Financial Repression, Economic Growth and Development*

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Abstract

Economic growth and development of market, stock exchange and related variables are among components which influence on business, economic activities and management of society. Financial repression is among economic variables greatly influencing on financial market specifically capital market and economic growth and development; so that, this concept caused to publish financial growth and development theory and its role on economic growth and development by Mackinnon and Shaw in the year 1970 and 1973 and on this basis financial repression is regarded as set of policies with the goal of obtaining income from financial systems and using them for creating resource at specific sectors of economy. Therefore, goal of the present article is involving government on pricing and allocating loans through repressing rate of real interest. Methodology of this research is historical method by studying scientific and theoretical basis with library studying by using data collected from Tehran stock exchange. Results of this study show that determining relationship of financial repression and economic growth and development and criterion for measuring financial repression is very important. There is no reverse significant relationship between indices of financial repression i.e. inflation and market indices i.e. industry index, financial index, total index and relationship of both variables is not equal.

Keywords: Financial Repression, Economic Growth & Development, Financial Market, Inflation Rate

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Introduction

Growth, development, stock exchange and related variables are among components influencing business, economic activities and management of society. Role and effect of these factors is revealed at welfare, perfection and obtaining strategic goals of countries and according to complexities of effective environment on third millennium, this process has ever-growing rate. Influence of factors including: changes of technology (property of present age as digital age), globalization (integration of processes, quick displacement of capital, globalization and competition) requirements of addressees (at institute, different requirement of customer in society, diverse demand of citizens, customer's rights and citizenship rights) on market is undeniable. Financial markets are among institutes originated from a foresaid components and market having logical performance, systematic approach for exchanges and its principal goal is transferring money among different groups and plays key role for management of environmental variables, creating wealth and value for accumulating capital and economic growth and development.

Heybati, Nikomaram and RahnamayRoodposhti (2007) studied performance of financial market within systematic financial system and concluded that such market has a system consisting of elements including: savers, applicants of money and loan by fulfilling process of cash flow with different applications in the way of increasing economic growth and development through accumulating capital. Therefore, it is regarded as official market and in spite of not establishing within literature and legal basis in accordance with official rules and regulations, it has systematic concept; otherwise, such market does not have durability and may not continue its activity. Capital market is among financial markets introduced as stock exchange in correspondences. This market is defined as center of exchanging securities (financial assets), official market consisting of organization effective on economic growth and development; in which, its most important duty is supplying desired financial resource for applicants, preparing investment opportunities for savers with the goal of accumulating capital and wealth. Review of scientific literature prepares evidences that role and performance of stock market for obtaining macro goals and strategic policies of Iran is undeniable and is continuously increasing. Evaluating performance of stock exchange on economy is among most important issues in this field which faces with dynamic exchange with variables and economic parameters including: influencing on financial repression. It addition, this dynamic exchange is also available in other economic phenomena including: inflation, legal reservoirs, credit of banks and monetary institutes, import and export, price of oil, changes in monetary and financial reserves. Understanding these exchanges has great benefit which influences on obtaining goals of capital market and consequently financial markets. Paying attention to these exchanges reveals necessity of scientific research to offer objective evidences in relation to role and effect of capital market on economy and economic institutes. Objective performance of capital market on defined indices of this market is revealed with economic phenomena. Indices are regarded as proxy that for better recognition of institute's performance. Paying attention to indices is very important and necessary with respect to all subjects, social and economic phenomena. Indices of capital market are not excluded from this rule; therefore, it is possible to study effect of economic variables and phenomena through indices capital market. Goal of this research is finding relationship between financial repression and economic growth and development and to evaluate effect of financial repression on capital market and economic growth and development based on understanding exchange of capital market and economy.

2- Literature Review& Research Background

2-1- Literature Review

Taghavi (2009) based on research of Gupta (2005) introduced financial repression as a phenomena consisting of 4 components; in which, each component introduces part of capital market, its indices through economic growth and development such as: imposing legal reserve and liquidity for compensating budget shortage of government with low cost. If financial system under management of government determines limit of interest rate, credit is mandatory allocated and produces financial repression and due to dynamic exchange of interest rate and credits with stock market, it is expected to influence indices of capital market.

Theoretical basics of financial repression deals with publishing theory of financial growth and development, its role on economic growth and development independently that is mentioned at 2 books including: Mackinnon and Shaw in the years 1970 and 1973 and is regarded as topic greatly interested by economists in less developed countries; so that, McKinnon and Mathieson (1981) refer to term of financial repression as set of policies with the goal of obtaining income from financial system and using them for establishing specific parts of economy and involvement of government on pricing and allocating loan through repression of real interest rate.

Peterson &Rejan (1994) referred to terms of financial repression as friction in capital market related to cash available by institutes with current net value for investment opportunities. In fact, performance of managers in small institutes is not able to borrow cash from acceptable interest rate. According to researches of Gupta (2005) the term financial repression consists of 3 components including: firstly, banking system have to maintain governmental securities and money due to high level of liquidity and regulations of legal reserves, secondly, not supporting from developing stock market and private bonds, thirdly, banking system is described by limit of interest rate.

Li (2001) believes that obtaining to macroeconomics with high level of stability through financial repression is not gratuitous, especially when this financial repression happens during reforms period which prevents from allocating budget of banks to profitable investment projects. Main reason of this phenomenon is that government regards ever-growing deposit of banks as reasonable resources for meeting financial requirement. Therefore, instead of facing with available challenges in economic organization, government applies from its dominance over banks for offering reasonable loan to economic organizations.

He &Turvey (2009) defined financial repression as concept of controlling interests and believed that it is possible to displace capital between industries and regions for better understanding financial repression. In addition, decreased rate of real interest and low growth economy or economy with no growth are among instances of financial repression.

Bai& et al (1999) based on researches of Roubini&Sala-i-Martin (1995), McKinnon (1986), Shaw (1973) and McKinnon 1973 believed that financial repression refers to influence of government's policy with determining return asset rate of institutes which cause damage to economic development. They believe that financial repression is substitute for income tax to increase government's income. When effective rate of income tax is high, collecting income through mild financial repression is more reasonable than income tax. Therefore, financial repression is an implied financial status for saving. Within theoretical basics and related schools such as: Ronald McKinnon (1973) and Edward Shaw (1973) the issue of financial repression with respect to theoretical economy, plays key role for economic growth and development through allocating efficiency of capital and believed that historical experience of several developed countries show that, increasing competition at financial sector contradicts with interventions and enacting governmental rules. Level of government's intervention, enacting rules, monetary and financial policy making including: interest rate and enacting income tax are regarded as instances of financial repression. Singh (2008) affiliated financial repression to increasing or unsuitable controlling the financial sectors, so that this issue is available in economy of several advanced countries and increasing ratio of allocating money to real assets in comparison to financial assets for economy of advanced countries, reveal this issue. Gupta (2008) in the way of explaining theoretical basics of financial repression referred to role and effect of tax on financial repression and believes that economic environment under control of government including: customer, financial mediators, institutes, government and foreign sector are regarded as financial repression which introduces concentration and control of government over economy. McKinnon (1990) in his research upon recommendation of Development Bank of Asia believes that if government's tax or any other type of intervention on markets of inner capital is increased, economy is faced with financial repression. In fact, repressing monetary system of inner capital market creates incompatible results (contradictory) for quality and quantity of collecting real capital including:

A. Cash flow for offering loan through banking system is decreased and it is required to put more pressure for potential loan receivers for depending on supplying personal budget
B. Interest rate is different due to incomplete flow of offering bank loan on contractual basis
C. Process of supplying budget by companies and families is very poor. If real return of deposits is negative, institutes are not able to collect cash for separate investment which increases inflation of costs
D. Certainly supplying budget out of banking system is impossible and when institutes are within dangerous status of liquidity, they have high level of inflation and unstable. Powerful markets of stock and bonds of mediator companies and insurance requires monetary stability.
E. Entrance flow of foreign financial capital is non-generative and when market of inner capital is irregular and rate of foreign currency is unpredictable.

Dorn (2006) in relation to explaining financial repression believes that theoretically there is positive direct relationship between economic freedom, capital displacement, economic development and financial amendments and also there is positive reverse relationship between these variables and financial repression. Peterson Institute (2008) defined financial repression as negative and low real return rate of deposits and believe that financial repression has direct relationship with government's involvement on determining interest rate, reserves rate and level of paying loan to applicants. Key terms related to this issue refer to summary of policies for financial repression including:

1) Financial repression is defined as negative real return of deposits which is obvious with respect to families
2) Financial repression decreases cost of government for supporting low valued rate of foreign currency due to facing with cost of releasing interest rate
3) Financial repression decreases rate of loan; consequently, remained demand for bank loan and goals for controlling growth is increased
4) Financial repression prevents long term goals of commercial banking system of government and improves underground loans
5) Financial repression devaluates income of family and principal goal is transferring to growth path of government which depends on investment, net export and domestic consumption

Kletzer and Kohli (2001) believe that most of developing countries enact some regulations for domestic and international financial exchanges. Such regulations in addition to control inflation, create income for government. Conditional income refers to implied tax and specific right of government for changing challenge and financial release. Du, Lu and Tao (2008) while theoretical studying the issue of financial repression in the way of not accessing to official financial supply specifically banking loan, referred that this issue is based on regulations of governments which shows controls of government. In addition they study and compare partial importance of bank loans and trading credit for improving performance for growth of institute. Results of this study show that obtaining bank loan is more important than trading credit for improving performance and growth of institutes. Venkataramany and Miklovich (2010) referred to releasing and financial repression on theoretical basis and introduced factors, components and instances of financial repression including:

1) Controlling interest rate of deposits and loans
2) Controlling rate of foreign currency
3) Controlling capital flow
4) Directing credit to selective sector
5) Prevention from foreigner partner for attending at domestic stock market

2-2- Researches related to Financial Repression

Theoretical basics studied by library method and according to accessibility of scientific resources show that broad researches related to topic of financial repression have more relationship with subject of this research.

Gupta &Ziramba (2010) in their research studied relationship between bureaucracy, releasing and public policies based on heterogeneous growth model obtained from financial repression. Results of this research show that degree of increasing corruption originates from policies and decisions of government, improves heterogeneous growth due to financial repression of economy which results in underdeveloped economy and is accompanied with high degree of corruption and financial repression. In addition, these researchers studied relationship between great cost of pressure due to tax and financial repression based on heterogeneous growth model in the year 2009 and concluded that indirect tax increases costs of collecting tax and procedures of collecting tax is related with increases reserves of bank and finally collecting costs of direct tax is regarded as logical basics for financial repression.

Demetriades, James and Lee (2008) in their research with title of *termination of financial repression and analysis of countries for private investment* concluded that rate of global interest is considered as powerful factor for determining private investment; meanwhile, status of domestic prevention is not significant. Therefore, findings show that financial repression period in developing countries is terminating. Based on findings of this research, scholars recommend that it is required for studying investment on developing countries and paying more attention to global financial factors.

Gupta (2008) is among researchers having highest number of research in relation to financial repression including: currency substitution and financial repression as research report number 70 at

Pretoria university in South Africa. Results of research show that high rate of currency substitution increases required reserves. It is to be noted that results of this research are significantly depend on how consumer evaluates suitability function in relation to domestic and foreign application and size of government.

Singh (2008) carried out applied research at international trade and development center at faculty of international studies of JavaherLalNahro university of India with title of financial repression, bank deposit, real asset and black money. This researcher in addition to explaining theoretical basics of financial repression, introduced indices of evaluating and testing. Results of study showed that returning deposits decreases financial repression; consequently, investment on asset is real. Although role of blocked monetary resources on real asset generally occurs at secondary market, making investment on initial market may increase; therefore, if effect of financial repression is higher than decreasing blocked monetary resources, financial development happens. According to results of executing this model, upon increase in selling liquidity of stock and selling real strategic assets under asymmetrical information, required evidence is offered, of course some conditions and prices are irrelevant to strategic transaction.

Bai, and et al (1999) studied financial repression and optimum system of receiving tax, role and effect of financial repression due to receiving tax on saving and concluded that when effective rate of income tax is uneven, income of government in developing countries is more effective than income tax through financial repression.

Researches including: Koo, Haslag (1996) upon recommendation of Federal Bank of Reserve Dallas of U.S.A carried out research in relation to financial repression, financial development and economic growth and studied empirical relationship between financial repression, financial growthand development and insisted on 2 principal components including:

1) What is empirical relationship between financial repression, growth and revising for financial development?
2) Is there any empirical relationship between financial repression and financial development?

Among 2 variables of financial repression, 2 items were selected including: inflation rate and ratio of legal reserves. Results of research show that inflation is not systematically related with growth. Inflation rate of statistics is neither enough for financial repression nor financial development. Ratio of legal reserves is systematically related with growth. Countries with high ratio of reserves have more slow growth of return and capital in comparison to countries with lower legal reserves. Inflation and legal reserves is greatly correlated with size of official financial mediator sector related to GDP, importance of banks related to central bank, percentage of allocated credit to private institutes and ratio of credit of issuers for private institute to GDP.

McKinnon (1990) upon recommendation of Asian Development Bank carried out research with title of financial repression and capital productivity: empirical study for interest rate and rate of foreign currency.This researcher offered the issue of financial repression in 1970's. In addition to benefiting from collected data in Japan, China, Taiwan related to indices of evaluating financial repression, he concluded that financial repression decreases capital productivity through controlling government, applying interest rate, foreign currency rate, determining volume of money and its exchange.

3- Research Hypothesis:

Principal hypothesis:

There is significant reverse relationship between financial repression and indices of price of capital market

Subsidiary hypothesis:

1) There is significant reverse relationship between interest rate and TEPIX.
2) There is significant reverse relationship between interest rate and financial index.
3) There is significant reverse relationship between interest rate and industrial index.

4) Research Methodology & Variables:

Research methodology is descriptive-survey and correlation and with respect to goal, this research fall within applied research and with respect to direction this research fall within post-event research. Theoretical basics of research were collected by using library method and related data were collected from financial report available in achieve of Tehran stock exchange and central bank of Iran by using library method. In order to analyze data, first of all information related to economic index and capital market were measured by partial index and then it was used from Pearson correlation test, variance test, regression analysis and for being certain from properties of regression test including: normality, linearity, independence in errors of model, statics of variables of research by using Eviews6 software with significance error of 5% for either accepting or rejecting research hypothesis. Place domain of this research is all companies listed in Tehran stock exchange from 2002 until 2010 for evaluating relations of macroeconomics indices and indices for price of capital market. Several researches were carried out in the way of studying financial repression which introduce related indices for recognizing variables of research including:

Research of He and Turvey (2009) in relation to financial repression based on McKinnon and Shav linear regression model and by using saving equation which positively show reaction against real interest rate of growth and investment equation negatively studied rate of real effective interest of loan and positively studied real rate of growth.

$$S_{growth} = \alpha_0 + \alpha_1 r + \alpha_2 r^2 + \alpha_3 g_{inc} + \xi_1$$
$$I_{growth} = \beta_0 + \beta_1 i + \beta_2 g_{ins} + \beta_3 i g_{inc} + \xi_2$$

Du, Lu and Tao (2008) studied and introduced variables of evaluating financial repression as index of evaluating this phenomenon. Independent variables are including: bank loan (ratio of bank loan to total assets) trading credits (percentage of purchased resources with loan for 2 principal resources of institute). Dependant variables are including: performance and growth of institute. In order to measure performance of institute, it is used from productivity of workforce (Total output logarithm for each worker), ROA (ratio of operational profit to total assets) and in order to measure growth of institute it is used from recruitment growth (change logarithm of recruitment within an specific year) repeated investment rate (share of net profit on repeated investment) within an specific year. On this basis the regression model of this research is:

$$y_{ir} = \alpha + \beta.\text{bank loans} + \gamma.\mathit{Tradecredit} + \eta Z_{ir} + \varepsilon_{ir}$$

y_{ir}: performance or growth of i company
Z_{ir}: control variable
ε_{ir}: model error

Research of Hohli and Kletzer (2001) studied different indices for assessing financial repression; in which, the most important indices are including: consuming products of family, supplying workforce of family, production level of institute, banking indices, government's involvement, capital displacement, international commerce, floating exchange rate, foreign currency rate and its policies, policies of displacing exchange rate, management of exchange rate, rate of receiving loan from abroad, ratio of bank credits and government's costs to GDP, ratio and income obtained from central government to GDP, ratio of income obtained from debit of public sector to GDP, ratio of debit at domestic sector and bank loans offered to government toward GDP.

Research of Haslag and Koo(1999) studied indices including: inflation rate, legal reserves rate, ratio of cash debit of financial system to GDP, ratio of legal money deposit to bank money deposit, additional domestic asset of central bank, claiming ratio of non-financial sector to total domestic credits, ratio of non-financial claiming to GDP for financial repression.

Research of McKinnon (1990) studied different indices including: rate of real interest, rate of GDP growth, ratio of M3 to GDP, investment ratio to GDP, ratio of changes in GDP to investment changes, ratio of M3 changes to real investment, inflation rate, fluctuation of inflation for financial repression.

Taghavi (2009) believes that financial repression consists of 4 components including:

1) Banking system should keep governmental bonds and money for imposing ratio of legal reserves and liquidity ratio by government and under this case, government compensate its shortage of budget through low cost of financial supply.
2) Whereas income of government only through receiving tax is not enough; therefore, government have to issue bonds which decreases rate

of selling bonds of private sector and stock of companies

3) Banking system is faced with limitation for interest rate to prevent from competition with government for financial supply by private sector. Limit of interest rate, mandatory allocation of credit and high legal reserves are among factors creating financial repression
4) Generally economies destroying domestic financial sector are rate of foreign currency and capital account for prohibiting all exchanges. According to this research, ratio of legal reserve, ratio of liquidity for government, publishing bonds, rate of tax, rate of interest, mandatory allocation of credit, rate of foreign currency and capital account are among indices of financial repression.

5- Research Findings:

Findings of present research were studied at descriptive and inferential sector; in which, results of table 1 and 2 are inferential results i.e. results of hypothesis test are offered and analyzed in table 3.

Results of descriptive test including: diversion of skewness and tension of variable that is greater than absolute value of 1.96 shows that distribution of asymmetric data is non-normal.

Results of K-S and J-b test show that distribution research variables are normal. Results of DF test show that durability of variable by taking differential for one time is normal and remained value for model of 1 and 3 i.e. industry index and total index is not normal.

Table 1- descriptive inflation Rate Indicator Results

Variable	N	Mean	Std. Deviation	Variance	Skewness	kurtosis	Standard Error of	
							Skewness	kurtosis
Inflation Rate	37	15.476	3.976	15.806	1.772	1.020	2.631	2.336

Table 2- Regression classic Hypothesis tests results

Regression Hypothesis	Test	result					
		Z statistic			Prob		
Normality	Kolmogorov-smirnov	0.749			0.628		
	Jarque-Bera	8.8514			0.01197		
Stationarity	Augmented Dickey-Fuller	ADF=-5.41			-3.54		
Residual Normality test	Jarque-Bera	1	2	3	1	2	3
		7.58	5.2	11.3	0.022	0.074	0.003

Table 3- Regression test for influence of inflation on capital market Indexes (hypothesis test)

Variable / Results	Industial Index		Financial Index		TEPIX	
	t-statistic	Prob	t-statistic	Prob	t-statistic	Prob
Inflation Rate	0.144	0.8866	-1.6609	0.1087	-0.059	0.9531
R-Squared	0.9817		0.955		0.987	

Results of subsidiary research hypothesis show that, firstly, financial repression index i.e. inflation rate does not have reverse significant relationship with index of financial industry and total index and this hypothesis is not confirmed, secondly, results of discern coefficient of this research about relationship between index of financial repression with industry index, financial index and total index shows intensity of dependency which explains more than 95% changes of indices due to changing inflation rate and reveals that indices of capital market are able to justify index of financial repression.

Therefore results of analyzing regression of variables shows lack of relationship between research variables i.e. change rate does not have reverse significant effect on capital market of bonds.

6- Conclusion and Discussion

Recognizing financial repression is regarded as effective phenomena on financial development and economic growth and development and has direct dependency to its comprehensive explanation. According to results of research, it is concluded that inflation rate does not have reverse significant relationship with indices of capital market including: index of industry, financial index, total index i.e. upon changing inflation rate it is expected that either increase of decrease at industry index, financial index and total index is not confirmed. In addition, results of research show that several researchers related to theoretical, scientific issues is studied by financial and economic thinkers of different countries. Most important research dealing with topic of financial repression is McKinnon & Shaw (1973) and Gupta (2005).

According to findings of Gupta &Ziramta (2010), Demetriades James & Lee (2008), Singh Bai et al (2008), Koo &Haslag (1996) and McKinnon (1990) show that firstly, indices for measuring financial repression are recognized and used, secondly, there is significant positive relationship between financial repression i.e. government’s involvement and lack of economic growth and development i.e. upon increasing financial repression, level of economic growth and development is more sluggish, so that financial repression prevents from financial development. It is recommended that activists of market, capital and policy makers of economic affairs pay more attention to negative effect of financial repression and economic growth and development and also planners should carefully consider effective variables on releasing economy and executing principle 44 of the constitution. It is recommended for future researcher to use from indices offered in this study for their future researches and also to compare and analyze their results with findings of this research.

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