Impact of Economic Factors on the Stock Prices at Amman Stock Market (1992-2010)

Dr. Ghazi F. Momani
Associate Professor, Department of Financial Sciences
The Arab Academy for Banking & Financial Sciences
P.O.Box 13190, Amman 11942, Jordan
Tel: 96-29-7655-5292 E-mail: drghazim@yahoo.com

Dr. Majed A. Alsharari
Associate Professor, Department of Accounting
Balqaa' Applied University, Faculty of Planning & Management
P.O. Box 1195, Amman, Tareq 11947, Jordan
Tel: 96-27-7720-6638 E-mail: majedsharay@hotmail.com

Received: September 5, 2011 Accepted: October 8, 2011 Published: January 1, 2012
doi:10.5539/ijef.v4n1p151 URL: http://dx.doi.org/10.5539/ijef.v4n1p151

Abstract

This study aims to examine the effect of macroeconomic factors (interest rate, national product, money supply and industrial product index) on stock prices at Amman Stock Exchange, and to measure the impact of these factors on the general index of prices and the index for each sector (bank, industrial, insurance and services), for the time period from 1992 to 2010.

The results were that the factors mentioned above combined with a significant statistical impact on share prices, but when we examine each factor with the index (general, bank, industrial, insurance and services) we found that the interest rate has a statistically significant impact on the prices of the shares in Amman Financial Market, and the effect was negative on behalf of the index and the sectors index. The other variable, which had a significant impact, was the production index where its impact was negative for general and sectors index except the insurance sector, which had a positive impact.

Keywords: Gross National Product, Money supply, Industrial product index, Interest rate

1. Introduction

The financial markets play an important role in the economy, it is the connecting point between the individuals and organization in regard with gathering the saving and converting them to investments participate in the economic development for states, therefore they are a solid bas for the national economy.

The absence of a regulated market for negotiating the shares of the partnership companies or government bonds led to think seriously in establishing a market for securities. The consecutive development plans called for establishing such market. To fulfill the central bank of Jordan conducted studies about establishing this market and to show the need of it in cooperation with the International Finance Corporation (IFC).

As a result of this, Amman Exchange has been established according to the temporary law number (31) for the year 1976 to manage the market, which was established by the cabinet's decision dated 16/3/1977. Now Amman stock exchange is run by a board of directors consisted of seven members and an executive manager who handles the daily works and follow up the exchange (Jordanian Sharing company's guide, 1980)

The Macro economic factors (Gross National Product (GDP), money supply (MS), the interest rate on long-term deposits (IN) and industrial production index (PI) have an obvious impact on the financial markets, but this impact at the advanced countries differs from that in developing countries, where the non economic factors (the political and psychological) play the same role in the financial international markets.

Therefore, this study will attempt to know the extent of response of exchange toward the Macroeconomic factors, and to present some recommendations that help the investors and the concerned people of the financial markets to know the most important factors that impact this market.

2. The Importance of the Study

The importance of the study lies in knowing the impact of the Macroeconomic factors on Amman Exchange Index, that is represented by the share prices response to these variables (the economic factors), and therefore, this becomes an indicator for the investors to be able to reflect these variables on the share prices.

While in the previous studies that have been shown, just the impact of the macroeconomic factors was on the general share price index, in this study the impact of the economic factors on the general index in general will be studied and in particular on the sectors of (Banks, Industry, Insurance and services).

3. Aims of This Study are the Following.

To know the impact on the general index in regard with many macro economic factors, the most important factors are (The National Gross Product NGP, the interest rate, money supply and industrial production index).

To know the impact extant of the macro economic factors on Amman exchange sectors represented by banks, industry, and insurance.

4. The Problem of the Study

The study's problem knows the impact of some macro economic factors, such as the GNP, the interest rate, money supply and industrial production index on the general index and the sectors indexes.

The market efficiency theory, which is considered one of the most important theories in the finance and investment field, assumes that the investors can't fulfill the abnormal return (the difference between the real return and the expected return), because all the information are reflected on the share prices quickly, and even immediately, the share prices and the change on them are considered as one of the most important indicators that measure the extent of response of the securities to the economic changes.

While the general index is a balanced average for a sample represents the share prices, it is expected according to the efficiency theory that there is an impact of macroeconomic factors on share prices at Amman exchange. Therefore, this study attempts to verify the impact of these factors on general index of share prices**.**

5. Study Variables

This study uses a standard model depends on annual statistics cover the period from 1992 to 2010, to measure the impact extent of the economic factors on the share prices at Amman Exchange. The details of these models are as follows:

5.1 The Dependent Variables

They represent the general index of share prices and the indexes for the sectors (banks, industry, insurance and services), as the share prices and the changes on them are considered as the most important indicators that measure the impact of economic factors on the securities markets.

The independent variables are the following:

5.2 Annual Gross National Product (GNP)

Annual values of this variable have been considered to cover the full period under consideration. Most economic theories consider this variable importance that has a great role in influencing the share prices levels. The study expects that this growth in the GNP will lead to an increase on the investment, in which a great part of it will be financed through stock Exchange market and in return it will increase the size of stock value of trade and increase the share prices as a result.

5.3 Annual Money Supply

It is expected that the increase in money supply will lead to increasing in the investments size. While part of these investments will be financed through issuing new shares, it is expected that this will make a positive impact on the share prices, but a negative impact might appear represented by the size of new issuances, where part of the increase of money supply might be represented by new issuances of bonds, which will lead to the absorption of a significant part of the available liquidity that will lead to a decrease in share prices due to the increase of demand on the bonds.

5.4 Annual Interest Rates on the Long-term Deposits

The increase of interest rate on deposits has negative impacts on the share prices and bonds.

5.5 Annual Industrial Production Index

This index consists of the mining, manufacturing and the electricity industry, which is one of the most important indexes in any economy that is larger in size and impact on the rest of the indicators.

6. Hypotheses:

There are one main hypothesis of the study and four other sub-hypotheses.

6.1 Main Hypothesis

HA: There is a statistically significant relationship between the following independent variables: annual (GNP), annual money supply, annual interest rate on long-term deposits and annual industrial production index and the dependent variable (share price index weighted by market value of capital).

The four sub-hypotheses are represented as follows:

6.1.1 First Sub-hypothesis

There is a statistically significant relationship between the following independent variables:

Annual (GNP), annual money supply, annual interest rate on long-term deposits and annual industrial production index and the share price for the industrial sector index weighted by market value of capital.

6.1.2 Second Sub-hypothesis

There is a statistically significant relationship between the following independent variables:

Annual (GNP), annual money supply, annual interest rate on long-term deposits and annual industrial production index and the share price for the bank sector index weighted by market value of capital.

6.1.3 Third Sub-hypothesis

There is a statistically significant relationship between the following independent variables: Annual (GNP), annual money supply, annual interest rate on long-term deposits and annual industrial production index and the share price for the insurance sector index weighted by market value of capital.

6.1.4 Fourth Sub-hypothesis

There is a statistically significant relationship between the following independent variables:

Annual (GNP), annual money supply, annual interest rate on long-term deposits and annual industrial production index and the share price for the services sector index weighted by market value of capital.

7. Methodology

This study is based on building a standard model that aims at measuring the extent of macroeconomic factors influence on the general index of Amman Stock Exchange and its sectors through using the multiple regression analysis.

8. Previous Studies

8.1 Stock Market Returns and Inflation: Evidence from Other Countries (Gultekin, 1983)

This paper investigates the relation between common stock returns and inflation in twenty-six countries for the postwar period. The results do not support the Fisher Hypothesis, which states that real rates of return on common stocks and expected inflation rates are independent and that nominal stock returns vary in one-to-one correspondence with expected inflation. There is a consistent lack of positive relation between stock returns and inflation in most of the countries.

8.2 Economic Forces and the Stock Market (Chen, 1986)

This paper tests whether innovations in macroeconomic variables are risks that are rewarded in the stock market. Financial theory suggests that the following macroeconomic variables should systematically affect stock market returns: the spread between long and short interest rates, expected and unexpected inflation, industrial production, and the spread between high- and low-grade bonds. The study found that these sources of risk were significantly priced. Furthermore, neither the market portfolio nor aggregate consumption are priced separately. It also found that oil price risk was not separately rewarded in the stock market.

8.3 Stock Price Volatility and Macroeconomic Variables: Evidence from Amman Stock Exchange. (Civilek &Khoury, 1991)

The study aimed to investigate empirically the relationship between the stock price changes and some macroeconomic variables in the context of the Jordanian economy. The empirical results lead to knowledge that the

money stock, industrial index variables, along with the Treasury bill and corporate bond rates, can't successfully explain the changes in the stock prices in the ASE. In other words, these variables do not contain any significant information relied upon by market participants in formulating their common stock investment strategies.

It should be note that several factors may contribute to the paper's empirical finding: the biases in the data, the problem of omitted variables of non-economic nature, and the irrational behavior of the market participants consequently, this paper hesitates to link it's finding to the efficiency issue of the ASE.

8.4 Macroeconomic Variables and Stock Prices in Malaysia: An Empirical Analysis (Ibrahim, 1999):

The article investigates the dynamic interactions between seven macroeconomic variables and the stock prices for an emerging market, Malaysia, using co-integration and Granger causality tests. The results strongly suggest informational inefficiency in the Malaysian market. The bi-variate analysis suggests co-integration between the stock prices and three macroeconomic variables – consumer prices, credit aggregates and official reserves. From bivariate error-correction models, study notes the reactions of the stock prices to deviations from the long run equilibrium. These results are further strengthened when we extend the analysis to multivariate settings. It also notes some evidence that the stock prices are Granger-caused by changes in the official reserves and exchange rates in the short run.

8.5 Impact of Macroeconomics Variables on Stock Prices: Empirical Evidence in Case of KSE Karachi Stock Exchange (Sulaiman & others, 2000)

The purpose behind this study is to explore the correlation among the

Macroeconomic variables and share prices of KSE (Karachi Stock Exchange) in context of Pakistan. The study consider several quarterly data for different macroeconomic variables are as foreign exchange reserve, foreign exchange rate, industrial production index (IPI), whole sale price index (WPI), gross fixed capital formation (GFCF) and broad money M2. These variables are obtained from the period (1986-2008). The result shows that after the reforms in 1991 the influence of foreign exchange rate and foreign exchange reserve significantly are affecting the stock prices, while other variables like IPI and GFCF are insignificantly affecting stock prices. The result also highlighted the internal factors of firm like increase in production and capital formation are insignificant while external factor like M2 and foreign exchange are affected positively. The study will be very helpful for national policy makers, researchers and corporate managers.

8.6 Macroeconomic factors and stock returns in a changing economic framework: the case of the Athens stock exchange (Diacogiamnis, 2001)

Outlines previous research on the capital asset pricing model and its extensions; and fluctuations in the Greek economy and capital market between 1980 and 1992. Develops a mathematical, multi-factor, risk-return model and applies it to Greek data for this period, split into two sub-periods: 1980-1986 and 1986-1992. Identifies and discusses the most important macro variables influencing security returns for both periods. Concludes that the

8.7 The Effect of Macroeconomic Variables on Stock Prices in Emerging Sri Lankan Stock Market (Menike, 2006)

This study investigates the effects of macroeconomic variables on stock prices in emerging Sri Lankan stock market using monthly data for the period from September 1991 to December 2002. The multivariate regression was run using eight macroeconomic variables for each individual stock. The null hypothesis, which states that money supply, exchange rate, inflation rate and interest rate variables collectively do not accord any impact on equity prices, is rejected at 0.05 level of significance in all stocks. The results indicate that most of companies report a higher R2, which justifies higher explanatory power of macroeconomic variables in explaining stock prices. Consistent with similar results of developed as well as emerging market studies, inflation rate and exchange rate react mainly negatively to stock prices in the Colombo Stock Exchange (CSE). The negative effect of Treasury bill rate

Implies that whenever the interest rate on Treasury securities rises, investors tend to switch out of stocks and that cause stock prices fall. However, lagged money supply variables do not appear to have a strong prediction of the movements of stock prices while stocks do not provide effective hedge against inflation especially in Manufacturing, Trading and Diversified sectors in the CSE. These findings hold practical implications for policy makers, stock market regulators, investors and stock market analysts.

8.8 Do structural oil-market shocks affect stock prices? (Apergis & Miller, 2008)

This paper investigates how explicit structural shocks that characterize the endogenous character of oil price changes affect stock-market returns in a sample of eight countries — Australia, Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. For each country, the analysis proceeds in two steps. First, modifying the procedure of Kilian. Not All Oil Price Shocks are Alike: Disentangling Demand and Supply Shocks

in the Crude Oil Market. American Economic Review.], they employ a vector error–correction or vector autoregressive model to decompose oil-price changes into three components: oil-supply shocks, global aggregate-demand shocks, and global oil-demand shocks. The last component relates to specific idiosyncratic features of the oil market, such as changes in the precautionary demand concerning the uncertainty about the availability of future oil supplies. Second, recovering the oil-supply shocks, global aggregate-demand shocks, and global oil-demand shocks from the first analysis, then a vector autoregressive model was employed to determine the effects of these structural shocks on the stock market returns in our sample of eight countries. The study found that international stock markets returns do not respond oil-market shocks.

8.9 Oil Prices and Stock Market Returns in Oil Importing Countries: The Case of Turkey, Tunisia And Jordan (AL-Fayoumi, 2009)

This study examines the relationship between changes in oil prices and stock market returns in three oil importing countries, namely Turkey, Tunisia and Jordan. Monthly data of oil prices, interest rate, and industrial production and stock market indices are modeled as a co integrated system in a Vector Error Correction Model (VECM). Based on the data from December 1997 to March 2008, the empirical results do not support the hypothesis that oil prices lead to changes in stock market returns in these countries. However, the results bring evidence that the effect of the local macroeconomic variables on the changes in stock market returns is more important than that of oil prices. The results of this study may have implications for policy makers and portfolio managers who should focus on macroeconomic factors such as interest rate and industrial production rather than focusing on oil prices to be the main factor in predicting future stock returns.

9. Concepts of macroeconomic factors

9.1 Annual National Product

The Gross National Product is represents the total values of all the goods and services ready for the final usage and produced in the economy during a certain period (a year for example). While the Gross National Product includes the Gross Domestic Product, in addition to the net income of the external production factors (The income from the production factors that are received from these who reside outside the country minus the income from the production factors that are paid by those who reside outside the country).

9.2 Annual Money Supply or Domestic Liquidity

Domestic liquidity represents the amount of money ready to be used in financing the economic activities. There are many concepts in regard with the money supply or the domestic liquidity.

Money supply with its narrow understanding (M1) means the money under circulation in addition to the demand deposits in the Jordan dinar. While money supply with its broad meaning represents the money supply with its narrow understanding in addition to demand deposits in foreign exchange and the saving and long-term deposits at the banking system.

9.3 Annual Interest rate

The interest rates at market are determined according to the forces of supply and demand. The Central Bank is giving indications to determine the interest rates through banks adoption of indirect management of the monetary policy and its instruments which represents the role of the Central Bank.

9.4 Annual Industrial Production Index

This index consists of the mining and manufacturing industries and the electricity industry, it is one of the most important indexes in any economic, the larger size and its impact on the rest of the indicators.

9.5 Efficiency Market

The concept of efficiency: The efficiency of the exchange is represented by the speed of prices reaction on unbiased way to some information available to the investors in the stock market; therefore the securities values of trade in the stock exchange become a function of the available information.

The information set is identified as the information that influences the future financial flows, and it is divided into three types:

a. The historical information, it is the information released by the financial statements or the exchange resources.

b. The present information, which is released now as the newspapers are considered it as one of their most important resources in addition to the financial statements and the stock exchange market.

c. The future information, represented by the information related to the future financing plans or forming the future capital or the strategic and investment future plans that obtained through internal resources in the company or through the anal sizes of the specialists.

The exchange efficiency can be classified into three levels as follow:

1- The strong form efficiency: At this level the exchange provides the investors all the available information either if their source is the released financial information or from other sources including the historical and present information about the share prices and any other special information (announced or not announced), i.e. all the information in the exchange are general, in order not to create the phenomenon of information monopoly by certain group enables them to achieve exceptional profits or normal profits, and this means that the expected value of the abnormal profits will be zero.

2- The semi-strong form efficiency: According to this level the prices of securities in the market reflect the information included in the published financial data, in addition to the historical previous information available from the prices themselves. Therefore, in such circumstances, some people have the opportunity to borrow from the non-published information, and analyzing them by providing them with the opportunity to make exceptional profits in the context of the information monopoly phenomenon.

3- The weak form efficiency: At this level of efficiency the shares price are reflected for their previous or historical prices only, therefore, there will be an opportunity in such circumstances to achieve some exceptional profits through two ways as follows:

Some investors obtained Private information (not published) not available to the others, or that they can analyze the published information with better efficiency than others.

10. Statistical analysis

The multiple regression analysis (stepwise method) has been used by the (SPSS) program to know any of the four economic factors (the GNP, money supply, change in interest rate, production index), and the general index for a previous year more influencing on the variables of Amman exchange, the general index of share prices and their four sectors (industry, banks, services and insurance) during the period (1992-2010).

The following are the details:

10.1 The General Index

Through the statistical results, it was shown (Table 2) that both variables interest rate and industrial production index have an impact with statistical significance on the dependent variable (Amman exchange general index). $R^2 = 0.729$ which refers to the percentage of what the economic factors explain, that have been entered to the regression equation (change in the interest rate and industrial production index), in regard with the dependent variable, with statistical significance less than 0.05, as shown the analyzing of regression variance table can be written as follow

$$\text{Index} = 8414 - 587 \text{ int.rate} - 18 \text{ Pro. In.}$$

We can see from the equation that value of Beta coefficient for the interest rate is negative due to that the interest rates are considered an alternative opportunity cost for investment in shares, the more increase in the interest rate the more decrease of demand on the shares and the more increase of demand on the bonds and deposits, there is an adverse relationship between the share prices and the interest rates. We see also that the sign of the value of Beta coefficient is negative; the decrease in the production index means decrease of demand on shares and decrease their prices, and the general index decreases. The negative relationship between Amman Index and the production index regards to that Amman Stock Exchange is weak form efficiency.

10.2 The Industry Sector

The statistical results showed (Table 3) that both variables, the interest rate and the production index had an impact with statistical significance on the dependent variable (the industry sector index) where $R^2 = 0.887$, which indicates the regression equation explain (the change in the interest rate and production index) of the dependent variable has significant statistical influence on a level less than 0.05, it can be written as follows:

$$\text{Manufacturing} = 2360 - 252 \text{ int. rate} + 5.99 \text{ Pro. In.}$$

From the above equation we notice that beta coefficient for the interest rate is negative, which indicates that there is an adverse relationship between the interest rate and the industry sector index due to what we mentioned above in the statistical analysis for the general index. We notice also that the value of Beta coefficient for production index is positive which indicates that there is a positive relationship between the production index and the industry sector index due to what we mentioned previously in the statistical analysis for the general index.

10.3 The Banks Sector

The statistical analysis showed (Table 4) that both variables the interest rate and the growth average of money supply had an impact with statistical significance on the dependent variable (the banking sector index) where R^2 = 0.672, which entered into the aggression equation (change in interest rate, average growth of money supply) of the dependent variable, which has a statistical significant at a level less than 0.05 as shown in the equation as bellow:

Bank= 17004-1195 int.rate-47 Pro. In.

From the above equation, we see that the value of Beta coefficient for the interstate is negative, which indicates that there is an adverse relationship between the interest rate and the banking system sector due to what we mentioned in the statistical analysis of the general index. We see also that the sign of the value of Beta coefficient for the production index is negative; the decrease in the production index means decrease of demand on shares and decrease their prices, and the general index decreases. The negative relationship between Amman Index and the production index because part of the capital went to industry and not for investment in shares.

10.4 The Insurance Sector

The statistical results showed (Table 5) that the both variable, the interest rate and the growth average of money supply have an impact with statistical significance on the dependent variable (the insurance sector index), where R^2 = 0.619, see figure (4-a) appendix number (4), which shows that the ratio of what the economic factors that entered in the aggression equation (change in the interest rate, the growth average of money supply) out of the dependent variable, which has statistical significance on the level that is less than 0.05, as shown in the aggression variance analysis table which is shown in figure (4-B), and the aggression equation. From figure (4-c) can be written as follows:

Insurance = 10612 – 644 int. rate – 28.53 pro. In.

We see from the equation that the Beta coefficient for the interest rate is negative and this indicates that there is an adverse relationship between the interest rate and the insurance sector index, due to what we previously mentioned in the statistical analysis for the general index.

We see also that the sign of the value of Beta coefficient for the production index is negative, the decrease in the production index means decrease of demand on shares and decrease their prices, the general index decreases. The reason why there is a negative relationship between the Amman Index and the production index is because part of the capital went to industry and not for investment in shares.

10.5 Service Sector

The statistical results showed (Table 6) that the variables, the interest rate and production index have an impact with statistical significance on the dependent variable (the services sector index), where R^2 = 0.479, and this indicates that the ratio of what the economic factors entered in the aggression equation explain (the interest rate and the production index) out of the dependent variable which has a statistical significance at a level less than 0.05, as shown by the following equation:

Services= 4217-241 int. rate - 4.231 pro. In.

From the above-mentioned equation we see that the value of Beta coefficient for interest rate is negative, this means that there is an adverse relationship between the interest rate and the services sector index due to what we previously mentioned about the general index.

We see also that the sign of the value of Beta coefficient for the production index is negative, the decrease in the production index means decrease of demand on shares and decrease their prices, the general index decreases. The reason why there is a negative relationship between the Amman Index and the production index is because part of the capital went to industry and not for investment in shares.

11. Conclusion

It is proved that there is a relation with statistical significance between the independent and dependent variables, therefore, the investors should take into consideration the macroeconomic changes in determine of the share prices.

The statistical results show that the interest rates variable has a great influence on the general index and the sectors indexes, therefore the investors should take this matter into consideration.

Decision makers of the monetary and financial polices should take the impact of their decisions on the exchange, and they should balance between the benefits and the negative impacts of such decisions, it is noted that such decision makers don't take into their considerations the impact of their decisions on the stock exchanges, but they concentrate on the economic situation as a whole in the first degree. The stock exchange as known is a mirror to the

economic situation and a follower to it; therefore it is not the direct objective of such decisions. The monetary policies have an influence on the economy, which is reflected on the exchange and not the contrary.

There is necessity to have an effective information system enables the investors to see the information related to the economic changes in order to be able to reflect them on the prices quickly.

Because the stock exchange efficiency depends on its internal system and the information system in it, this study suggests the continuity of developing the internal system of the market, and to provide an information system to transfer the information to convey it quickly and accurately without any costs.

References

Amman Financial Market. (2010). *Statistic*, 1992-2010. Amman.

Apergis, Nicholas, & Miller, Stephen M. (2009). Do Structural Oil-Market Shocks Affect Stock Prices?. Economics. *Working Papers*, p51.

Al-Fayoumi N. (2009). Oil Prices And Stock Market Returns in Oil Importing Countries: The Case Of Turkey, Tunisia And Jordan. *European Journal of Economics, Finance and Administrative Sciences*, ISSN: 1450-2275, Issue 16.

Central Bank of Jordan. (1992-2010). *Monthly statistical Bulletin*, Department of Research and studies.

Civilek M., & EL-Khoury, R. (1991). Stock Price Volatility And Macroeconomic Variables: Evidence from Amman Stock Exchange. *Abhath AL- Yarmouk*, Vol 7, no 3, pp: 9-27.

Chen. (1986). Economic Forces and the Stock Market. *The Journal of Business*, ISSN: 0021-9398, Vol 59, Issue 3.

Diacogiamnis, G., Tsiritakis, E., & Manolas, G. (2001). *Macroeconomic factors and stock returns in a changing economic framework*: the case of the Athens stock exchange. ISSN: 0307-4358, Vol 27, Issue 6,

Gultekin. (1983). Stock Market Returns and Inflation: Evidence from Other Countries. *The Journal of Finance,* ISSN: 0022-1082, Vol 38, Issue 1.

Ibrahim, M. (1999). Macroeconomic Variables and Stock Prices in Malaysia: An Empirical Analysis. *Asian Economic Journal*, ISSN: 1351-3958, Vol 13, Issue 2.

Menike L.M.C.S. (2006). The Effect of Macroeconomic Variables on Stock Prices in Emerging Sri Lankan Stock Market. *Sabaragamuwa University Journal*, vol 6, no. 1, pp 50-67.

Sulaiman, D. Mohammad, Adnan H., & Anwar J. (2009). Impact of Macroeconomics Variables on Stock Prices: Empirical Evidence in Case of KSE (Karachi Stock Exchange), *European Journal of Scientific Research*, ISSN: 1450-216X, Vol.38, No.1, pp.96-103.

Table 1. Descriptive Statistics

	N	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Statistic	Variance
DI	19	1299.00	8191.50	3286.4263	2343.12803	5490249.0
GNP	19	3424.30	19121.80	8292.4053	4765.48313	22709829
IR	19	7.59	12.89	10.1374	1.54963	2.401
MS	19	4266.90	21173.40	9144.1421	4972.23272	24723098
IP	19	106.60	250.80	134.5316	32.79307	1075.386
BANKS	19	1156.00	16892.00	5573.8158	4839.52963	23421047
INSUR	19	1197.40	7382.40	2473.6263	1715.78299	2943911.3
SERV	19	998.10	3332.50	1573.9158	625.23296	390916.249
INDUS	19	751.50	4841.70	2118.9421	1459.78987	2130986.5
Valid N (list wise)	19					

Table 2. Summaries of the statistical results of the linear regression analysis of the first hypothesis

Model	B	T	Sig,
Constant	8414	2.247	.041
GNP	.105	.120	.909
IR	-585	-1,871	.082
MS	.272	.287	.779
PI	-18.78	-.764	.458
R^2	o.729		

Table 3. Summaries of the statistical results of the linear regression analysis of the second hypothesis Industrial

Model	B	T	Sig,
Constant	2360	1.567	.139
GNP	.551	1.572	.138
IR	-252	-1.998	.066
MS	-.335	-1.139	.395
PI	5.991	.135	.554
R^2	o.882		

Table 4. Summaries of the statistical results of the linear regression analysis of the their hypothesis Bank

Model	B	T	Sig,
Constant	17004	1.998	.066
GNP	-.013	-.007	.995
IR	-1195	-1.675	.116
MS	.793	.368	**719**
PI	-47,96	-,858	.405
R^2	0.672		

Table 5. Summaries of the statistical results of the linear regression analysis of the fourth hypothesis Insurance

Model	B	T	Sig,
Constant	10612	3.26	.006
GNP	-.104	-.137	.893
IR	-1644	-2.359	.033
MS	,338	.410	.688
PI	-28.5	-1.335	.203
R^2	0.619		

Table 6. Summaries of the statistical results of the linear regression analysis of the fourth hypothesis Service

Model	B	T	Sig,
Constant	4217	3.042	.009
GNP	-.081	-.250	.806
IR	-241	-2.073	.057
MS	.113	.323	.751
PI	-4.231	-465	-.465
R^2	0.479		