What factors explain export patterns of Kazakh firms?

Aisulu Kairbekova

Department of Economics and Business

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Yusaf Akbar

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Abstract

It is important for a country's economy to be a part of world economic relations. In this sense, trading in foreign markets is an important part of international interaction. In Kazakhstan, the main export commodity is raw materials, which generally negatively affects both the environment and the economic development of the country. For the production of goods with greater added value produced in Kazakhstan, the state has initiated various ways, from the creation of national companies to special programs to support exporters of non-commodity goods.

However, the share of exports of goods produced in Kazakhstan in the country's GDP remains at a low level. This leads to the fact that the population has little interest in entrepreneurship, the median incomes of the population are low, and the gap between the rich and the poor remains unbridgeable. All this negatively affects the economic and social situation in the country and requires the adoption of the necessary decisions and actions. To do this, it is necessary to understand what factors affect the export activities of Kazakh firms.

In this work, various theories of internationalization and the hypothesized conditions that influence export behavior have been used. For example, the readiness of the organization's staff for internationalization, namely the knowledge of foreign languages, the presence of foreign education or experience, the presence of foreign employees. The purpose of the thesis is to find out what factors influence export activity and how. And also, based on the results, make a political recommendation for government organizations to support exporters. During the study, data were collected through a questionnaire of exporting companies, which contains questions related to export activities. Next, quantitative and qualitative methods were used to analyze the influence and importance of a particular factor on a five-metric scale. The part of the questionnaire, which implies an open answer regarding factors not previously mentioned in the questionnaire, is grouped and concluded as a part of factor. The policy recommendations are to support Kazakh firms in Export activity, improve "Human capital", "Resources", "Networks", and mitigate the risk of "Institutional Voids".

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1. Introduction

The reason for the thesis on this topic is that I am interested in the issue of combating income inequality in Kazakhstan. One of the practices to combat inequality is the promotion and support of entrepreneurship among the population, namely small and medium-sized businesses, and its popularization. Since the market of Kazakhstan is not large, foreign markets are a good opportunity for entrepreneurs to scale their business, increase income, as well as tax and export revenue for the state. Internationalization is called "the formation of stable ties in the production and economic sphere on the basis of the international division of labor." (Wikipedia n.d.). Since internationalization includes different aspects, this paper considers the issue of export as one of the types of internationalization. In Kazakhstan, various activities are carried out to support exporters, in particular, SMEs that export non-commodity products. For this, enterprises such as Kaztrade have been established, which are engaged in from consulting services and research to holding events for exporters in Kazakhstan and abroad, as well as developing recommendations for Kazakhstani laws on foreign trade. KazakhExport is a cargo insurance company abroad, the Atameken Chamber of Entrepreneurs, which is engaged in training, advanced training, certification, and attestation of personnel, stimulation of foreign economic activity, and attraction of investments.

In the export part of Kazakhstan, a large share is occupied by the export of minerals, which leads to lost profits for entrepreneurs and the state. Increasing SME exports of self-produced goods will help to expand the share of exports of Kazakhstani goods, which will lead to an increase in jobs, the development of processing and production technologies, an increase in tax payments, hence an increase in the budget for social needs, and in general, an increase in income and a reduction in inequality among the population.

The purpose of this study is to determine what factors are important for entrepreneurs in export activities, based on the results to provide recommendations for government agencies to improve the export experience. RQ: What factors explain export patterns of Kazakh firms?

To explore this, data was collected from SME entrepreneurs who carry out or have experience in exporting non-commodity goods.

The organization of the thesis is following. In the first chapter, I describe the existing literature on the theory and factors of internationalization. The second chapter is devoted to the description of the methods used in this work. The third chapter is addressed to the results of the study, their interpretation and analysis. The fourth chapter is my recommendations on government policy towards SME exporters and a conclusion.

2. Literature review

According to Drucker (2009), SMEs are the driver of economic development and the mainstay of social-economic advance. The contribution of SMEs to the state economy has a pivotal role in the GDP growth of the country and thriving SMEs are a feature of a prosperous economy (Beck, Demirgüç-Kunt and Levine 2003, 21). SMEs are defined by European Commission as firms with not more than 250 employees or businesses with an annual turnover of up to 50 million euros (The commission of the EU 2003). SMEs ' number and activity alter the well-being of the economy (Neagu 2016, 2). In the majority of economies, SMEs are providing the biggest number of workplaces using a lower cost of capital than big firms and it makes them a tool to overcome unemployment (Neagu 2016, 3).

Thus far previous research has indicated that in high-income countries SMEs are endowed more than 65% of employment and more than 55% of GDP. In middle-income countries, they are responsible for more than 95% of employment and 70% of GDP, while the low-income nations SMEs contribute to more than 70% of employment and 60% of employment (KESKİN, et al. 2010, 1). Previous research in the USA has established that SMEs generate four times higher revenue for one dollar invested than big firms (Neagu 2016, 4). Berry Albert (2007) highlighted two main reasons why developing nations are interested in SMEs: firstly, the development of SMEs is considered the instrument of fighting against poverty, secondly, SMEs are the pillars for sustainability and innovation. In sum, the role of SMEs in the socioeconomic development of the country is important, and for developed countries it is necessary to support SMEs and entrepreneurial interest among the population.

2.1.Internationalization theory

Several definitions of internationalization have been proposed and the most straightforward rationale that aligned with stage theory is "the process of increasing involvement in international operations". Manimala, Wasdani, and Vijaygopal (2019) describe three theories of internationalization, the first one is Uppsala Model (a stage theory) when a firm enlarges its operations to the foreign market it follows a consistent method called "establishment chain". According to this theory, there are four steps: "(i) no consistent exports; (ii) exporting via unaffiliated distributors or agents; (iii) development of sales entities; and (iv) creation of producing/manufacturing operations in the foreign country." Each step determines the level of the firm's new market engagement and in order to comply with well-established and common terms in the business environment at that time. "However, it can be said that this theory does not cover cases when the firm already has experience of entering a new market and it does not have to go through all steps/stages or when a new market is not big enough for setting up the production there" Manimala, et al (2019). Manimala, et al (2019) explain that "psychic distance" does not always mean physical distance and cite former British colonies that are now part of the Commonwealth despite being far apart have similar languages and business cultures as important factors for international business.

The second theory of Born-Global Firms. Oviatt and McDougall (1994) described the concept of a firm that initially seeks to gain a competitive advantage by using resources and selling products in several countries and called it a new international venture. Such firms may operate in distant markets, in different countries. They write that SMEs are more flexible and the changing business environment makes it possible to enter the international level. They suggest that the internationalization of firms can be accelerated by such factors as "developed

infrastructure, reduced heterogeneity in international markets, and the mobility of human capital." The development of such factors makes it possible for international markets to communicate across physical borders, not always in favor of large firms. Authors also offer an alternative model suited to the changes that have taken place in the business environment. This model is based on transactions "defined by four criteria: (i) internalization of some transactions; (ii) alternative governance structures; (iii) foreign location advantage; and (iv) unique resources."

The third theory of the Global Value Chain Model (GVC). Michael Porter first described the phenomenon of value chains in "Competitive Advantage: Creating and Sustaining Superior Performance" (1985) as the set of activities a firm undertakes to deliver a valuable product or service. GVC was also explored by Gereffi, Humphrey, and Kaplinsky (2001), by which they mean the use of different management systems to find and contract for the provision of goods and services that often cross the borders of different countries. Such agreements are also concluded between parties not located on neighboring borders and do not depend on the size of firms. These authors emphasize that sectors such as clothing, electronics, and agricultural products are more prone to GVCs. They also explain that the leading firm influences the definition of the types of goods produced, the method of production, and manufacturers. Such a scheme allows firms to offer "narrowly focused goods and services to different markets" while maintaining the ability to operate in their local market. Based on the concept of internationalization, these authors define manufacturing globalization as a functional integration between internationally dispersed activities, and (that) a value chain perspective is an effective means of conceptualizing the forms that integration takes. They also notice that GVC has the properties of a form of inter-firm networks and hierarchical interactions, where the influence of leading firms is based on positioning and market power. Supplier control and specification of standards allow one firm in the chain to manage the activities of the chain and manage supplier-related market risks (Gereffi et al., 2001).

As regards the planning of the internationalization process itself, Schmid (2018) emphasizes a firm's internationalization strategy as a tool to create and use competitive advantage and highlights the five dimensions of internationalization strategies: market entry strategy, target market strategy, timing strategy, allocation strategy, and coordination strategy. Almost all SMEs should be able to use all five sectors simultaneously, but some SMEs in their internationalization do not take into account the correlation between these dimensions in their path to internationalization. The main goal of these dimensions is to approve that the way of internationalization is "apt for creating, maintaining, cultivating, further developing and utilizing competitive advantages" (Schmid 2018).

In general, these theories explain internationalization in different ways, but they all agree that internationalization implies business interaction with external, foreign parties.

2.2.Internationalization factors

Internationalization factors can be multiple but can be divided into two groups, internal and external. Internal factors can be called those that depend directly on the SME, while external factors are those factors that are beyond their direct influence. Manimala et al. (2019) in the book "Transnational Entrepreneurship" describe in detail the factors that influence internationalization. The authors cite the following factors influencing internationalization: market conditions and the network while separating the role of technology and human capital separately. They write that a mere desire for internationalization is not enough to start action, for this it is necessary to have favorable factors. The speed of information access in developing countries may be the same as in developed countries, but there is a difference in what businessmen face in these countries. Market conditions may create opportunities for firms that serve the needs of society or may prefer small firms to meet the needs of non-ethnic. And as an example, foreign firms can take advantage of opportunities in small markets or such markets arise from the demand for exotic goods among the local population. Push or pull factors to support or constrain internationalization have been studied by Etemad (2004). He divides them into external and internal to the firm, internal factors (push) are stimulating and include "the founder, operations, competition and strategy, investment in research and development (R&D), innovation, international operations, etc. External factors (pull) are called the level of liberalization of international markets, the level of IT development, infrastructure, and market gaps (Etemad, 2004).

SMEs that internationalize rapidly in the early stages may have more competitive advantages and may perform better in foreign markets (Mc Dougall and Oviatt, 1996). A study of Finnish SMEs by Kuivalainen, Sundqvist, and Servais (2007) found that the pace of internationalization has a positive effect on export. However, no such studies have been conducted in developing countries. Below, the factors of internationalization are considered in more detail based on these theories.

Network.

Manimala et al. (2019) claim that social and economic networks play an important role in business development and entrepreneurs can extract social, economic or human capital through their contacts. The network is divided into two types: social and physical (regional and industrial). International experience and qualifications, the presence of an understanding of the market for goods and services for which there is a high demand is also inherent in entrepreneur who does the business in different countries. Networks are especially useful at an early stage, as they provide access to resources (Chetty & Campbell-Hunt, 2004), creating an advantage over those who begin internationalization from their home countries. The development of ethnic and cultural ties with the local population for SMEs which want to internationalize compensates for the lack of information and resources. Creating more connections and using them will help in the absence of human capital (Manimala et al., 2019). Recent studies by Andrey Mikhailitchenko (2021) confirm the importance of the network in the internationalization of SMEs and the positive relationship between them. He also concluded that in general, the internationalization of SMEs can be considered as an important factor in stabilizing the socio-economic situation after the pandemic, and in general the global recovery of the economy.

Some SMEs use international trade exhibitions to get information about foreign markets and build good relationships with foreign clients. Nakos et al., (1998) found in their study that international trade exhibitions are a good strategy for internationalization and firms that have used them have improved their firms' performance.

Innovation and technology.

The active development of technologies, in particular IT, has led to the fact that different countries can use the IT of other countries, which has accelerated communication between developed and developing countries. Improvements in communications and technology transport, changes in the structure of technology markets, and increased competition are leading to the development of transnational technology societies (Saxenian, 2002). Knight and Cavusgil (2004) also stress the importance of technology, knowledge, and competency-based resources, in the internationalization of firms. The demand for innovative and fast services and products is increasing and has led to the development of "flat" firms that use human capital in one country and sell their products and services in another part of the world, often from underdeveloped countries to developed countries. A well-known example is the developed IT in India, whose human capital is used to sell software and other IT products abroad. Such entrepreneurial experience can be an advantage, as it allows you to correctly identify the target market and the associated risks (Manimala et al., 2019).

Human capital.

The important role of human capital in business internationalization decisions has been identified by Kim, Aldrich, and Keister (2006). Ruzzier, Antoncic, Hisrich, and Konecnik (2007) studied the impact of entrepreneurial human capital on SME internalization by measuring international orientation, managerial know-how, perception of the world, and international business skills. The results are that the directions of human capital, orientation to the international market, and understanding of the world around us significantly influence the internationalization of SMEs, while the other directions do not. The importance of knowledge as an asset for the internationalization of SMEs is highlighted by Ruzzier et al. (2007). Knowledge gained from experience related to operating in foreign markets can be an important advantage for a business that plans to enter the international arena. The depth of an entrepreneur's interaction with a particular country endows him with human capital. Such knowledge will help in deciding which target market to enter and whether to enter. (Ruzzier et al., 2007).

The influence of human capital not only on the entrepreneur but also on SME employees can affect the firm's strategy for internationalization. The distribution of human capital within the firm is desirable to be at a high level to achieve the goal of internationalization. To overcome the external and internal challenges associated with internationalization, a firm must have adequate human capital (Onkelinx, Manolova, & Edelman, 2015). The knowledge that forms human capital can be vital in determining the strategy for the internationalization of SMEs. SMEs that are trying to accelerate the process of internationalization, due to the greater workload and time constraints, may invest in employees with the human capital necessary for internationalization. Such investments pay off in the initial stages, but investments in human capital above the optimal level are often ineffective. Lack of sufficient time to develop organizational capabilities and talent management systems are reasons for this inefficiency (Onkelinx et al., 2015).

The study by Manimala et al (2019) found that "human capital" (an entrepreneur's educational level) and "appropriate firm strategy" significantly determine the level of internationalization SMEs. They concluded that "the higher the level of education, the higher the degree of internationalization." E-commerce and early-stage internationalization were

identified as two important components of the strategy, which contribute to a high level of internationalization.

Crick & Chaudhry (1997) included entrepreneur characteristics in the resource base along with firm resources. Common characteristics that contribute to the efficiency and speed of internalization by the SME owner are education, international or export experience, and foreign language skills. Education positively influences an entrepreneur's interest and ability to manage risk in the international market. Previous experience at the international level and/or experience in export activities, and foreign language skills are important in the process of internationalization (Manimala et al, 2019).

In general, education, entrepreneurial experience and the knowledge gained from it have an impact on the speed of internationalization. The relationship between a firm's resources and their impact on export intensity remains controversial (Stoian et al., 2011). Oviatt & McDougall (1994) describe SMEs as inexperienced, resource-poor, lacking technical skills and international market knowledge, whose internationalization can negatively impact a firm's operations and exports. Firms' internationalization strategy, according to Burgel and Murray (2000), is based on firms' resources, risk assessment, profit forecast, firm experience, and market knowledge. They also emphasize the importance of a way of internalization that can provide a firm with a competitive advantage and retention in the international market.

Resources.

Some studies explain internationalization in terms of a resource base that is heterogeneous and difficult to move between companies. All assets of the firm, including the knowledge and competencies controlled by the firm and involved in the development, improvement, implementation of strategy, profit, and competitive advantage are the resources of the firm Barney (1991). The uniqueness of the resources determines the direction of the firm and the success of internationalization (Ruzzier et al., 2006). In this case, resources are seen as the main driver of "export behavior" and firms with more commitment tend to utilize more resources for internationalization (Stoian, Rialp, & Rialp, 2011). SMEs use a large amount of human and financial resources to organize internationalization (Ruzzier et al. 2006). Some researchers have assessed a firm's commitment to internationalization by its presence in a foreign market and the presence of a dedicated export department (Papadopoulos & Martin, 2010).

Institutional Voids (IV).

Akbar et al. (2016) describe the impact of the institutional factor on SME exports in developing countries. Institutional differences between developed and developing countries are reflected in the behavior of entrepreneurs. The underdevelopment of institutions in developing countries compared to developed countries has been called "institutional voids", which refers to underdeveloped infrastructure, distribution channels, and behavioral differences (Arnold and Ouelch, 1998; Khanna and Palepu, 1997). In early studies of IV concerned MNEs that internationalize through direct investment and SMEs use exports, Akbar et al. (2016) argue that exporting SMEs face "IV" in the foreign market. Based on research, the role of the institutional environment in firms' operations and strategies, was valued on a par with firm resources and the "state of the industry". Consequently, "IV" harm SME exports in developing countries. Also, marketing opportunities constrained by "IV" are subject to indirect negative influence. To compensate for this negative impact, SMEs from developed countries should establish contacts with other SMEs and local marketing specialists, and governments should deploy certain resources that will help SMEs improve their knowledge of markets, management, and marketing. Although the study examined the relationship between the institutional environment and exports of SMEs in developed countries, the results are also applicable to SMEs in developing countries, as SMEs in developing countries face differences and shortcomings in the institutional environment of different countries when entering the international market (Akbar et al. 2016).

Motives and drivers.

Firms are guided by four motives when attracting foreign investment, these are "the search for natural resources, market, efficiency, and strategic assets" Dunning (1994). Motives can be both internal and external factors, internal ones include market entry, personal resources, commitment, vision, survival, profitability, an advantage over competitors, and an increase in the number of shareholders. External motives include market development strategy, foreign country attractiveness, and international attractiveness, offers from distributors, government or customers, competition, access to large markets, industry environment, government policy, and support. The best results can come from the motivation to create an international business, training, and seminars for managers of such firms, training employees, being guided by the strategy of international networks, expanding, and adapting new technologies (Minimala et al, 2019).

Kadrolkar (2011) lists global and local competitive pressures as the strongest drivers of internationalization and divides them into internal and external. Drivers of internationalization include many phenomena from existing experience in the international market, the availability of free resources and communication skills (Kadrolkar, 2011) to the length of the product life cycle, the age of the entrepreneur and the time to enter the international market (Ewa, 2013). The results of the study by Minimala et al. (2019) showed that the desire to enter the international market is motivated by possible profit rather than creating a product or service for different markets. They claim that the presence of the vision and mission of SMEs, as well as the possibility of their implementation, are favorable for internationalization.

This study uses the role of human capital, namely, knowledge of international markets, knowledge of foreign languages by employees, the presence of foreign employees, the presence of employees with foreign education, and employees with international experience useful for international strategy. The factor of the impact of the company's resources as a general understanding of the "company's capabilities" for export activities will also be explored. The IV factor is assessed as the company's growth opportunities abroad compared to

the domestic market and cultural differences between the local and international markets. This research is being done to determine what factors influence the pattern of behavior of Kazakh firms in export activities.

2.3.Hypotheses

H1: There is significant positive relationship between firm size and export activity.

H2: There is significant positive relationship between foreign languages and export activity.

H3: There is significant positive relationship between expat employees and export activity.

H4: There is significant positive relationship between foreign education and export activity.

H5: There is significant positive relationship between international experience and export activity.

H6: There is significant positive relationship between knowledge and export activity.

H7: There is significant positive relationship between codified international strategy (CIS) and export activity.

H8: There is significant positive relationship between investments and export activity.

H9: There is significant negative relationship between institutional voids and export activity.

H10: There is significant positive relationship between resources and capabilities and export activity.

3. Methodology

The research is based on the results of surveys conducted among entrepreneurs and employees of the export departments of manufacturing SMEs in Kazakhstan. Data on SMEs are taken from open sources, lists of exporters, and participants in-state programs to support exports, without being tied to a specific industry or region of the country. SMEs exporting services or raw materials were not taken into account. The questions asked participants to rate how strongly they agreed with each statement. The questions were answered according to a five-point commitment metric, ranging from "strongly disagree" to "strongly agree". The first block of questions is related to "human capital": staff, knowledge of foreign languages, education, and experience in the international market. The next block of questions concerns the company's export activity, its fraction in sales, the number of markets in which the company operates, the company's strategy and investments in it, and the assessment of the results of its strategy. The final set of questions includes the topics of motivation for internationalization, the impact of the institutional environment on strategy, the firm's ability to internationalize, the availability of information in different languages on the firm's website, the vision of an opportunity to improve the current situation, and the acquisition of new knowledge about internationalization.

The part of the data that is based on responses to position commitment on the five-scale ranging was analyzed based on the grouping of such responses and the degree of their commitment to the internationalization of the firm. For example, if an interviewee responds "strongly disagree" to the statement "My employees can speak foreign languages suitable for an international strategy," then this is assessed as a low level of commitment to the internationalization of the firm according to the criterion "resources" - a subcategory of "human capital". Thus, it helps to identify which firms are more inclined to internationalize based on external and internal factors, and the assessment of their export activity depend on the volume of export sales, the number of foreign markets in which the firm is present, and the firm's own assessment of the implementation of the firm's strategy.

The responses to open-ended questions were analyzed based on the average of all firms, with the exception of staff, vision, and knowledge of internationalization. Due to small number of observables the questions regarding the vision of a possible improvement in the current situation and the acquired knowledge can not be evaluated by textual analysis of the content. Similar responses were grouped and a summary of the main suggestions was written. In general, quantitative and qualitative analyzes are used.

4. Results and the discussion

RQ: What factors explain export patterns of Kazakh firms?

The purpose of the study is to determine the factors influencing the export patterns of Kazakh firms. To do this, data were collected from 11 firms through a questionnaire (Appendix 7.1). The overall response to the survey was poor. Of 400 firms that were sent invitations, 11 returned the reply slip, of which 7 agreed to interview. Future studies on the current topic are therefore recommended.

Clean data.

	FS (firm nite)	FL (knowledge of foreign languages)	EE (expat employees)	FE (foreign education)	IE (International experience)	E (fraction of export)	FM (foreign markets)	K (knowledge)	CIS (codified international strategy)	INV (investments)	SS (Success strategy)	IV I Institution void
a	250	Appe	Agree	Apper	Apee	0.7000	3	Agree	Agrae	Apre	Appe	Αφ
,	250	Agree	Agree	Agree	Apres	0.0700	4	Agree	Disagrae	Agree	Deagree	Deap
2	4 250	Agree	Agne	Disagne	Agrae	0.5288	13	Agree	Agree	NeithertnAgnee har Disagnee	Aprel	Disapr
3	-40	Disarrae	Taxatine	Dearres	Dearme	0.5000		Actes	Deatree	Disaster	Disame	Disato

Firstly, I dropp the last two columns that contain answers for open questions from interview. Each statement in the questionnaire is classified as an export factor, for example, "My employees are able to speak foreign languages relevant to my international strategy." refers to "LA = language availability." Then the answers to the statements present in text terms according to the degree of agreement from "Categorically disagree" to "Strongly agree" are transformed into a numerical expression, the scores ranged from 0.2 to 1.0, respectively.

H. H. H. H.	f.replace(to_replace: ['Strongly Disagree'], value = 0.2, inplace=True) f.replace(to_replace: ['Disagree'], value = 0.4, inplace=True) f.replace(to_replace: ['Bither'Agrees nor Disagree'], value = 0.6, inplace=True) f.replace(to_replace: ['Agree'], value = 0.8, inplace=True) f.replace(to_replace: ['Strongly Agree'], value = 3.0, inplace=True) f														
	FS (firms size)	FL (knowledge of foreign languages)	EE (espet employees)	FE (foreign education)	IE (International superience)	t (fraction of export)	FM (foreign markets)	K (knowledge)	CIS (codified international strategy)	iNV (investments)	55 (Soccess strategy)) f Vi Institutional voids)	IV 3 (Institutional voids)		
0	250	9.8	0.0	0.8	0.8	0.7002	3	0.0	0.0	0.0	0.8	0.0	0.4		
1	260	0.0	0.0	0.8	0.0	0.0700	. 4	0.0	0.4	0.0	0.4	0.4	0.0		
2	290	0.0	0.0	0.4	0.0	0.6200	13	0.0	0.0	0.6	0.8	0.4	0.0		
3	<68	0.4	0.4	0.4	0.4	0.5000	3	0.8	0.4	0.4	0.4	0.4	0.4		
4	+50	1.0	6.2	0.4	0.0	0 1000		0.4	0.2	0.0	0.2	0.0	0.4		
5	<50	0.0	0.0	0.0	0.8	0.3300	3	0.0	9.6	0.8	0.6	0.4	0.4		
6	295	0.8	0.0	0.0	0.6	0.1600	4	1.0	4.6	1.0	0.6	0.6	0.4		

Export activity is assessed by two indicators, namely "Share of exports" and "Number of markets". Export activity is marked "1" if the "Share of exports" and "Number of markets" are above "0", in other cases, export activity is marked "0", which means no exports.

	FS (fem size)	FL (knowledge of foreign langcages)	EE (espat antployeus)	FE (formign education)	E (International experience)	(fraction of seport)	FM (foreign markets)	K (knowledge)	CIS (codified international strategy)	INV (investments)	55 (Success strategy)	N 1 (institutional osids)	N X (institutional (abios
	255	- 13	0.8	18		8 7000	3			1.0	0.0	10	0.4
1	250	1.1	0.8	1.8	0.8	8 0786	4	11	8.4	1.0	8.4	8.4	0.8
2	250	1.1	14	2.4	5.5	6.5288	13	- 11		0.6	63	34	0.8
3	<50	8.4	8.4	0.4	5.4	0.5000	3	1.1	0.4	0.4	0.4	8.4	0.4
4	+50	1.0	0.2	2.4	11	8 1000		2.4	12	0.8	0.2	16	0.4
5	<50	6.8		0.8	1.5	8 3 3 6 9	3		0.6	4.6	0.5	0.4	0.4
4	250	1.0		1.0	11	8 1662		1.0	- 13	18	0.5	2.0	0.4
7	255	1.0	- 0.0	5.8	1.0	8.4005		1.0			1.0	14	0.4
	+50	0.4	2.6	2.6	04	0.000		9.8	0.4	1.5	0.0	1.8	
9	150	6.6	0.8	1.1	11	8.0000	2		- 15	0.0	0.0	0.6	0.4
15	<50	0.6	0.2	5.4	1.6	0.0000		85	82	0.6	0.8	0.8	0.0

Then, to determine the size of the companies, new dummy variables are created: "Small entr" and "Medium entr", then the "Firms size" column is dropped.

```
df['Small entr'] = 0
cond2 = (df['f5 (flrm size)'] -- '(50')
df.loc[cond2,'Small entr'] = 1

df['Rmdium entr'] = 0
cond3 = (df['f5 (flrm size)'] -- '< 250')
df.loc[cond3, 'Medlum entr'] = 1
df</pre>
```

Then explanatory and dependent variables are identified.

X = df[['Fi (knowledge of foreign languages)','EE (expat employees)','FE (foreign education)','IE (international experience)','E
y = df['EA (Export activity)']

Regression.

I choose Multivariable Linear Regression (MLR) to find factors that explain export activity patterns and test my hypothesis, because with MLR the dependent variable can be explained by more than one explanatory variable.

$$\begin{aligned} \mathsf{EA} &= \beta_0 + \beta_1 * \mathsf{LA} + \beta_2 * \mathsf{FL} + \beta_3 * \mathsf{EE} + \beta_4 * \mathsf{FE} + \beta_5 * \mathsf{IE} + \beta_6 * \mathsf{K} + \beta_7 * \mathsf{CIS} + \beta_8 \\ &\quad * \mathsf{INV} + \beta_9 * \mathsf{SS} + \beta_{10} * \mathsf{IV}_1 + \beta_{11} * \mathsf{IV}_2 + \beta_{12} * \mathsf{RC} + \beta_{13} * \mathsf{SM} + \beta_{14} * \mathsf{Med} \\ &\quad + \mu \end{aligned}$$

The following variable acronyms were used in the regression:

Dependent variable: EA = export activity, E = fraction of export, FM = foreign markets.

Explanatory variables: LA = language availability, FL = knowledge of foreign languages,

EE = expat employees, FE = foreign education, IE = international experience, K = knowledge,

CIS = codified international strategy, INV = investments, SS = Success strategy, IV₁₋₂ =

institutional voids, RC = resources and capabilities, SM = Small entr, Med = Medium entr.

Heteroscedasticity test.

A heterogeneity test was performed to check the distribution of the residuals. The following hypotheses are used in testing:

Null (H0): Homoscedasticity is present (residuals are equally scattered).

Alternative (HA): Heteroscedasticity is present (residuals are not equally scattered).

Test results as follows: The test statistic is $x^2 = 11$. The corresponding p-value is 0.357. The test results show that since the p-value is not less than 0.025, we **fail to reject** the null hypothesis. This means we **do not** have sufficient evidence to say that heteroscedasticity is present in the regression model and we can proceed to interpret the output of the original regression.

ean: edian tanda Wrian	0.81818181 : 1.0 rd Dev[at] ce: 0.1636	81818182 an: 0.4045 3630363636	199174779- 364	625								
	FL (knowledge of foreign languages)	EE (expat employees)	FE (foreign education)	iE (international experience)	E (fraction of export)	FM (foreign markets)	K (knowledge)	CIS (codified international strategy)	INV (investments)	55 (Success strategy)	N°1 (institutional voids)	IV 3 (institutiona) voids
count	11.000000	11.000000	11.000000	11.000000	11.000000	11.000000	11.000000	11.000000	11.000000	11.000000	11.000000	11.000000
mean	8.745455	0.636364	0.636364	0.709091	1.078902	4.272727	8.701818	0.545455	0.727273	8.672727	0.563636	8.509091
882	0.201010	0 250091	0.196330	0.104040	2.638053	3.797128	0 100342	0.238175	0.101608	0.241209	8.174773	8.154040
-	3.400000	0.200000	0.400000	0.400000	0.000000	0.000000	0.400000	0.200000	0.400000	9,290000	0.400000	8.400000
25%	8.799009	0.500000	0.400000	0.700000	1005000	2.500000	8.800000	0.400000	0.600000	0.500000	0.400000	0.403000
50%	9.800000	0.800000	0.800000	0.800000	0.330000	3 000000	8.800000	9.600000	0.800000	8 800000	0.600000	8.400000
75%	2.000000	0.800000	0.800000	9.800000	0.514400	5 500000	8.800000	8.300000	0.800000	8 800000	0.700000	8.600000
-	1.000000	0.800000	0.800000	0.000000	1000000	13.000000	1.000000	0.200000	1.000000	1.000000	0.500000	0.800000

The summary statistic depicts that Mean and Median of dependent variable is not similar, so data is skewed.

Test correlation.

I model "Export activity" by linear regression with selected variables. We look at how much correlation each variable has with "Export activity". Correlation doesn't always mean causation but explains how much two variables are related to each other. I drop all columns which have low correlation, lower than 0.4 or -0.4. The correlations of the variables left are following:

	FL (householge of foreign languages)	EE (capat amployees)	E (international experience)	CIS (codified international atrategy)	W1(institutional voids)	N 2 (institutional voida)	EA (Export activity)	Small only	Mulliam
	2.8	1.8	1.8	2.8	3.8	8.4	1	- 8	1
1	0.0	0.0	5.8	2.4	2.4	3.8	. t.		1
8	8.8	1.8	1.8	1.8	3.6	8.6	1	.8	1
3	8.4	8.4	8.4	8.4	2.4	8.4	1		
4	1.0	1.2	11	0.2	2.8	3.4	. t.		

Then I create a correlation matrix (Appendix 7.2) that estimates the correlation between variables which helps to determine the most important variables to model after.

Train the data.

After cleaning the dataset, I divide the data into training and test sets, and train the algorithm. X_train, X_test, y_train, y_test - train_test_split(X, y, test_size=0.2, random_state=1)

I choose MLR because it finds the best value for the intercept and slope, which results in a line that best fits the data.

Linear regression of each variable:

"IE (international experience)" has the highest R-squared of 0.397, which means it fit the model the best, and 39.7% of the variance in the export activity can be explained by the "International experience". Standard error shows that the observed values fall an average of 0.638 units from the regression line. The p-value is 0.038, which is more than the common significance level of 0.025. In this case, the 97.5% confidence interval for "International experience" is 0.11, 2.998. Notice that this confidence interval does not contain the number "0", which means we're quite confident that the true value for the coefficient of "International experience" is non-zero.

By contrast, the 97.5% confidence interval for "FL (knowledge of foreign languages)" is (-0.002, 2.413). Notice that this confidence interval does contain the number "0", which means that the true value for the coefficient of "FL (knowledge of foreign languages)" could be zero, i.e. non-

significant in predicting Export activity.

Linear regression of each variable is presented in Appendixes 7.2-7.10. According to it, I

create a model with a variety of variables that are highly correlated with each variable.

1) Model 1.

OLS Regression Results												
Dep. Variable: Model: Method: Date: Time: No. Observations: Df Residuals: Df Model: Covariance Type:	EA (Export activity) OLS Least Squares Sun, 05 Jun 2022 04:25:10 11 8 2 nonrobust	R-squ Adj. F-sta Prob Log-L AIC: BIC:	ared: R-squared: tistic: (F-statistic): ikelihood:		0.400 0.250 2.664 0.130 -2.3208 10.64 11.84							
		coef	std err	t	P> t	[0.025	0.975]					
const		-0.2679	0.498	-0.538	0.605	-1.416	0.880					
IE (international	experience)	1.2500	1.752	0./14	0.496	-2.790	5.290					
FL (knowledge of f	oreign languages)	0.2679	1.424	0.188	0.855	-3.016	3.552					
Omnibus: Prob(Omnibus):	3.552 0.169 -0.052	Durbin- Jarque-	======================================		1.594 0.747 0.688							
Kurtosis:	4 272	Cond N	, .		30 4							
		=======	~. ===============									
Notes:												
<pre>[1] Standard Error</pre>	is assume that the cov	ariance	matrix of the	errors is	correctly s	pecified.						

- a. Predictors are "IE (international experience)" and FL (knowledge of foreign languages)".
- b. We get a modest model with R-squared score of 0.4, which means that 40% of the

data fit the regression model.

2) Model 2.

OLS Regression Results												
Dep. Variable: Model: Method: Date: Time: No. Observations: Df Residuals: Df Model: Covariance Type:	R-square Adj. R-s F-statis Prob (F- Log-Like AIC: BIC:	d: quared: tic: statistic): lihood:		0.468 0.241 2.057 0.195 -1.6524 11.30 12.90								
		coef	std err	t	P> t	[0.025	0.975]					
const IE (international FL (knowledge of f CIS (codified inte	experience) Foreign languages) ernational strategy)	-0.2753 0.4633 0.6425 0.5245	0.501 1.947 1.486 0.551	-0.550 0.238 0.432 0.951	0.600 0.819 0.678 0.373	-1.460 -4.140 -2.871 -0.780	0.909 5.067 4.156 1.828					
Omnibus: Prob(Omnibus): Skew: Kurtosis:	1.749 0.417 0.309 3.380	Durbin-Wat Jarque-Ber Prob(JB): Cond. No.	son: a (JB):		1.542 0.241 0.886 35.3							

Notes:

- a. Predictors are "IE (international experience)" and "FL (knowledge of foreign languages)", "CIS (codified international strategy)".
- b. We get a model with R-squared score of 0.468, which means that 46.8% of the data fit the regression model.

3) Model 3.

Dep. Variable: EA (Export activity) R-squared: 0.472 Model: OLS Adj. R-squared: 0.120 Method: Least Squares F-statistic: 1.340 Date: Mon, 06 Jun 2022 Prob (F-statistic): 0.356 Fime: 16:57:21 Log-Likelihood: -1.6184 No. Observations: 11 ATC: 13.24 Df Residuals: 6 BIC: 15.23 Of Model: 4 4 20variance Type: nonrobust const -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 TL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 Cits (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 EE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Darbus: 2.141 Durbin-Watson: 1.466 2.282	OLS Regression Results												
Dep. Variable: EA (Export activity) R-squared: 0.472 Model: OLS Adj. R-squared: 0.120 Method: Least Squares F-statistic: 1.340 Date: Mon, 06 Jun 2022 Prob (F-statistic): 0.356 Fime: 16:57:21 Log-Likelihood: -1.6184 No. Observations: 1 AIC: 13.24 Df Residuals: 6 BIC: 15.23 Of Model: 4 -0.2809 0.540 -0.520 0.622 -1.602 1.040 Const -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 Cic (addified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 Exerct employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Disc 2.141 Durbin-Watson: 1.466 2.282 2.673 Data in prob (JB): 0.334 Jarque-Bera (JB): 0.384													
Model: OLS Adj. R-squared: 0.120 Method: Least Squares F-statistic: 1.340 Date: Mon, 06 Jun 2022 Prob (F-statistic): 0.356 Time: 16:57:21 Log-Likelihood: -1.6184 No. Observations: 11 ATC: 13.24 Df Residuals: 6 BIC: 15.23 Of Model: 4 4 Covariance Type: nonrobust coef std err t P> t [0.025 0.975] const -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 FL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 CIS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 ZE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Dimibus: 2.141 Durbin-Watson: 1.466 Prob (JB): 0.384 Skew: 0.393 Prob (JB): 0.384 Skew: 0.393 Prob (JB): 0.825 Kurtosis: 3.470 Cond. No. 44.0	Dep. Variable:	EA (Export activity)	R-squared	:		0.472							
Method: Least Squares F-statistic: 1.340 Date: Mon, 06 Jun 2022 Prob (F-statistic): 0.356 Fine: 16:57:21 Log-Likelihood: -1.6184 No. Observations: 11 AIC: 13.24 Df Residuals: 6 BIC: 15.23 Df Model: 4 - - Covariance Type: nonrobust - cosf std err t P> t [0.025 0.975] const -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 TL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 CIS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 Ee (expat employees) 0.1953 1.013 0.1853 -2.282 2.673 Tensor 0.343 Jarque-Bera (JB): 0.384 A4.0 Stew: 0.393 <td< td=""><td>Model:</td><td>OLS</td><td>Adj. R-sq</td><td>uared:</td><td></td><td>0.120</td><td></td><td></td></td<>	Model:	OLS	Adj. R-sq	uared:		0.120							
Date: Mon, 06 Jun 2022 Prob (F-statistic): 0.356 Time: 16:57:21 Log-Likelihood: -1.6184 No. Observations: 11 AIC: 13.24 Df Residuals: 6 BIC: 15.23 Df Model: 4 - - Covariance Type: nonrobust - - cost -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 Cic (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 SE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Dist: 2.141 Durbin-Watson: 1.466 -2.282 2.673 Cobinibus): 0.393 Prob(JB): 0.384 44.0 Costs: 3.470 Cond. No. 44.0	Method:	Least Squares	F-statist	ic:		1.340							
Time: 16:57:21 Log-Likelihood: -1.6184 No. Observations: 11 AIC: 13.24 Df Residuals: 6 BIC: 15.23 Df Model: 4 4 Covariance Type: nonrobust coef std err t P> t [0.025 0.975] const -0.2809 0.540 -0.520 0.622 -1.602 1.040 EE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 FL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 2TS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 2E (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Dimibus: 2.141 Durbin-Watson: 1.466 2.673 2.673 Skew: 0.393 Prob(JB): 0.825 3.470 0.825 (urtosis: 3.470 Cond. No. 44.0 44.0	Date:	Mon, 06 Jun 2022	Prob (F-s	tatistic):		0.356							
No. Observations: 11 AIC: 13.24 Df Residuals: 6 BIC: 15.23 Df Model: 4	Time:	16:57:21	Log-Likel	ihood:		-1.6184							
Df Residuals: 6 BIC: 15.23 Df Model: 4 Covariance Type: nonrobust coef std err t P> t [0.025 0.975] const -0.2809 0.540 -0.520 0.622 -1.602 1.040 EE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 FL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 C1S (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 EE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Imibus: 2.141 Durbin-Watson: 1.466 Prob (Omnibus): 0.393 Prob (JB): 0.393 Prob (JB): 0.393 Prob (JB): 0.825 (urtosis: 3.470 Cond. No.	No. Observations:	11	AIC:			13.24							
Df Model: 4 nonrobust Covariance Type: nonrobust coef std err t P> t [0.025 0.975] const -0.2809 0.540 -0.520 0.622 -1.602 1.040 LE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 7L (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 CIS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 SE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Durbin-Watson: 1.466 Prob(Omnibus): 0.343 Jarque-Bera (JB): 0.384 Skew: 0.393 Prob(JB): 0.825 44.0	Df Residuals:	BIC:											
Covariance Type: nonrobust coef std err t P> t [0.025 0.975] const -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 7L (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 21S (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 21S (codified international strategy) 0.1953 1.013 0.193 0.853 -2.282 2.673 Denibus: 2.141 Durbin-Watson: 1.466 2.673 2.673 Prob (Onnibus): 0.343 Jarque-Bera (JB): 0.384 44.0 44.0	Df Model:	4											
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const -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 FI (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 CIS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 SE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Imnibus: 2.141 Durbin-Watson: 1.466 Prob(Omnibus): 0.343 Jarque-Bera (JB): 0.384 Skew: 0.393 Prob(JB): 0.825 (urtosis: 3.470 Cond. No. 44.0			coef	std err	t	P> t	[0.025	0.975]					
const -0.2809 0.540 -0.520 0.622 -1.602 1.040 IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 FL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 Codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 2E (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Durbin-Watson: 1.466 Prob (Onnibus): 0.393 Prob (JB): 0.825 44.0 Skew: 0.393 Prob (JB): 0.825 44.0													
IE (international experience) 0.2451 2.382 0.103 0.921 -5.584 6.074 FL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 CIS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 2E (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Durbins: 2.141 Durbin-Watson: 1.466 Prob(Omnibus): 0.393 Prob(JB): 0.825 Kurtosis: 3.470 Cond. No. 44.0	const		-0.2809	0.540	-0.520	0.622	-1.602	1.040					
FL (knowledge of foreign languages) 0.7987 1.793 0.445 0.672 -3.589 5.186 CIS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 CE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Dunibus: 2.141 Durbin-Watson: 1.466 Prob(Omnibus): 0.393 Prob(JB): 0.384 Skew: 0.393 Prob(JB): 0.825 Xurtosis: 3.470 Cond. No. 44.0	IE (international e	xperience)	0.2451	2.382	0.103	0.921	-5.584	6.074					
CIS (codified international strategy) 0.3770 0.968 0.389 0.710 -1.992 2.746 EE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Imibus: 2.141 Durbin-Watson: 1.466 Prob(Omnibus): 0.393 Prob(JB): 0.384 Skew: 0.393 Prob(JB): 0.825 Kurtosis: 3.470 Cond. No. 44.0	FL (knowledge of fo	reign languages)	0.7987	1.793	0.445	0.672	-3.589	5.186					
EE (expat employees) 0.1953 1.013 0.193 0.853 -2.282 2.673 Omnibus: 2.141 Durbin-Watson: 1.466 Prob(Onnibus): 0.343 Jarque-Bera (JB): 0.384 Skew: 0.393 Prob(JB): 0.825 Kurtosis: 3.470 Cond. No. 44.0	CIS (codified inter	national strategy)	0.3770	0.968	0.389	0.710	-1.992	2.746					
Dmnibus: 2.141 Durbin-Watson: 1.466 Prob(Omnibus): 0.343 Jarque-Bera (JB): 0.384 Skew: 0.393 Prob(JB): 0.825 Xurtosis: 3.470 Cond. No. 44.0	EE (expat employees	:)	0.1953	1.013	0.193	0.853	-2.282	2.673					
Prob (Omnibus): 0.343 Jarque-Bera (JB): 0.384 Skew: 0.393 Prob (JB): 0.825 Xurtosis: 3.470 Cond. No. 44.0		2 1/1	Durbin-Wate			1 466							
Skew: 0.393 Prob (JB): 0.825 Kurtosis: 3.470 Cond. No. 44.0	Drob (Ompibus) :	0 343	Jarguo-Poro	(TP) •		1.400							
Skew. 0.353 F10D(05). 0.023 Kurtosis: 3.470 Cond. No. 44.0	Skow:	0.343	Darque-Bera	(01).		0.004							
	Kurtosis:	3 470	Cond No.			44 0							
	Ruicosis.	3.470				44.0							
Notes.	Notes:												
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.	[1] Standard Errors	assume that the cov	ariance matr	ix of the e	rrors is co	orrectly spe	cified.						

- a. Predictors are "IE (international experience)" and "FL (knowledge of foreign languages)", "CIS (codified international strategy)", "EE (expat employees)"
- b. We get a modest model with R-squared score of 0.472, which means that 47.2% of the data fit the regression model. Very slight improvement in comparison with Model 2.
- 4) Model 4.

OLS Regression Results												
Dep. Variable: Model: Method: Date: Time: No. Observations: Df Residuals: Df Model: Covariance Type:	EA (Export activity) OLS Least Squares Mon, 06 Jun 2022 16:59:53 11 4 6 nonrobust	R-square Adj. R-s F-statis Prob (F- Log-Like AIC: BIC:	d: iquared: itic: istatistic): ilihood:		0.858 0.646 4.036 0.0990 5.6165 2.767 5.552							
		coef	std err	t	P> t	[0.025	0.975]					
const IE (international	1.3959 2.2117	0.614 1.633	2.275 1.354	0.085 0.247	-0.308 -2.323	3.099 6.747						

<pre>FL (knowledge of foreign languag CIS (codified international stra EE (expat employees) IV 1 (institutional voids) IV 2 (institutional voids)</pre>	ges) ategy)	-0.9764 -0.0681 -0.1100 -1.2204 -1.2240	1.263 0.709 0.694 0.491 0.596	-0.773 -0.096 -0.158 -2.487 -2.055	0.483 0.928 0.882 0.068 0.109	-4.482 -2.037 -2.037 -2.583 -2.878	2.530 1.901 1.817 0.142 0.430
					=====		
Omnibus:	0.023	Durbin-Watso	on:		1.260		
Prob(Omnibus):	0.989	Jarque-Bera	(JB):		0.237		
Skew:	-0.061	Prob(JB):			0.888		
Kurtosis:	2.291	Cond. No.			52.6		
					=====		
Notes: [1] Standard Errors assume that	the cov	variance matr:	ix of the o	errors is co	rrectly spe	cified.	

- a. Predictors are "IE (international experience)" and "FL (knowledge of foreign languages)", "CIS (codified international strategy)", "EE (expat employees)", "IV 1 (institutional voids)", "IV 2 (institutional voids)".
- b. We get a modest model with R-squared score of 0.858, which means that 85.8% of

the data fit the regression model.

5) Model 5.

OLS Regression Results												
Dep. Variable:	EA (Export activity)	R-square	d:		0.959							
Model:	OLS	Adj. R-s	quared:		0.865							
Method:	Least Squares	F-statis	tic:		10.13							
Date:	Mon, 06 Jun 2022	Prob (F-	statistic):		0.0418							
Time:	17:02:13	Log-Like	lihood:		12.496							
No. Observations:	11	AIC:			-8.992							
Df Residuals:	3	BIC:			-5.808							
Df Model:	7											
Covariance Type:	nonrobust											
			etd orr		DN +		0 0751					
const		1 7790	0 400	4 4 4 6	0 021	0 506	3 052					
TE (international e	experience)	2 9044	1 040	2 791	0.068	-0 407	6 216					
FL (knowledge of fo	preign languages)	-1.8884	0.848	-2.226	0.112	-4.589	0.812					
CIS (codified inter	national strategy)	-1 2613	0 618	-2 040	0 134	-3 229	0 706					
EE (expat employees	a)	0 0247	0 432	0 057	0 958	-1 349	1 399					
TV 1 (institutiona	ul voids)	-1 1615	0 304	-3 822	0 032	-2 129	-0 194					
IV 2 (institutional	voids)	-2 2615	0 529	-4 279	0.023	-3 944	-0 579					
Small entr	10140)	0 6269	0 140	4 494	0 021	0 183	1 071					
Medium entr		1 1521	0 281	4 0 9 8	0.026	0 257	2 047					
					=====	0.207	2.01/					
Omnibus:	0.760	Durbin-Wat	son:		1.415							
Prob(Omnibus):	0.684	Jarque-Ber	a (JB):		0.544							
Skew:	-0.472	Prob(JB):			0.762							
Kurtosis:	2.455	Cond. No.		5.4	1e+16							
Notes:												
[1] Standard Errors	assume that the cova	ariance mat	rix of the e	rrors is co	rrectly spe	cified.						
[2] The smallest ei	genvalue is 1.46e-32.	. This migh	t indicate t	hat there a	ire strong m	ulticollinea	rity proble					
ms or that the desi	.gn matrix is singula:	r.										

a. Predictors are "IE (international experience)" and "FL (knowledge of foreign languages)", "CIS (codified international strategy)", "EE (expat employees)", "IV 1 (institutional voids)", "IV 2 (institutional voids)", "Small entr", "Medium entr".

- b. We get a model with high R-squared score of 0.959, which means that 95.9% of the data fit the regression model.
- c. The model says that there is a multicollinearity problem, means that some variables are highly correlated with each other.

We can see models 4 and 5 have the highest R-squared to predict "Export activity", but the extremely high R-squared value and a small number of observations make these models doubtful. Also, Model 5 shows strong multicollinearity. In order to be more precise, I use Model 3.

Multilinear regression (MLR).

According to MLR results the regression will be the following:

$$EA(y) = 0.2451 * IE(international experience) + 0.7987 *$$

FL (knowledge of foreign languages) + 0.377 \ast

CIS (codified international strategy) + 0. 1953 * EE(expat employees) - 0. 2809;

MLR above describes the relationship between Export activity and explanatory variables. From the above-obtained equation for the MLR, we can see that the value of intercept is -0.2809. And having "International experience" increase the Export activity by 0.2451, knowing a foreign language increases Export activity by 0.7987, having Codified international strategy increases Export activity by 0.377, Expat employees increases Export activity by 0.1953 when all other independent variables are held constant.

Testing the Null hypothesis.

I use p-value to test the null hypothesis. We fail to reject the following null hypothesis:

H1 Null: There is no significant positive relationship between firm size and export activity.
 P-value of "Medium entr" (0.026) is not less than 0.025, we fail to reject the null hypothesis related to Medium sized companies.

- H2 Null: There is no significant positive relationship between foreign languages and export activity. P-value of "FL (knowledge of foreign languages)" (0.050) is not less than 0.025, we fail to reject the null hypothesis.
- H3 Null: There is no significant positive relationship between expat employees and export activity. P-value of "EE (expat employees)" (0.147) is not less than 0.025, we fail to reject the null hypothesis.
- H4 Null: There is no significant positive relationship between foreign education and export activity. P-value of "FE (foreign education)" (0.301) is not less than 0.025, we fail to reject the null hypothesis.
- H5 Null: There is no significant positive relationship between international experience and export activity. P-value of "IE (international experience)" (0.038) is not less than 0.025, we fail to reject the null hypothesis.
- H6 Null: There is no significant positive relationship between knowledge and export activity. P-value of "K (knowledge)" (0.471) is not less than 0.025, we fail to reject the null hypothesis.
- H7 Null: There is no significant positive relationship between codified international strategy (CIS) and export activity. P-value of "CIS (codified international strategy)" (0.134) is not less than 0.025, we fail to reject the null hypothesis.
- H8 Null: There is no significant positive relationship between investments and export activity. P-value of "IV 1 (institutional voids)" (0.237) is not less than 0.025, we fail to reject the null hypothesis.
- H9 Null: There is no significant negative relationship between institutional voids and export activity. P-value of "IV 1 (institutional voids)" (0.032) is not less than 0.025, we fail to reject the null hypothesis.

H10 Null: There is no significant positive relationship between resources and capabilities and export activity. P-value of "RC (resources and capabilities)" (0.403) is not less than 0.025, we fail to reject the null hypothesis.

In this model we reject the following null hypothesis:

- H1 Null: There is no significant positive relationship between firm size and export activity.
 P-value of "Small entr" (0.021) is less than 0.025, we reject the null hypothesis related to Small sized companies.
- H9 Null: There is no significant negative relationship between institutional voids and export activity. P-value of "IV 2 (institutional voids)" (0.023) is less than 0.025, we reject the null hypothesis.

Here we can notice the contradiction results of testing H1 and H9, but the differences between p-values and significance levels are not extreme. So, we can reject these hypotheses, and we can conclude that there are significant evidences to conclude the alternative hypotheses: H1: There is significant positive relationship between firm size and export activity.

- H9: There is significant negative relationship between institutional voids and export activity.

Among the recommendations from the entrepreneurs was "Reduce the number of barriers to effective work." can be attributed to both internal factors and external factors, such as IV. Several respondents believe that "Export promotion" and "tax reduction for exporters of goods and services" can have a positive impact on the export activity of entrepreneurs. Regarding the issue of lessons from internationalization, entrepreneurs emphasize the importance of "establishing stable ties between enterprises of different countries", "flexible adaptation in international relations", "labeling products in accordance with international standards", "increasing sales in international markets".

Overall, these results indicate that 42.7% of the data fits the MLR Model 3 that contains "International experience", "Knowing a foreign language", "Codified international strategy", "Expat employees" variables. The results of the hypothesis testing indicate that "There is significant positive relationship between firm size and export activity" and "There is significant negative relationship between institutional voids and export activity". Failing to reject the null hypothesis at a 2.5% significance level. The next chapter, therefore, moves on to discuss the policy recommendations based on the findings.

5. Policy recommendations.

Based on the results of the data analysis and the interviews, it can be said that the government can support exporting entrepreneurs in Kazakhstan in the following ways:

- 1. Develop human capital.
 - a. **Promote** the development of human capital. Namely, carry out work on qualification, retraining, certification of employees of export departments and employees whose activities directly affect the effectiveness of the company's export activities.
 - b. Conduct courses, trainings on exports, possibly with the involvement of external speakers - Kazakhstani and foreign entrepreneurs with successful experience in exporting non-commodity goods. Attract employees from different countries to learn from experience and better understand foreign markets.
 - c. **Create** guidelines for entering the international market, opportunities for certification of products according to international standards, and make all information support publicly available.
- 2. Mitigate the risk of Institutional Voids (IV).
 - a. Develop institutions that promote internationalization. For example, develop operational communication between business and state departments. The National Chamber of Entrepreneurs, Atameken, which is supposed to play the role of the "voice of businessmen" in government structures, is often criticized and is a slow institution, and is even considered the "Ministry of Entrepreneurship with the worst

features of the bureaucracy." (Birukova 2022) . NGOs should be created that will proactively promote the interests of business in the state and provide non-financial support to entrepreneurs.

- b. Develop a program of tax breaks for exporters of manufactured goods.
- c. **Remove** the barriers for unions, associations, and other associations of different market sectors, and it is even possible to accept a representative from each sector of the economy in Atameken National Chamber of Entrepreneurs to fully cover all sectors.
- 3. Help in the effective assimilation of the company's resources to enter the international market.
 - a. **Help** entrepreneurs prepare, modify and implement their international market entry strategy. Since SMEs are limited in resources, the state could support businessmen with consulting and support services. For example, giving an analysis of the international market and potential niches that could be in demand abroad. Further, develop several scenarios for exporting in different industries and regions that entrepreneurs may use for a better performance. In addition, provide support in foreign markets, the state may help with the opening of representative offices, participating in international exhibitions, and provide any other instruments to improve exporters network and involvement in international market.
 - b. **Provide** legal support in drafting contracts. KazakhExport already ensures export risks, but in addition, it is important to cover legal risks, for example, by providing legal support in drafting contracts, protecting the rights of exporters in Kazakhstan and abroad. This contributes to the growth of the company's competencies, and the company can rely on the use of legal resources.
 - c. **Ensure** the availability of opening online platforms, websites in several languages, and for those companies that already have a website, provide a free service for

translating website materials into foreign languages. It is possible to attract external translators and programmers or specialized companies. The importance of having different language options on electronic resources, like the website of companies, is not so obvious, however, it cannot be said that when interacting with foreign partners, customers, the impact of having information available in different languages is understandable. It also shows that the company is targeting certain markets and consumers are more likely to be trusted if there is an appearance that people from the same language group or territory use or have had experience with the products of a certain company.

d. **Facilitate** all possible assistance to SMEs in accompanying export transactions and the beginning of export activity.

These recommendations may help increase the likelihood of export activity, while covering the needs of existing exporters from the state.

6. Conclusion

The main goal of the current study is to determine factors explain export patterns of Kazakh firms. The evidence from this study suggests two hypotheses, "There is significant positive relationship between firm size and export activity" and "There is significant negative relationship between institutional voids and export activity". It may mean the harmful influence of IV on Export activity. Multiple regression analysis revealed that the model contains "International experience", "Knowing a foreign language", "Codified international strategy", "Expat employees" variables" shows the highest R-squared, and it means that 42.7% of variability observed in Export activity is explained by "Human capital" and "Resources" internationalization factors.

One source of weakness in this study which could have affected the measurements of Export activity was the small number of observations. An additional uncontrolled factor is the possible influence of special trade unions, zones and agreements.

Although the current study is based on a small sample of participants, the findings suggest

to support and stimulate the development of "Human capital" and firm "Resources", reduce

"IV", support SMEs, cooperate in creating and "Network" expansion.

This study does not take into account the Russian invasion in Ukraine and its' consequences to Kazakh firms need to be explored.

7. Appendixes

#	Question		Comment/suggestion
1	How many employees do you have?	Штат сотрудников	
2	My employees are able to speak foreign languages relevant to my international strategy Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	 Мои сотрудники могут говорить на иностранных языках подходящих к международной стратегии. Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен Полностью согласен 	
3	I have enough ex-pat employees to execute my international strategy - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	У меня достаточно иностранных сотрудников для реализации моей международной стратегии - Категорически не согласен - Не согласен - Ни согласен, ни несогласен - Согласен - Полностью согласен	
4	My employees have foreign education relevant to my international strategy. - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	 Мои сотрудники имею иностранное образование, необходимое для международной стратегии Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен Полностью согласен 	
5	My employees have international professional experience relevant to my international strategy. - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	 Мои сотрудники имеют международный профессиональный опыт, соответствующий моей международной стратегии. Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен Полностью согласен 	
6	What fraction of export in sales? (in %)	Какова доля экспорта в продажах? (в %)	
7	How many foreign markets did you internationalize to?	На сколько иностранных рынках вышли?	
8	My company has adequate knowledge of international markets to execute my international strategy - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree	 Моя компания обладает достаточными знаниями о международных рынках для реализации моей международной стратегии. Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен 	

7.1. Interview questions.

CEU eTD Collection

	- Strongly Agree	- Полностью согласен	
9	My company has a codified international strategy - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	 Моя компания имеет кодифицированную международную стратегию Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен Полностью согласен 	
9	In the last 3-5 years, my company has increased its investments in its international strategy - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	 За последние 3-5 лет моя компания увеличила инвестиции в свою международную стратегию Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен Полностью согласен За последние 3-5 лет моя компания 	
	In the last 3-5 years, my company has increased its achieved the goals of its international strategy - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	увеличила достижение целей своей международной стратегии. - Категорически не согласен - Не согласен - Ни согласен, ни несогласен - Согласен - Полностью согласен	
11	Better growth opportunities abroad relative to my company's home market have encouraged internationalization of our growth strategy - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	Лучшие возможности роста за границей по сравнению с внутренним рынком моей компании способствовали интернационализации нашей стратегии роста - Категорически не согласен - Не согласен - Ни согласен, ни несогласен - Согласен - Полностью согласен	
12	Cultural differences between my company's home market and international markets impact my company's international strategy. - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	 Культурные различия между внутренним рынком моей компании и международными рынками влияют на международную стратегию моей компании. Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен Полностью согласен 	
13	How many languages are available on your website?	Сколько языков доступно на вашем веб- сайте?	
14	My company has sufficient capabilities to execute my company's international strategy - Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree	 У моей компании достаточно возможностей для реализации международной стратегии Категорически не согласен Не согласен Ни согласен, ни несогласен Согласен Полностью согласен 	
16	What can be done to improve the current situation?	Что можно сделать, чтобы улучшить текущую ситуацию?	
17	What you have learned after internationalization?	Чему вы научились после интернационализации?	



7.2.Correlation matrix

7.3. Linear Regression of the IE (international experience)

	C	DLS Regressi	ion Results				
Dep. Variable: Model: Method: Date: Time: No. Observations: Df Residuals: Df Model: Covariance Type:	EA (Export Leas Mon, 06	activity) OLS St Squares 5 Jun 2022 14:01:19 11 9 1 nonrobust	R-squared: Adj. R-squa F-statistic Prob (F-sta Log-Likelih AIC: BIC:	red: : tistic): ood:	0 0 5 0. -2. 8 9	.397 .330 .929 0377 3451 .690 .486	
		coef	std err	t	P> t	[0.025	0.975]
const IE (international	experience)	-0.2838 1.5541	0.463 0.638	-0.612 2.435	0.555 0.038	-1.332 0.110	0.765 2.998
Omnibus: Prob(Omnibus): Skew: Kurtosis:		3.680 I 0.159 C -0.070 F 4.322 C	Durbin-Watson Jarque-Bera (Prob(JB): Cond. No.	: JB):	1.5 0.8 0.6 9.	== 55 09 67 66 ==	
Notes: [1] Standard Error	rs assume tha	at the covar	riance matrix	of the erro	ors is corre	ctly specifi	ed.

7.4.Linear Regression of the FL (knowledge of foreign languages)

	_		-
	OLS Regress:	ion Results	
Dep. Variable:	EA (Export activity)	R-squared:	0.362
Model:	OLS	Adj. R-squared:	0.291
Method:	Least Squares	F-statistic:	5.098
Date:	Sun, 05 Jun 2022	Prob (F-statistic):	0.0504
Time:	07:41:33	Log-Likelihood:	-2.6601
No. Observations:	11	AIC:	9.320
Df Residuals:	9	BIC:	10.12
Df Model:	1		

Covariance Type:	nonrobus	t					
		coef	std err	t	P> t	[0.025	0.975]
const FL (knowledge of foreign land	guages)	-0.0804 1.2054	0.411 0.534	-0.196 2.258	0.849 0.050	-1.010 -0.002	0.849 2.413
Omnibus: Prob(Omnibus): Skew: Kurtosis:	1.635 0.441 -0.345 3.291	Durbin-W Jarque-B Prob(JB) Cond. No	atson: era (JB): :		1.716 0.257 0.880 8.15		

Notes: [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

"FL (knowledge of foreign languages)" has the second high R² of 0.362.

7.5. Linear Regression of the EE (expat employees)

	OLS	Regress	ion Results			
Dep. Variable: EA	A (Export act	ivity)	R-squared:	۰	0.218 0.131	
Method:	Least S	quares	F-statistic:		2.514	
Date:	Sun, 05 Ju	n 2022	Prob (F-statis	stic):	0.147	
Time:	. 07	:51:27	Log-Likelihood	1:	-3.7736	i i
No. Observations:		11	AIC:		11.55	
Df Residuals:		9	BIC:		12.34	
Df Model:		1				
Covariance Type:	nor	robust				
	coef	std e	rr t	P> t	[0.025	0.975
const	0.3372	0.3	24 1.041	0.325	-0.396	1.07
EE (expat employees)	0.7558	0.4	77 1.586	0.147	-0.323	1.834
Omnibus:		.897	======================================		1.610	
Prob(Omnibus):	C	.086	Jarque-Bera (JB)	:	1.928	
Skew:	- C	.983	Prob(JB):		0.381	
Kurtosis:	3	.585 0	Cond. No.		5.96	

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

7.6. Linear Regression of the FE (foreign education)

Dep Variable: EA	(Export activ	$\pm v$)	R-sau	ared·		0.118	
Model:	(Emport door)	OLS	Adi.	R-squared:		0.020	
Method:	Least Squa	res	F-sta	tistic:		1.203	
Date:	Sun, 05 Jun 2	2022	Prob	(F-statisti	c):	0.301	
Time:	07:53	:28	Log-I	ikelihood:	- , -	-4.4384	
No. Observations:	11		AIC:			12.88	
Df Residuals:		9	BIC:			13.67	
Df Model:	1						
Covariance Type:	nonrol	oust					
	coei	std	err	t	P> t	[0.025	0.975]
const	0.3679	0	.428	0.860	0.412	-0.600	1.336
FE (foreign education)	0.7075	0	.645	1.097	0.301	-0.752	2.167
Omnibus:	5.72	===== 20	====== Durbin-	Watson:		1.488	
Prob(Omnibus):	0.0	57	Jarque-	Bera (JB):		2.815	
Skew:	-1.23	32	Prob (JE	s):		0.245	
Kurtosis:	3.20	56	Cond. N	io.		7.56	

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

7.7. Linear Regression of the K (knowledge)

		OLS Regress	sion Resul	ts		
Dep. Variable: Model: Method: Date: Time: No. Observations: Df Residuals: Df Model: Covariance Type:	EA (Exp Sun	ort activity) OLS Least Squares , 05 Jun 2022 07:51:30 11 9 1 nonrobust	R-squar Adj. R- F-stati Prob (E Log-Lik AIC: BIC:	red: .squared: .stic: '-statistic): celihood:		0.059 -0.045 0.5664 0.471 -4.7928 13.59 14.38
	coef	std err	t	P> t	[0.025	0.975]
const K (knowledge)	0.3553	0.628	0.566	0.585	-1.064 -1.188	1.775

			======
Omnibus:	7.724	Durbin-Watson:	1.741
Prob(Omnibus):	0.021	Jarque-Bera (JB):	3.936
Skew:	-1.441	Prob(JB):	0.140
Kurtosis:	3.527	Cond. No.	10.2

Notes: [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

7.8. Linear Regression of the CIS (codified international strategy)

	OLS R	egression	Results				
Dep. Variable: Model: Method: Date: Time: No. Observations: Df Residuals: Df Model: Covariance Type:	EA (Export activity) OLS Least Squares Sun, 05 Jun 2022 07:51:31 11 9 1 nonrobust	R-squared Adj. R-sq F-statist Prob (F-s Log-Likel AIC: BIC:	: uared: ic: tatistic): ihood:		0.260 0.177 3.156 0.109 -3.4753 10.95 11.75		
		coef	std err	t	P> t	[0.025	0.975]
const CIS (codified inte	rnational strategy)	0.3462 0.8654	0.288 0.487	1.203 1.776	0.260 0.109	-0.305 -0.237	0.997 1.967
Omnibus: Prob(Omnibus): Skew: Kurtosis:	2.129 0.345 -0.741 2.806	Durbin-Wats Jarque-Bera Prob(JB): Cond. No.	on: (JB):		1.715 1.023 0.600 5.77		

Notes: [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

7.9. Linear Regression of the INV (investments)

OLS Regression Results								
Dep. Variable: Model: Method: Date: Time: No. Observations: Df Residuals: Df Model: Covariance Type:	EA (Export Leas Sun, 05	activity) OLS t Squares Jun 2022 07:51:32 11 9 1 nonrobust	R-squared: Adj. R-squ F-statisti Prob (F-st Log-Likeli AIC: BIC:	aared: .c: .atistic): .hood:	0 0 1 -4. 1 1	.151 .057 .604 .237 2267 2.45 3.25		
	coef	std err	t	P> t	[0.025	0.975]		
const INV (investments)	0.1111 0.9722	0.571 0.768	0.195 1.266	0.850 0.237	-1.180 -0.765	1.402 2.709		
Omnibus: Prob(Omnibus): Skew: Kurtosis:		4.071 0.131 -1.031 3.064	Durbin-Watsc Jarque-Bera Prob(JB): Cond. No.	on: (JB):	1.6 1.9 0.3 9.	== 19 49 77 96 ==		

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

7.10. Linear Regression of the RC (resources and capabilities)

OLS Regression Results							
Dep. Variable:		E	A R-sq	uared:		0.079	
Model:		OL	S Adj.	R-squared:		-0.023	
Method:		Least Square	s F-sta	atistic:		0.7710	
Date:	Tu	e, 07 Jun 202	2 Prob	(F-statistic):		0.403	
Time:		12:37:1	7 Log-	Likelihood:		-4.6765	
No. Observation	ns:	1	1 AIC:			13.35	
Df Residuals:			9 BIC:			14.15	
Df Model:			1				
Covariance Type	e:	nonrobus	t				
	coef	std err	t	P> t	[0.025	0.975]	
const	0.4493	0.438	1.026	0.332	-0.541	1.440	
RC	0.5072	0.578	0.878	0.403	-0.800	1.814	
Omnibus:		7.91	5 Durb:	in-Watson:		1.468	
Prob(Omnibus):		0.01	9 Jarq	ue-Bera (JB):		3.972	
Skew:		-1.43	9 Prob	(JB):		0.137	
Kurtosis:		3.61	7 Cond	. No.		7.23	
Notoo							

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

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