The Role of Small and Medium Enterprises (SME) in the Country's Economic Development

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ABSTRACT

This paper tried to applyably collect descriptive information by Delphi survey technique and investigate the relationship or lack of significant relationship between the original hypotheses which consisted of subsidiary hypotheses. The main hypothesis is the existence of relationship between SME and economic development. The statistical population of study consisted of a thirty-year period of performance of SME companies. In this paper, Pearson correlation coefficient test is used for main and subsidiary hypotheses. Based on the results of calculating the Pearson correlation coefficient, small and medium enterprises have a strong direct relationship with economic development with the coefficient of 0.0765 and the original hypothesis is confirmed. Also the calculation shows that the subsidiary hypothesis for the relationship of SME value added with Iran's economic development is approved with the coefficient of 0.072, but the other subsidiary hypotheses indicating the significant relationship between production value and the value of SME investments are rejected respectively with coefficients of 0.850 and 0.944. Finally, regression analysis indicates that one unit increase in added of SMEs is effective in economic development for the amount of 0.025.

- KEY WORDS: Added value, growth and economic development, SME, Entrepreneurship

1 - INTRODUCTION

In recent years the role of economic enterprises has been increasing, especially small and medium industries in Iran and industrial and developing countries. In the last two decades with the advent of modern technologies changes emerged in production, communications, industrial capabilities, methods of production, distribution and organizational structure of firms, which generally has increased the importance of small and medium economic units. Most of the countries in the world have provided significant support for small enterprises and have formulated economic policies to expand and strengthen them. Not many countries can be found without laws to support small and medium enterprises, even in some countries it seems that the national economy is based on small and medium enterprises. Iran's economy significantly and extensively is defined by large governmental and quasi-government corporations which controls more than 80 percent of the country's economy [1]. This is particularly concerns the economic activities related to the extraction, processing and trading of crude oil, petroleum products and natural gas which provides about 80 percent of Iran's export earnings and about 40 to 50 percent of the governmental budget. This has created a strong dependency of this sector of the economy, especially large government-owned companies, while most of Iran's economy is owned by small and medium industries. It is natural that all country's economic sectors, including services, agriculture, industry, commerce and so on are effective in development of each of these variables with regard to the defined priorities. But given the scope of the present study, we will inevitably focus on the industrial sector.

Small and medium industries in recent years have significantly contributed in creating new jobs. In other words, in today's modern world, small industries with their specifications effect considerably on different and important variables such as economic growth, competitiveness and the also solving the pandemic unemployment crisis. Researchers in any field of economics generally consider the matters that go directly to their own specialized area. For example, financial economics scholars know that the pattern of effective financial markets does not respond in small industries; economics scholars know that small industries pay less for similar work; and scholars of industrial economics know that small industries have higher bankruptcy rates but the faster growth rate than larger industry. But unfortunately we have not yet considered that these laws can be connected systemically. Economy of small industries can connect the laws related to the scale [2].

The importance of small and medium units can be studied from both quantitative and qualitative dimensions. In the quantitative dimensions, very high percentage of companies in Iran and many countries consists of small and
medium units, the number of practitioners in these units is noteworthy, also the added value produced in these units in different countries is somewhere between a third to half of the added value of the whole country. In terms of quality, small and medium units have characteristics that can avoid the migration to the cities. Large units wherever they are formed gathered crowd and lead to immigration. Small units are formed by local and regional needs, so if when there is no need to them, they go away like the textile industry. These units spread job and production and are linked with people and can develop the culture of production in the country and encourage the private sector to investment. The current pressures to improve the quality which in economic and technological views is associated with new concepts to a large extent have only answered in small and medium industries. In these industries, the technology life cycle is much shorter than other industries. The contemporary world in which customer is driving decision making and conducts the industry pays attention to multiple factors that heavy industries are not able to respond quickly, and only small units and non-complex products were successful, helpful and directing to achieve customer's perspective [3].

The main objective of this study is to investigate the role of small and medium enterprises in Iran’s economic development and its prospects in the coming years. Also the secondary objectives are also considered. This paper reviews the literature, then the research methodology is presented and then a case study is discussed and after a brief investigation of findings, conclusions will be discussed.

2 - REVIEW OF LITERATURE

In this section respectively the theoretical foundations of the research, the importance of the research, research background, methodology and research findings are presented.

2-1 - Theoretical Foundations

Penn Rose believes that in economic prosperity conditions, growth opportunities for small and medium industries are more possible that development of large industries. According to this theory, large industries due to long time of return on investment, heavy advertising and marketing costs in the early stages of growth, have less attention to these opportunities in their planning and prefer to spend their capital to increase the current production than investment in new products. Absence of the above restrictions in small and medium industries, and particularly having lower investment cost, limited capacity of machinery and the possibility to use new machines with advanced technology caused the advantage of small industries and their growth more than ever. This means that large industries systematically have to inevitably disregard the new innovations and production opportunities in favor of small industries. Alfred Marshall introduces a group of profits caused by outsourcing factors which affect the interests of individual companies developed in a geographically complex [4]. Admiral believes that in the new arrangements, the relationship between large and small industries is significantly changing. May be small and large enterprises shall not be considered opposite each other. Today the relative quantitative changes are not considered, but we observe intelligent changes in cooperating networks, through which industries with different scales are able to be experts in the projects that are more appropriate for them [5].

Peru the French economist referred to Schumpeter innovation theory, and concluded that industries that produce new goods will have different growth rates compared to industries that produce conventional and common goods. He linked innovative activities with the phenomenon of profits caused by accumulation, and introduced it a requirement of growth processes [6]. Until about three decades ago, industrial clusters in some industrial fields, with emphasis on particular advantage rose from skills and knowledge, which over time has been converted into social capital of those areas, caused the economic growth in their geographical contexts. Each industrial cluster is composed of many small manufacturing and service units. These units by forming regular communication networks and systematic cooperation with each other, while achieve mass production indicators, have the advantages of small industries such as innovation and diversity.

2-2 - The necessity of research

Industrial development is a clear need for research in the field of economic development. The importance of viewing Iran's to economic development with a programmed reflection is clearly visible in the priorities of five-year plans for economic, social, cultural development, the outlook document and strategic programs of services and industry unit. Iran is among developing countries and is eligible for economic development and industrialization, and compared with many countries, have considerable advantages to access mineral deposits, energy (oil and gas), man power, infrastructure and noteworthy extensive facilities for private sector development [7]. Some advantages of small and medium industries due to transport effects, the effect of market size, adjusting effect, effectiveness of selection and control effect, has made these industries to the first choice for production of many goods [8].

10280
Now in Iran's economy 94% of industrial units which are being exploited consist of small industries. These industries are accounted for 43 percent of industrial employment. According to Managing Director of Small Industries & Industrial Parks Organization of Iran, small industries due to the potential of employment increase in a short term, low investment absorption, fair distribution of wealth and income, are backed by the government [9]. What made this study necessary is the necessity of managers’ attention to small and medium industries, and the status and traditional role of this sector in the domestic economy and lack of success consistent with development programs, which are necessary for the aim of deployment of functions in this sector for economic indicators of these industries.

2-3 - Background of Research

Study and review of articles about the role of small and medium enterprises in the country's economic development shows that study and research on economic development in small and medium enterprises must basically form in one of the fields of Ministry of Industry, Small and Medium Industries and Industrial Parks Organization of Iran, by planners and strategists and academic scholars. All of the above areas have been searched through library studies of the present research. The findings results of search are: Pishro in 2006 (strategic management, an efficient tool to increase competitiveness of small and medium enterprises) seeks to explain the benefits of strategic management in small and medium enterprises and its effect on increasing the competitiveness of these firms to develop export [10]. Maleki Nejad in 2006 (an analysis of the role of small and medium industries in economic development), reviewed the theory of Ex and Adrash and also the theory of cluster development pattern, and illustrated the importance of small and medium industries in the country's economic development through entrepreneurship, innovation and technological change, industry dynamics and creating job opportunities and increased revenue, and studied the advantages of this type of industry and transport, the effect of market size, the impact of adjustment, effectiveness of choice and impact of control. Ahmadi Moghaddam Ermeki in 2009 (the strategy to spread small and medium manufacturing industries in Iran), introduced the intelligent and integrated role and applications of computer systems, and finally offers the stepwise justification methodology for applying the productive systems to meet demand, and maintain and promote competitive market conditions, lack of enjoyment of small and medium industries from these integrated production computer systems for small and medium enterprises [11], Deh Moled in 2009 (innovation management and intellectual capital in small and medium textiles and non-metallic mineral industries of Yazd provinces), studies the barriers and areas of innovation in small and medium enterprises of textile and non-metallic minerals industries in Yazd province, which respectively include 35% and 22% of the total employment of industries in the province. He argues that most of the countries in the world by focusing on innovation seek to increase productivity and improvement of their economic status. Data analysis in this paper indicates that 45% of enterprises in the studied sample were innovative. According to the author studies, the use of strategic management at these enterprises can expand the activity of these enterprises and provided more rational decision-making for managers. On the other hand the organizational structure of these enterprises is not ready for the application of strategic management and thus cannot take action to institutionalize them for small and medium enterprises [12]. Furthermore other research can be named including: (an operational model of outsourcing activities in small and medium enterprises) presented at national conference on development of implementation system of civil, industrial and urban projects in 2007; (The role of small and medium industries in economic development) provided at the first national conference on the development of economic activities in 2008; (Small and medium enterprises and factors influencing their economic life in Iranian manufacturing industries) provided at the first national conference on the development of economic activities in 2008; and a paper named (investigation the role of small industries in Iran employment) provided at the first national conference on the development of economic activities in 2008.

Small and medium enterprises in different countries have many similarities, but despite this, a unit and same definition cannot be obtained; each country according to its own requirements has provided a definition of these kinds of businesses. Most of these definitions are discussed based on quantitative criteria such as number of employees and turnover rate.

According to the definition of Ministry of Industries and Mines and Ministry of Agriculture, small and medium enterprises are industrial and service sectors (urban and rural) that have less than 50 employees (UNIDO, 2004, 121). Ministry of Cooperation according to different case uses the definitions of Ministry of Industries and Mines and Statistical Center of Iran for these industries. Statistical Center of Iran has classified the businesses into four groups: Businesses with 9-1 employees, 10-49 employees, 50-99 employees, and more than 100 employees (2009 figures). Although this classification is apparently similar to definitions of Europe Union, but the Statistical Center of Iran only considers the businesses with less than 10 employees as the small and medium enterprises, and considers other businesses as "large industrial firms". Central Bank of Iran also considers businesses with less than 100 employees as small and medium enterprises. In this paper we mostly use the Iranian definition. But according to various definitions, apart from the number of workers per unit, usually small and medium businesses have three qualitative characteristics that these features gave them a nature different from large industries. These features
include: the unity of ownership and management, individual and family ownership, independence from other businesses. Table (1) shows the final definition of small and medium industries in the world.

Table 1: formal definitions of small, medium and large industries "in 2001"

<table>
<thead>
<tr>
<th>Row</th>
<th>Country</th>
<th>Definition of industrial and nonindustrial small and medium enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Japan</td>
<td>Small and medium manufacturing units: are those small and medium industrial enterprises that have employees fewer than 300 people or recorded total assets less than 100 million yen. Businesses units: are small and medium enterprises with employees fewer than 50 people or their recorded maximum ceiling of assets is 30 million yen. Service units: are companies with the maximum work power of 50 people or their maximum registered total assets are 10 million yen.</td>
</tr>
<tr>
<td>2</td>
<td>South Korea</td>
<td>Small and medium industrial units: are companies with maximum 300 employees. Business units and services: are companies with the maximum 20 employed</td>
</tr>
<tr>
<td>3</td>
<td>Malaysia</td>
<td>Small industries: are industrial units with at least 5 and maximum 50 employees or their maximum value does not exceed 500,000 Rnygt or 200,000 $. Medium industries: are those industrial units with 50 to 75 employees, or with at least of stock value 500,000 Rnygt (200,000 $) and a maximum ceiling of 2.5 million Rnygt (1 million in American $).</td>
</tr>
<tr>
<td>4</td>
<td>Singapore</td>
<td>Small and medium industrial units: are those industrial units with fixed assets less than 12 million Singapore dollars, equivalent to 8.5 million American dollars. Service - commercial units: are those companies with maximum 100 employees.</td>
</tr>
<tr>
<td>5</td>
<td>Taiwan</td>
<td>Small enterprises: those companies with annual maximize revenue from sales does not exceed 20 million. Medium-sized enterprises: are companies active in manufacturing, mining and commerce and their maximum annual sales does not exceed 40 million Taiwan dollars and the maximum full-time workers in these companies is not more than 200 people.</td>
</tr>
<tr>
<td>6</td>
<td>Thailand</td>
<td>Small to medium enterprises are run with entrepreneurship system and their maximum employed man power is 200 people. Small and medium enterprises are run based on capital-intensive system and the maximum employed man power is 100 people.</td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>Small industries: are those industries with less than 20 employed persons. Medium industries: are those industries with more than 20 and less than 100 employed people.</td>
</tr>
<tr>
<td>8</td>
<td>China</td>
<td>In general, regardless of the type of production and productive capacity of units, those industrial companies with more than 200 employees are called small and medium companies.</td>
</tr>
<tr>
<td>9</td>
<td>France</td>
<td>Small and medium companies: companies with minimum 10 and maximum 199 employees.</td>
</tr>
<tr>
<td>10</td>
<td>Indonesia</td>
<td>Small and medium industries: those industries with less than 100 employees are called small and medium industries.</td>
</tr>
<tr>
<td>11</td>
<td>India</td>
<td>Very small industry: with 2.5 million rupees maximum ceiling of fixed capital including machinery of initial working capital. Small Industries: with 10 million rupees maximum ceiling of fixed capital including machinery of initial working capital. (220 thousand people) The average industry: with 100 million rupees maximum ceiling of fixed capital including machinery of initial working capital. (2 million and two hundred thousand dollars).</td>
</tr>
<tr>
<td>12</td>
<td>America</td>
<td>Very small enterprises: companies with maximum 20 people man power. Small enterprises: companies with at least 20 and maximum 99 employed man power. Medium-sized enterprises: companies with at least 100 and maximum 499 employed man power.</td>
</tr>
<tr>
<td>13</td>
<td>Vietnam</td>
<td>Small and medium enterprises: those companies with maximum 200 employees.</td>
</tr>
<tr>
<td>14</td>
<td>Iran</td>
<td>Small enterprises: companies with less than 10 employees Medium and small enterprises: companies with 10-49 employees Large enterprises: more than 100 employees</td>
</tr>
</tbody>
</table>

Source: Asian Productivity Organization, meeting of small and medium industries, New Delhi April 2001 (written report)

Diverse opinions have been collected about the role of small and medium industries in the library of studies and some of them are pointed out here. Schumpeter believes that only large enterprises are equipped to use the opportunities for innovation. Comanor believes that research and development is a costly process that requires mass production. Kamien and Schwartz have pointed out that, powerful (though temporary) enterprises in the market use innovation as a means to maximize profit. Cohen [13] says that ability of large enterprises in the takeover of
economic revenues resulting from research and development and other investments in the production of knowledge are directly linked with the extent of their market. Scherer [14] believes that mass production whether in the advertising of distribution process, facilitates the penetration of new products in the market and enables large industries to better utilization innovation resources. Feizpour and Deh Moled believe that reduce those innovations that lead to reduce some percentage of costs have more prominent effect in the profit margins of large enterprises than small enterprises. Aghazadeh believes that entrepreneurship of small and medium industries whether in theory or statistical fact is confirmed by many independent economists. Talebi suggests that most reliable picture of the relative importance of small and medium industries is revealed in entrepreneurship created by them.

3 - RESEARCH METHODOLOGY

The methodology of this paper in terms of objective is an applied research, and in terms of data collection is descriptive in the branch of Delphi survey which aims to achieve a consensus of experts familiar with the subject of the article.

3-1 - Research Method

This article first by providing the plan started to collect case literature in the field of small and medium enterprises and then the basics of economic development. By designing the proposed conceptual model through reliable sources, the needed data for calculation has been collected. At the end, based on data analysis, data obtained from calculations were concluded and some recommendations were offered. In this article major tasks and activities carried out include: determining the article's hypothesis, collecting statistics, data analysis and hypothesis testing. Below the article has discussed the definition and method of each of these activities.

3-2 – Research hypotheses

Variables (dependent) in this article include economic development with GDP indicator and variables (independent) defined in this article related to SMEs include added value, production value, and investing value. The value means the currency of the country.

- The main hypothesis

There is a significant relation between the performance of small and medium industries and economic development in Iran.

- Sub-hypothesis

1 - There is a significant relation between added value of small and medium industries in Iran.
2 - There is a significant relation between production value of small and medium industries in Iran.
3 - There is a significant relation between investment value of small and medium industries in Iran.

3-3 - METHODS OF DATA ANALYSIS

In the main hypothesis reliability has been tested between the economic developments of Iran (with ID of annual rate of GDP) as the variable dependent with SMEs (with IDs of added value, production value, investment value) as the independent variable using Unit root test (software EViews).

4 - Research findings

Research findings to prove the main and sub hypotheses have been done using the Pearson test. To analyze the relationship between sub-variables of the research and economic development, regression method is used by EViews software.

Diagram (1) the relation of independent variables of SMEs and dependent variable of economic development
4-1 Results of Pearson correlation coefficient of the main hypothesis
H0: There is a significant relation between small and medium enterprises and economic development.
H1: There is no significant relation between small and medium enterprises and economic development.

Table (2), Pearson correlation coefficient table for the hypothesis H0

<table>
<thead>
<tr>
<th>Correlation coefficient</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.765</td>
<td>0.0000</td>
<td>Confirmation of the hypothesis and the strong direct relationship</td>
</tr>
</tbody>
</table>

The correlation coefficient is in a significant level of 1%, equal to 0.765. It can be concluded that there is a significant relationship between the small and medium enterprises and economic development. The p-value is equal to zero and shows the strong and direct relationship.

4-2 Results of Pearson correlation for sub-hypotheses
In the following table, the results of the research sub-hypothesis test are presented.

Table (3) Pearson correlation coefficients of the SME dimension for economic development

<table>
<thead>
<tr>
<th>SMEs dimensions</th>
<th>Correlation coefficient</th>
<th>Sig</th>
<th>Test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Added value</td>
<td>0.072</td>
<td>0.000</td>
<td>Significant and direct relation</td>
</tr>
<tr>
<td>Production value</td>
<td>0.850</td>
<td>0.135</td>
<td>No significant relationship</td>
</tr>
<tr>
<td>Investments value</td>
<td>0.944</td>
<td>0.201</td>
<td>No significant relationship</td>
</tr>
</tbody>
</table>

The correlation coefficient value is 0.072 and its significance level is 0.000 and less than 5%. This suggests the significant and strong and direct relationship between added value and economic development with 95% of reliability. But according to the correlation coefficient and significance level higher than 5%, it can be said that the production value and the investments value have no significant relationship with economic development.

4-3 Estimation of regression model using EViews software
4-3-1 - Study the stability (or reliability) of variables:
Surveys show that in many economic time series, variables are unreliable. Therefore, in accordance with the collective theory in modern econometric it is essential to study their reliability or unreliability. Dickey - Fuller unit root test is one of the most appropriate tests. Dickey and Fuller assumed that under the null hypothesis p = 1, that its accepting means that the time series has a unit root and is unstable. With this assumption that the actual production of data is without intercept, now if the calculated quantity of the mentioned statistics is more than critical quantity offered by Dickey and Fuller (MacKinnon quantity), the null hypothesis is rejected in favor of the opponent hypothesis and we will have a non-stable time series. In other words, in this method the statistics of ADF test or the calculated t-statistics of the mentioned delay variable is compared with the MacKinnon critical values. If the obtained t value was smaller than the critical values, it is concluded that the desired variable is static. Regarding the prolongation of the results, the process of this test is described by EViews software for one of these variables and the results are provided for other variables. In the reliability test Dickey - Fuller unit root test was used for the variable of Gross Domestic Product (GDP) and results are shown in the table below:
Table (4) results of reliability test using Dickey - Fuller unit root test for GDP

<table>
<thead>
<tr>
<th>Null Hypothesis: GDP has a unit root</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exogenous: Constant</td>
</tr>
<tr>
<td>Lag Length: 0 (Automatic based on SIC, MAXLAG=5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>2.307664</td>
<td>0.9997</td>
</tr>
</tbody>
</table>

Test critical values:
- 1% level: -3.626784
- 5% level: -2.945842
- 10% level: -2.611531


As the table below shows the calculated statistics value (2.30) is more than estimated critical values (at all levels is one percent, five percent and ten percent). Therefore it can be concluded that this variable is not stable at the level. Therefore reliability of this variable is evaluated in the first order difference:

Table (5) static test results using Dickey - Fuller unit root for GDP in the first order difference

<table>
<thead>
<tr>
<th>Null Hypothesis: D(GDP) has a unit root</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exogenous: Constant</td>
</tr>
<tr>
<td>Lag Length: 0 (Automatic based on SIC, MAXLAG=5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>-5.804393</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Test critical values:
- 1% level: -3.632900
- 5% level: -2.948404
- 10% level: -2.612874


As it can be seen the calculated statistic value (-5.80) is less than the estimated critical values (at all levels). Therefore it can be concluded that this variable (in first difference) is stable. Summary of test results mentioned in the first order difference time series model for all variables in the model is presented in the table below.

Table (6) Dickey Fuller test results for time series data of research variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dickey Fuller statistic</th>
<th>MacKinnon highest critical value</th>
<th>Result</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>2.30</td>
<td>-2.61</td>
<td>Unreliable</td>
<td>I(1)</td>
</tr>
<tr>
<td>D(GDP)</td>
<td>-5.80</td>
<td>-2.61</td>
<td>Reliable</td>
<td></td>
</tr>
<tr>
<td>VA</td>
<td>-1.476</td>
<td>-3.610</td>
<td>Unreliable</td>
<td>I(1)</td>
</tr>
<tr>
<td>D(VA)</td>
<td>-6.060</td>
<td>-3.615</td>
<td>Reliable</td>
<td></td>
</tr>
<tr>
<td>PV</td>
<td>-4.55</td>
<td>-2.611</td>
<td>Reliable</td>
<td>I(0)</td>
</tr>
<tr>
<td>IV</td>
<td>-8.42</td>
<td>-3.621</td>
<td>Reliable</td>
<td>I(0)</td>
</tr>
</tbody>
</table>

The research findings

D symbol in the table below represents the first order difference of variables. Therefore, other than GDP and SME variables, which are reliable in the first order differences, other variables are reliable at level. So the final results of reliability tests determine that research variables are reliable in levels or in first order differences. Therefore, by determining the degree of reliability of variables, the desired patterns can be fitted and there will be no difficulties for the models.

In this section using EViews software model coefficients will be estimated.

ED = 222.4721 + 0.02479 VA + 0.00068 PV + 0.01939 IV  
(6.93)  (3.83)  (0.39)  (0.41)

F-statistic = 153.15  \[D.W = 1.91 \quad R^2 = 0.84\]

The full profile of estimated model can be seen in the following table:
### Table (7) estimate of the econometric model by ordinary least squares method

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value added</td>
<td>0.024798</td>
<td>0.006465</td>
<td>3.835548</td>
<td>0.0007</td>
</tr>
<tr>
<td>Production Value</td>
<td>0.000687</td>
<td>0.001758</td>
<td>0.390977</td>
<td>0.0990</td>
</tr>
<tr>
<td>Investment Value</td>
<td>0.019395</td>
<td>0.046360</td>
<td>0.418355</td>
<td>0.0791</td>
</tr>
<tr>
<td>C</td>
<td>222.4721</td>
<td>32.07422</td>
<td>6.936166</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**R-squared** 0.846442, Mean dependent var 721.4000
**Adjusted R-squared** 0.840263, S.D. dependent var 258.6724
**S.E. of regression** 63.22275, Akaike info criterion 11.25477
**Sum squared reside** 103925.0, Schwarz criterion 11.44160
**Log likelihood** -164.8216, F-statistic 153.1526
**Durbin-Watson stat** 1.914299, Prob (F-statistic) 0.000000

EViews software output

The significance level prob. and estimation of each model coefficients shows that:
1 - t-Statistic shows that the added value of small and medium sized enterprises (SME) influence Iran's economic development (t = 3.83 ≥ 1.96, p-value = 0.0007), so with a single increase of SMEs added value, economic development increases 0.025 unit.
2 - Value of production and investment value does not affect the level of economic development and does not have a significant relationship.
3 - R-squared value is equal to 0.846. This amount shows that 84 percent of the dependent variable changes (economic development) are explained by the model independent variables and this indicates the high explanatory power of the model.
4 - Durbin - Watson statistics in the model is 1.91, confirms the hypothesis of correlation between model components.
5 - High level of model F statistic (153.1526), showed the significance of the overall regression.

### 5 - Conclusion

The main results in this paper determine the values of correlation coefficients between independent and dependent variables. The correlation coefficient in the significant level is at 1%, equal to 0.765, so it can be concluded that there is a significant relationship between the small and medium companies and economic development, and the p-value is equal to zero and indicates a strong and direct relationship. The correlation coefficient value equals to 0.072 and its significance level equals to 0.000 and less than 5%. This suggests that there is a strong and direct significant relationship between added value and economic development in 95% level of confidence. But according to the correlation coefficient and significance level more that 5% it can be said that production value and investment value have no significant relationship with economic development.

Also it is seen that the added value of small and medium sized enterprises (SME) affects the Iran's economic development. So with a single value increase of SMEs added value, the economic development increases 0.025 units, while the production value and investment value does not affect the level of economic development and the relationship is not significant.

Symbol D represents the first order difference of variables and GDP and SME variables are reliable in the first order difference and the rest of the variables are reliable in levels. So the final result of reliability tests determines that research variables are reliable at level or in first order differences, therefore, by determining the degree of reliability of variables, the desired patterns can be fitted and there will be no difficulties for the models.

Regression model of SMEs is estimated according to the output of the EViews software and calculating coefficients as the below model. Obviously, public makers of policy sector using this model can allocate and share resources in the added value section for small and medium sized companies. Coefficients in the model below show the amounts to be allocated.

\[
ED = 222.4721 + 0.024799 \times VA + 0.000688 \times PV + 0.019395 \times IV
\]

(6.93) (3.83) (0.39) (0.41)
It is recommended that using the research process in this paper, investigators and other researchers consider the following issues:

1 - Research all other variables affecting SMEs and study and test their relationship with economic development. These variables can include employment rates, the amount of cooperation in outsourcing of large companies, the entrepreneurship, and innovation rate in the industry.

2 - To increase SMEs’ empowerment with regard to their impact on economic development, determine the added value equation proportional to the economic development rate. Thus all variables affecting the growth of added value in the SME must be identified.

\[ GD = \Sigma(x_1 \ldots x_n) - TC \]

Here GD represents the economic development which is a function of \( x_1, \ldots x_n \), which represents the increasing variables of added value and TC which represents the excess expenditure or variables reducing the added value.

3 - In case public sector supports the SMEs for economic development, the rate of 0.025 can be considered for the formulation of operational plans and the impact of these programs in increasing economic development.

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