of institutions on trade as non-price variables, the following recommendations are provided to policymakers and decision-makers:

The basis of economics today is based on the three components of knowledge, innovation, and technology. Therefore, it is suggested that a set of political and economic institutions be created to motivate the production, accumulation, and application of knowledge to create added value, which is one of the components affecting trade. Ideas are the main engine of value creation. The ideas are intangible and the definition, guarantee, and enforcement of property rights in them are very complex, which requires the adoption of laws and regulations to implement property rights that must be considered. In such circumstances, policy in the field of guarantee and implementation of property rights is necessary to create the necessary incentive to support ideas and create new technologies, and this confirms the important and effective role of institutions in creating new technologies to create added value and increase competitiveness.

According to the research results, the role of institutions in determining the transaction cost is very important. Inefficient institutions such as bribery, types of property insecurity, non-compliance with contracts, and the like, play a key role in increasing transaction costs and thus illegitimately saving a significant portion of transactions. This in itself is a factor in lowering the level of trade and reducing the level of trade. Therefore, managers’ attention and policy-making to reduce transaction costs through a serious fight against bribery, corruption, and rent in the economic system, institutionalizing the implementation of laws and regulations and the rule of law are necessary and the result is an increase in business.

The research results show that; Weak institutions hurt productivity and growth. Low productivity is one of the barriers to competitiveness. As a result, countries with weak institutional environments face major problems in improving productivity and increasing competitiveness, and the expansion of exports and trade volume in these countries faces more obstacles. Therefore, increasing the level of business requires the existence of institutions that enhance productivity and increase competitiveness, which should be considered by planners.

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