

Analyzing the Impacts of Credit Development on Exporting Probability of Companies Listed In Tehran Stock Exchange (Test)

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Abstract: *In modern world of industry and trades, exports and competitive power are crucial to manufactures while credit development is essential to exports. This research, via the adoption of Logit model, attempted to analyze the impacts of financial development on the probability of exports by companies listed in Tehran Stock Exchange (TSE) during 2008 -2014 time period. The statistical population covered 102 companies listed in Tehran Stock Exchange (TSE). Considering the analyses, findings and the research results, it is held that the impacts of the independent indicator of financial development (which in turn is computed from base capital ratio to risky assets) on virtual dependent indicator of 0 and 1 of export probability would be 1 in case of export probability and 0 if proved otherwise are positive and significant. Considering the fact that improved capital adequacy results in increased base capital of firms or lowered risky assets, it could be concluded that financial development enhances investments in production and consequently the volume of exports in the sample companies. The findings could greatly contribute to description and analyses of financial reporting settings that may provide shareholders and investors with correct and accurate information for selection of outperforming firms.*

Keywords: *Financial Development, Exports, Companies Listed in Tehran Stock Exchange (TSE)*

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I. Introduction

Given the economic growth of Iran combined with integration and globalization trends observed in the field of exports, exports and competitive power are crucial to manufactures financial credit development is essential to exporters. Additional experiential studies conducted in this regard suggest that financial development contributes to the promotion of industries with heavy reliance on foreign credit markets, intangible assets and R&D in exports markets (Beck 2003, Hur, Raj, & Riyanto 2006, Manova 2003 and 2013, Svaleryd & Vlachos 2005). Therefore, Development of an effective financial system may allay credit squeezes and give firms a channel to access foreign markets. In a similar study, Berman and Héricourt (2010) discovered interactions between financial development and squeezes and exporting profiles of different firms. They demonstrated that liquidity and financial leverages which serve as indicators of credit constraints are stronger determinants of a firm's volume of exports. However, their findings are in contrast to the results of this research. Therefore and considering the theoretical backgrounds presented here, this research attempts to answer this question "do credit constraints and financial developments affect the exporting profiles of firms listed in Tehran Stock Exchange?". This study is a venture in the field of commercial management as it addresses factors affecting the exports of firms operating in Stock Exchange of a country.

There is no denying the contributions of exports to economic growth, development, production, employment, efficiency, improved production techniques, management, training skilled staff etc that even some have dubbed exports as "the engine of economic growth and development". However, economic development is not possible should access to the services of credit and capital intermediaries as well as financial markets and consistent, effective enterprises fail to materialize. Studying the factors influencing the probability of exports and how it is influenced in turn by financial development could serve as a guide for economic planners and decision makers. Some studies suggest that financial development promotes exports and trades to increase the reliance of manufacturing institutions on external finances with the ultimate goal of expansion of credit and capital systems. In contrast, some other studies maintain that increasing the trades and opening the doors of an economy leads to higher rates of external financing which imposes constraints on the financial sector of a country, in particular developing countries. Although theoretical discussions confirm the positive effects of financial development on increased probability of exports, in Iran only field tests could verify or disprove the existence of such effects. Therefore and considering the importance of exports in any country, this research

attempts to examine the effects of financial development on probability of exports in companies listed in Tehran Stock Exchange (TSE).

II. Review of literature

2.1 Financial Development

Financial development takes place when credit tools, markets and intermediaries lower the information, execution and exchange costs, yet avoid removing them. Financial development thus covers the followings:

- Generation of information about possible investments
- Supervising the investments and implementing the rulings of companies
- Exchange, dispersion and management of risks
- Allocation of savings
- Exchange of goods and services (Leven Rose, 2003)

Factors influencing the levels of financial developments in a country also include historical factors such as legal, historical, cultural, ethical, geographical and political components which in turn cover the political environment and macro economy, institutional, legal and information infrastructures, regulations and supervisions, financial liberation and easier access to financial and credit services.

The financial system of a country is comprised of diverse financial markets, tools and products. Financial development, therefore, is a multi-dimensional which, in addition to the development of banking sector, covers non-financial development, developments of monetary sector and policy-making, banking regulations and supervisions, openness of the financial sector, institutional environments and stock exchange development (Dehmordeh and Shokri, 2009).

2.2 Financial Development and Exports

The effects of financial sector as a contributory factor to the growth and development of countries on development of exports is widely discussed in recent times at level of international economy. Nowadays, the strategy of exports development is the driving force behind the main divisions of the economy. Financial market is an arrangement where financial assets are exchanged. Although a market category is based on short-term maturity (monetary market), financial assets have long-term maturity (capital market). The capital market is categorized into primary and secondary markets. A secondary capital market is where overdue securities are traded. This market is divided into organized, stock exchange-based and off-exchange, unorganized markets (Fegghi, 2006).

In many countries, banking networks not only attracts domestic savings to promote investments, it also attempts to draw international savings. Financial intermediaries in general and banks in particular are the main players of international trading along exporting and importing agents as well as the governments. Banks and other credit and financial institutions are crucial to guiding and development of commercial operations among countries. They not only fund exports and imports, but also attempt to lower risks and uncertainties via offering guarantees and insurance policies to facilitate international exchanges. Governments aim at providing foreign traders with necessary funds as well as emphasizing the enhanced the competitive powers of domestic agents and corporations to flex muscles at international trading via establishing specialized export-import banks. However, there are some non-banking institutions that fund imports and exports if economic establishments fail to secure the financial services of banks and governments to advance their trades. In general, a collection of private and public institutions such as banks, insurance companies and agents tend to offer financial services for exporting and importing enterprises. In sum, the researches indicate that a developed financial sector could greatly contribute to the growth of commercial sector in general and exports in particular. Considering the importance of non-petroleum exports in state and country-wide macro plans, the existence of an appropriate, facilitator financial sector is an important requirement of this drive. As already observed and according to the results, financing the exporting companies could greatly contribute to economic development of a country via developing and encouraging international trades and as a result employment.

The liquidity-to-GDP is a financial indicator which is also known as financial deepening. In monetary and banking terminology, financial deepening is synonymous with financial assets and has been defined as "a state in which financial assets grow faster than non-financial ones. As a result, the financial to non-financial assets will grow (Alvarez et al, 2012).

Dushimumukiza (2010) divides financial development into two components of financial deepening and financial sophistication. Financial deepening is employed as the measurement scale of financial intermediaries. McKinnon (1973), Shaw (1973) and Levine and King (1993) consider *financial deepening* as a process of liberating banks from governmental control, decreasing or removal of credit rationing and commercialization of those financial factors that hinder economic growth. On the other hand, financial sophistication has been defined as the creation and promotion of new financial tools and technologies, institutions and markets. Tofanu (2002) has used many proxies to measure the levels of financial deepening. Subject to the financial development level

of a given country, some researchers use liquidity (M1, M2, M3) to GDP ratio as the proxy of financial deepening. This has been inspired by Levine (1997) which has defined financial deepening as the ratio of debts or financial liabilities to GDP. Along these lines, Hassan and Jung-Suk (2007) use M3 to GDP as the proxy of financial deepening. They argue that other liquidities such as M1 and M2 are very poor in countries with less sophisticated economies. Liquidity to GDP ratio is rather high in these countries because the money is used as a value reserve in absence of more attractive alternatives. Some other researchers (Loayza et al, 2000) prefer money supply or liquidity with broad definition (M2) ratio to GDP which has been subject to criticism. This is because deepened financial markets in countries with sophisticated capital markets may decrease M2 ratio to GDP (Sakatua, 2008).

The exports supply function has been specified according to Kohli's theory (1978) about maximizing the profit of agents. Kohli believes that supply decisions are made to maximize the profits of agents, an objective is fulfilled considering the fixed costs. As a result, exports supplies are directly influenced by fluctuations of price and production capacity. It should be noted that the pricing of inputs is inversely related to exports supplies (Tayyebi, 2001). In major petroleum exporting countries, exports are divided into two categories of petroleum and non-petroleum goods. Concerning the oil exports, it could be assumed that oil prices and behaviors behave exogenously or at least follow short-term policies. The volume of oil exports is determined based on supply condition such as the life of reserves and investment and production rates while the prices are negotiated by governments (Khan, 1974). Economist such as Kincaid (1984) in Indonesia and Pesaran (1984, 1990) and Lazare (1997) have placed exports in oil exporting economies in two categories of petroleum and non-petroleum components.

There have been numerous theoretical and experimental researches about how financial intermediaries and economic growth are related. This issue was first explored theoretically about one and a half centuries ago. Researchers such as Goldsmith (1969), Bagat (1873), King and Levin (1993) et al have addressed this thoroughly investigate this field. However, few researches have been carried out about the how this phenomenon is related to the trades of a given country. The conducted research has primarily focused on a number of countries in aggregate or a collection of industries or corporations. For example, Hur et al (2006, 42 countries and industries), Beck (2002, 65 countries and 36 industries) and Manuel and Asp Spatarino (2009, on corporations) (Jahanshad and Shaebani, 2016). Some studies such as Beck (2002, 2003), Svaleryd and Vlachos (2005), Joe and Way (2005), Wayne (2005) Becker and Greenberg (2005), Riberio de Lucinda (2003) have looked into the effects on financial development on international trades. They have found out that the different levels of financial development bring about technological differences and availability of agents which poses itself as the source of relative advantages and specialization of international trades. Some researchers suggest that financial development and trades have indirect relations. For instance, Kletzer and Bardhan (1978) believe that countries with relatively more developed financial sectors have a relative advantage in industries and sectors relying on external financing.

Beck (2002) believes in channeling the savings into the private sector and consequently pushing the economy toward specialization and economies of scale which promote the development of the modern theory of trades.

As we will see, the type of the causal relation between real and financial sectors is a source of debate among researchers. Regardless of development of what part initiates changes in other parts, the research reveals a significant relationship between real parts such as financial sector and exports. Therefore, establishing the relationship of these two sectors could play a big role in economic policy-making to kick start the economic development. Considering the differences of provinces regarding the financial development and the growth of the external financing, studying this issue may help policymakers and economic planners choose the most appropriate strategy to promote non-petroleum exports of every province (Kavand & Hassanvand, 2013).

III. Research Methodology

Research methodology is a set of rules, instrument and verified, systematic ways of studying the facts, decoding the unknowns and finding solutions. Research methodology can be applied, fundamental or scientific based on the research objectives. This study belongs to the category of applied research. The applied research intends to gather the adequate knowledge for supplying tools in order to meet a given demand. In addition, this type of research aims at discovering new knowledge that seeks a special application for a process in reality. In exact wording, an applied research is an effort to answer a scientific problem found in the real world (Khaki, 2004). The research results could be useful for a wide range of activists such as managers, shareholders, investors, creditors, researchers and developers of standards.

Researches could be prospective or retrospective in respect to the time dimension. In general, if the collected data concern the past events, it is called retrospective which covers the present research.

Researches could be historical, descriptive, correlative and experimental.

Descriptive research covers a set of methods that attempt to set forth the circumstances of the studied phenomenon.

Correlative researches are those researches that intend to explain the relationship between the variables via correlation coefficients. This type of research primarily attempts to find the type, size and magnitude of the relations between one or more variables (Sarmad et al, 2011). Considering these categories, this research is descriptive-correlative.

In addition, this is a quantitative research based on the characteristics of the analyzed data. Researchers in this type of research asks completely defined questions, extracts some information from the samples, conduct statistical analyses of data. It should be note that this type of research is completely objective or unbiased.

3.1 The Conceptual Model of the Research

Sometimes a variable is at 2 levels during inter-variable analyses (dummy or virtual). For example, the dependent variable may be the participation or non-participation of an individual in a program. Here, a linear probability model (Logit or Probit) must be used for data analyses. There are some issues with linear probability models:

1. Abnormal distribution
2. Dispersion heterogeneity of variances of distributions
3. Improbability of occurrence of Y between 0 and 1
4. Suspicious R² volume as a criterion for good fitting

Linear probability models are not logically attractive because they assume that the probability of Y=1 (the occurrence of an attribute in the dependent variable) is linearly related to X i.e. the fixed externality is proved. This is excessively ideal in some cases.

Therefore, a probability model with the following characteristics is required:

1. P_i increases are tied to increases in X, yet within the range of 0-1
2. A non-linear relation between X_i and P_i

Logit linear logarithm analysis process addresses the relations between one or more dependent variables and multiple independent variables. Dependent variable is always categorical while independent variables may be categorical or not in this analyses. Other independent variables such as slack variables may be categorical. However, not all the levels of a variable will be examined here. Instead, the weighted means of variable in the respective box will be considered and then Logit logarithm of dependent variables is used as the linear combination of variables. This method uses Newman-Raphson algorithm to estimate the parameters of Logit linear logarithm models. Probability model is a technique that allows the estimation of the probability of occurrence or default of an event.

Similar to linear logarithm models and Probit, Logit model is a specific kind of general linear model which includes regression and ANOVA models and has been presented to perform better on dichotomy and categorical variables. Logit model is similar to linear logarithm model but it covers one or more categorical dependent variables.

3.2 Research Hypothesis

The following hypothesis has been developed to analyze the impacts of financial development on probability of exports by firms listed in Tehran Stocks Exchange:

Financial development has impacts on probability of exports by firms listed in Tehran Stocks Exchange

3.3 Research Variables

Dependent variable:

A virtual 0 and 1. 1 in case of exporting by a company in a given year and 0 if otherwise

Independent Variable:

The Financial Development Indicator

The capital adequacy ratio indicator which is derived from the base capital ratio to risky assets (Sepehr Doost and Aeiny, 2013).

Employment, efficiency ratio, liquidity ratio

Control Variables:

Debt ratio, Market to Book Value Ratio, Profitability Indicator

3.4 Statistical Sample and Population

The statistical population includes all the elements and individuals on a geographical scale (global or regional) that share one or more characteristics (Hafez Nia & Sarmad). The statistical population in this

research covers all the companies listed in Tehran Stock Exchange. The statistical sample is a limited number portion of the statistical population which expresses the predominant characteristic of that population (Azar & Momeni, 2010). This research uses systematic removal method to select a sample that best represents the target population. For this, five conditions have been considered as the inclusion criteria. It should be noted that as the information of a former period is required, the research time interval has been extended to the year 2009.

1. The firm must have been listed in TSE before 2009 and has been active up to the March 2015
2. The selected firms may not belong to holding firms, insurance companies, leasing firms, banks, investment and financial institutions due to remarkable differences between the aforementioned entities and manufacturing and trade companies
3. The end of each fiscal year must be the last month in Iranian calendar (21st February to 20th March of each year) with no changes in the fiscal years of this period
4. The target firms must run consistent operations and transact their shares during the study period
5. Availability of the required data and information during the study time period

The required information about the literature and the conceptual framework is collected from library resources, science bases and articles (by Iranian or foreign-based researchers). The required data will be manually extracted from the financial statements of the firms, information banks of Stock Exchange Organization (www.rdis.ir) and TSE Technology Management Company, information banks of Rahavard Novin Software and reports and notices published on Codal Network (www.codal.ir).

3.5 Data Analysis

Multi-variate linear regression model and panel data statistical method have been employed to test the data. First panel data method and associated tests are described. Then significance tests of the whole model and independent variables are explained. Finally and after describing the tests of classic regression assumptions, how acceptance or rejection of the research hypothesis is decided will be presented. Eviews and Microsoft Excel have been used for analyzing the data.

IV. Research Findings

4.1 Descriptive Data Analysis

Before conducting the data analysis and for a better understanding of the study population and closer examination of the research variables, data description is a requirement. It is sometimes used to identify the ruling pattern and serves a base to explain the relations between the research variables (Khorshidi and Ghorayshi, 2003, 254).

Descriptive statistics of this research are displayed in the table below.

Table 1. Descriptive Statistics

Variable	Exports	Capital Adequacy Proportion	Profitability Indicator
Symbol	EXP	KZ	PRO
Mean	0.482955	0.180322	0.134091
Median	0.000000	0.089052	0.090374
Max	1.000000	1.690439	0.893744
Min	0.000000	0.029382	-0.004294
SD	0.500183	0.483921	0.366175
Skewness	0.068221	4.730546	0.175484
Kurtosis	1.004654	2.182492	2.952087

TABLE:2 Descriptive Statistics

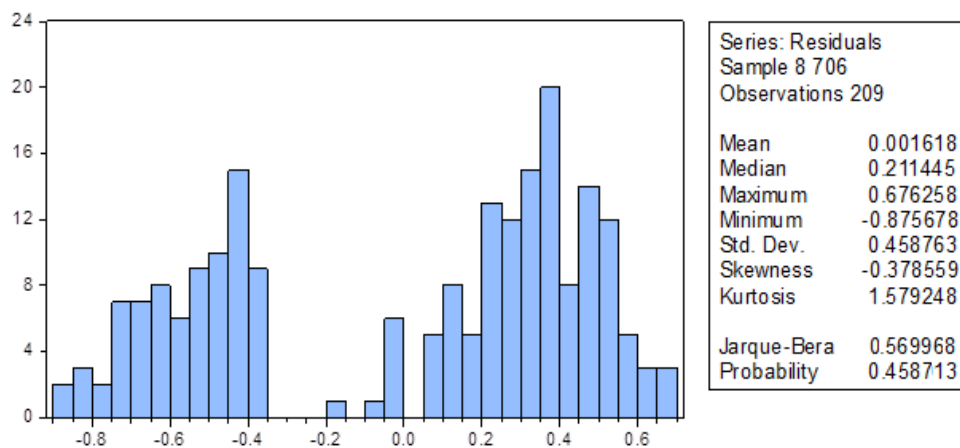
Variable	Employment	Efficiency Ratio	Liquidity Ratio	Debt Ratio	Market to Book Value Ratio
Symbol	EMP	EFF	M	DEB	MBV
Mean	0.229403	0.750495	1.284351	0.739536	1.064247
Median	0.179038	0.291943	0.044506	0.670596	1.000182
Max	0.342093	0.959429	3.665099	3.640781	1.98977
Min	0.089292	0.032392	0.380972	0.000000	0.07128
SD	2.095823	1.093846	0.980644	0.495954	5.374496
Skewness	3.138229	2.340472	2.034924	3.345447	0.209279
Kurtosis	2.034823	3.980473	2.493924	18.14056	66.09144

Mean as the primary indicator of the table shows the balance point and gravity center of the distribution and thus a good indicator of the data centrality. For example, the mean of capital adequacy ratio is 0.180322 that shows most data are centered on this point. Another central indicator is median that describes the population status. As the table displays, the median of capital adequacy ratio is 0.089052 which indicates that half the data

of the firm's variable are less and half are more than this figure. Generally speaking, dispersion parameters are a criterion for determining the dispersion of parameters both among the parameters themselves and between the parameters and the mean. Standard deviation is one of the most important parameters of this variable. The SD of capital adequacy ratio is 0.483921. Skewness is the measure of the asymmetry of frequency-distribution curve. If skewness is zero, the population is completely symmetric while if it is positive the tail on the population is longer on the right side and if it negative, the tail on the population is longer on the left side. For example, the skewness coefficient of the capital adequacy ratio is 4.730546 which mean that the skewness is to the right and has a deviation of 4.73 from the center of symmetry. Kurtosis is a measure of the "tailedness" of the probability distribution of a real-valued random variable. If it is 3, the frequency-distribution curve is in a normal, balanced state while if it is more than 3 the curve is leptokurtic or sharp and if below 3 the curve is platykurtic or "flat-topped". The kurtosis of capital adequacy ratio is 2.182492 which is flatter than normal distribution.

4.2 Normality Test

Jarque- Bera statistic is used to test the normality of the residuals. The closer this statistic to zero, the higher the probability of the significance level greater than 0.05 and thus the null hypothesis which suggests the normality of the data will not be disproved. The findings indicate the normality of research residuals.



Graph1. The Normality Test of Residuals

4.3 The Durability Test of Research Variables

The durability of all the variables in estimates must be tested before estimating the pattern. This is because durability of variables results into false regression about both time series data and panel data. The durability of the research variables of the companies listed in TSE has been examined the results of which verify the durability of the variables.

4.4 F Limer Test

Although there is no Hausman test is Logistic method, F Limer test has been already conducted to identify panel data. Panel data are verified as the probability is lower than 5%.

Table 3. The Durability Results of Variables

Variable	Symbol	Levin-Lin-Chu Test	Probability	Result
Exports	EXP	-9.38682	0.0000	I (0)
Capital Adequacy Ratio	CAP	-25.0997	0.0000	I (0)
Profitability Indicator	PRO	-22.1514	0.0000	I (0)
Employment	EMP	-112.293	0.0000	I (0)
Efficiency Ratio	EFF	-35.1588	0.0000	I (0)
Liquidity Ratio	M	-6.35598	0.0000	I (0)
Debt Ratio	Debt Ratio	-7.09453	0.0000	I (0)
Market to Book Value Ratio	MBV	-11.43032	0.0000	I (0)

Table 4. F test

Statistic	Probability	Result
3.70765	0.0000	Verification of Panel Data Method

Since the dependent variable is 0 and 1, Logistic method has been used the results of which are presented in Table 4.

4.5. Pattern Estimation

As the dependent variable is close to 0 and 1, Logistic method has been employed, the results of which are presented in Table 5.

Table 5. The estimation results of Logistics Combined Regression from 2009 to 2015

Variable	Symbol	Coefficient	SD	Z statistic	Significance Coefficient
y-intercept	C	-1.241318	1.142746	-1.086259	0.2774
Capital Adequacy Ratio	CAP	0.238166	0.042611	5.589279	0.0000
Profitability Indicator	PRO	0.051753	0.020933	2.472291	0.0367
Employment	EMP	0.211627	0.081615	2.592982	0.0329
Efficiency Ratio	EFF	0.071675	0.023195	3.090100	0.0070
Liquidity Ratio	M	0.406612	0.001504	4.397217	0.0000
Debt Ratio	Debt Ratio	-0.930238	0.458398	-2.029324	0.0403
Market to Book Value Ratio	MBV	-0.281302	0.055223	-5.093883	0.0000
Determinant Coefficient: 0.84					

The objective determinant coefficient and level of influence are equal to 0.84 as Logistic method has been used.

The results show that the impacts of the independent indicator of capital adequacy proportions the indicator of financial development which is computed from the proportion of base capital to risky assets on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant at 0. 0.238166. This indicates that increased capital adequacy which is a result of higher capital base or lowered risky assets improves the investment and production and as a result enhances the probability of exports in the statistical research sample.

In addition, the results show that the impacts of the independent indicator of job creation which is computed from the employment rates and operational costs of staff salaries on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant at 0.211627. This indicates that enlarging the workforce improves the investment and production and as a result enhances the probability of exports in the statistical research sample.

Also, the results show that the impacts of the independent indicator of efficiency ratio on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant at 0.071675. This indicates that increased efficiency improves the investment and production as well as the production space and as a result enhances the probability of exports in the statistical research sample.

The results show that the impacts of the independent indicator of liquidity ratio on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant at 0.406612. This indicates that increased liquidity ratio improves the investment and production as well as the production space and as a result enhances the probability of exports in the statistical research sample.

In addition, the results show that the impacts of the control variable of debt ratio on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is negative and significant at 0.930238. This indicates that increased debt ratio raises the liquidity and bankruptcy risks which in turn lowers the demands for shares of a given company and consequently decreases the investment, production and the production space. These factors decrease the probability of exports in the statistical research sample.

Also, the results show that the impacts of the control variable of market to book value on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is negative and significant at 0.281302. This indicates that deepening the gap between market and book values raises the liquidity and bankruptcy risks which in turn lowers the demands for shares of a given

company and consequently decreases the investment, production and the production space. These factors decrease the probability of exports in the statistical research sample.

The results show that the impacts of the independent variable of profitability indicator on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant at 0.051753. This indicates that increased profitability lowers the liquidity risks and improves the investment and production as well as the production space and as a result enhances the probability of exports in the statistical research sample.

4.6. Residuals Autocorrelation Test

BG test was conducted to check the occurrence of autocorrelation in the values of error correction pattern. Null hypothesis and its alternative in this research are as follows:

H₀: No autocorrelation exists among the values

H₁: Autocorrelation exists among the values

Table 6. The Autocorrelation Test of Residuals

Null hypothesis and its alternative	p-value	Obs*R Statistic squared	F-statistic	Result
Acceptance of null hypothesis (no autocorrelation)	0.8519	0.309434	0.160364	H ₀ : No autocorrelation H ₁ : Autocorrelation

According to the results and considering the p-value, the value of probability is larger than 5% and thus the null hypothesis is accepted, i.e. the existence of autocorrelation among the error values is disproved.

4.7. Residuals Equality Test

ARCH LM test was carried out to examine the occurrence of equality of variance among the values of error correction pattern. Null hypothesis and its alternative in this research are as follows:

H₀: Variances of error values are equal

H₁: Variances of error values are not equal

Table 7. The Equality Test of Residuals

Null hypothesis and its alternative	p-value	Obs*R Statistic squared	F-statistic	Result
Acceptance of null hypothesis (equality of variances)	0.9720	0.001243	0.001238	H ₀ : equality of variances H ₁ : inequality of variances

According to the results and considering the p-value, the value of probability is larger than 5% and thus the null hypothesis is accepted, i.e. error values are equal in variance.

4.8. Testing the Research Hypothesis

Research Hypothesis:

Financial Development impacts the probability of exports by companies listed in Tehran Stock Exchange (TSE)

According to the results of Table 4, The results show that the impacts of the independent indicator of capital adequacy proportion as the indicator of financial development which is computed from the proportion of base capital to risky assets on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant at 0. 0.238166. This indicates that increased capital adequacy which is a result of higher capital base or lowered risky assets improves the investment and production and as a result enhances the probability of exports in the statistical research sample.

V. Conclusions

The results show that the impacts of the independent indicator of job creation which is computed from the employment rates and operational costs of staff salaries on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant. This indicates that enlarging the workforce improves the investment and production and as a result enhances the probability of exports in the statistical research sample.

In addition, the results show that the impacts of the independent indicator of efficiency ratio on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant. This indicates that increased efficiency improves the investment

and production as well as the production space and as a result enhances the probability of exports in the statistical research sample.

Also, the results show that the impacts of the independent indicator of liquidity ratio on the virtual dependent indicator of 0 and 1 of export probability which would be 1 in case of export probability and 0 if proved otherwise is positive and significant. This indicates that increased liquidity ratio improves the investment and production as well as the production space and as a result enhances the probability of exports in the statistical research sample.

VI. Suggestions Based on Research Findings

Considering the positive, significant effects of capital adequacy indicator which is computed from the proportion of base capital to risky assets on the virtual dependent indicator of 0 and 1 of export prospect, the financial managers of the companies listed in STE are recommended to adopt policies that increase capital adequacy if they wish to enhance the probability of exports in their companies.

Considering the positive, significant effects of job creation indicator which is computed from the employment rates and operational costs of staff salaries on the virtual dependent indicator of 0 and 1 of export prospect, the financial managers of the companies listed in STE are recommended to adopt policies that are based on improving employment rates if they wish to enhance the probability of exports in their companies.

Considering the positive, significant effects of efficiency indicator on the virtual dependent indicator of 0 and 1 of export prospect, the financial managers of the companies listed in STE are recommended to adopt policies that are based on improving efficiency rates if they wish to enhance the probability of exports in their companies.

Considering the positive, significant effects of liquidity indicator on the virtual dependent indicator of 0 and 1 of export prospect, the financial managers of the companies listed in STE are recommended to adopt policies that are based on increasing the liquidity if they wish to enhance the probability of exports in their companies.

References

- [1]. Beck, T. (2003); "Financial Dependence and International Trade", *Review of International economics*; Vol.11, pp. 296-316.
- [2]. Dehmordeh, N and Shokri, Z. (2010). The impacts of financial development on income distribution in Iran. *Economic Researches and Policies*. No.54. pp.147-164
- [3]. Hur, Jung et al. (2006); "Finance and Trade: A Cross-Country Empirical Analysis on Impact of Financial Development and Asset Tangibility on International Trade" *World Development*; Vol. 34, No. 10, pp. 1741-1728.
- [4]. Jahanshad, A and Shaebani, D. (2015). The impacts of financing constraints on the relations between institutionalized investments and sensitivity of investment cash flows. No.27.Fall 2015. pp.39-56.
- [5]. Kashani Fegghi, M (2006). Completing the financial institutions of the country. Banking and Monetary Research Center. The Central Bank of Islamic Republic of Iran. Spring 2006.
- [6]. Kavand, A and Hassanvand, Dariush (2013). Studying the effects of financial development on non-petroleum supplies via application of ARDL model. The case of Iran. The quarterly of applied economic studies of Iran. The 2nd year. No.7. pp.173-195
- [7]. Khan, M.S. (1974); "Imports and Exports Demand in Developing countries", *IMF Staff Papers*; Vol. 21, pp. 678-693.
- [8]. King, Robert G. and Levine, Ross, (1993), *Financial Intermediation and Economic Development*, Colin Mayer and Xaviervives. London: Centre for Economic Policy Research, 89-156
- [9]. Levine, R. (2003), "Financ and Growth:Theory,Evidence and Mechanisms", *Journal of Economic Growth*, PP. 1-107.
- [10]. Tayyebi, S.K and Mesri Nezhad, SH. (2002). Studying the long and short-term interactive relations of inflation and non-petroleum supplies in Iran. *Economic Researches Magazine*. No. 61. pp. 1-23.

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