SMALL, MEDIUM ENTERPRISES AS A DRIVING FORCE FOR EGYPTIAN ECONOMIC GROWTH

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ABSTRACT

The main objective of this study is to investigate the impact of expanding SME sector on the economic growth using time series data from Egypt for the period (1980-2010). This study aims to fill the gap in the literature by providing the first empirical study with time series data to investigate the relationship between SMEs expansion and the economic growth for the Egyptian economy .The study proves a positive relationship between SMEs expansion and economic growth, suggesting that the Egyptian government should focus in boosting that sector.

INTRODUCTION

Several economies have been building up due to a strong and dynamic SME sector, like the Japanese & Italian economies, which SME sector play an important role in the economic growth.

The role played by SMEs in achieving economic growth and social prosperity is an attractive topic in the economic arena especially these days. The reason for that is that for a long period of time the economic literature was focusing on the merits of large firms, believing that larger enterprises are much more efficient and a large enterprise in general is the only mean to boost the economy. Even until these days some economists and academics still doubt that SMEs could boost an economy or solve some of the socio-economic problems. This raises arguments in the literature; actually it is an unresolved issue among economists till now.

Since the 1980s Egypt's SMEs were put into consideration by the government and the attention was explicitly turned to them in the 1990s when government realized the need for strong private sector in need as SMEs are considered the main engine for job creation, & increasing the GDP. Egypt has put its plan for poverty reduction in 2005 by ministry of planning, economic research forum and UNDP, a part of that plan was generating more jobs through SMEs .SMEs also help in increasing the average income of women in Egypt.

The Egyptian government does not only announce its total support to the SME sector, it also declares that it depend on this sector to achieve the country's goals for the next years, in fact, SMEs is one of the main component of Egypt's agenda for social and economic development .The Egyptian government promised to support and encourage the healthy environment for SMEs to perform competitively and efficiently.

Most studies that investigate the impact of SMEs use cross sectional data from many countries, only few researches were done using time series data tracing the performance of SMEs on a single economy; the main

objective of this study is to investigate the impact of SMEs expansion on the Egyptian economic growth. But before going through the study .A brief about what are SMEs and what have been said in literature about them is an essential step before going through the empirical study.

Definition of SMEs:

Actually, it is impossible to have a unified single definition of SMEs that fit all countries an all economic sectors, as the definition actually depends on who is defining, where and when the definition is made. However, there are some criteria that are used to define SMEs. Talking about Egypt, there are three criteria for defining SMEs in Egypt; sometimes the criteria could be used solely or as a combination: definition according to capital, definition according to employment, definition according to turnovers.

Even inside Egypt, different sectors and institutions define SMEs in different ways. For example,

- **SMEs definition according to the LAW 41 for small enterprises which defines SMEs according to capital and employment:**

  A small enterprise is any enterprise whose capital is more than fifty thousand Egyptian pounds and less than one million Egyptian pounds employing less than fifty employees, and a medium enterprise is any enterprise whose capital is more than one million Egyptian pounds and less than five million Egyptian pounds employing less than hundred workers.

- The Egyptian central bank defines a small enterprise in terms of capital and turnover. A firm is considers to be an SME if its capital is not less than fifty thousand and not more than five million Egyptian pound and its annual is more than one million and is less than twenty million Egyptian pounds.

  -The Nilex is the SMEs stock exchange, which main aim is to provide adequate funds for SMEs. Nilex define SMEs in terms of capital only, for a company to enter NILEX its capital should not be less than five hundred thousand Egyptian pounds and not to be greater than twenty five million Egyptian pounds.

- The world bank is one of the most important institutions that support SMEs in Egypt and in all developing countries, it defines SMEs in terms of employment and turnovers, no matter what capital is, a firm is to be considered a small one when it employees from eleven to fifty employees, and its annual sales is from three to fifteen million dollars, while it is considered to be medium enterprise if it employs from fifty to three hundred employees and the annual total sales is between fifty million to hundred million dollars.

In fact, different countries have different definitions for SMEs according to sectors and institutions which defines and also according to how developed the country is.

Literature review

In Egypt, believing in the important role played by SME sector to achieve economic growth, ministries form units and institutions in order to support the SME sector.

GAFI under the ministry of investment initiate small and medium investment (SMI) in November 2008. It focuses on four pillars and a monitoring activity aiming to create jobs (OECD 2010), the four pillars are

1. Improving the SME's access to funds
2. Encouraging business development services
3. Promoting entrepreneurial culture in Egypt
4. Forming competitiveness poles

Three bodies (industrial modernization center, the Egypt technology transfer an innovation centers (ETTICs) and the industrial development authority (IDA))under The ministry of trade and industry apply policies supporting the development of SME sector. The ministry has also a sector for SME development policies.

The ministry of finance established SME development unit in 2000, which concentrates in the policy development and research.

All these efforts prove that Egypt is serious in supporting and encouraging the SMEs sector.

Before realizing the importance of SMEs in boosting economic growth, the role played by smaller firms were undefined and misinterpreted in the literature for a long period of time.

In past, small enterprises were seen to be hindering the economic growth by absorbing the resources that could have been used by larger enterprises more efficiently (Audretsch, 2000).

Schumpeter, Galbraith and Ace believed that larger enterprises are more efficient than smaller ones.

Schumpeter argued that economic growth could be achieved only through large enterprises due to the advantage of economies of scale that larger enterprises enjoy in the production of economic and technological knowledge, which he believes are the engine for economic growth. (Schumpeter1950)

Schumpeter was more concerned about the monopolistic market structure-as large firms monopolize the technological process- not the market size, so The idea that larger enterprises have the potential to succeed more than smaller ones could be attributed to Galbraith.

Galbraith argued that larger firms are dominant in almost all the aspects of economic behavior (Galbraith 1956).

Schumpeter and Galbraith build their arguments in the belief that in global world it is extremely difficult for small firms to survive and compete with larger firms.

Ace suggests that for any economy who wants to boost the economic growth its focus should be on larger firms not smaller ones. (Ace 1996).

In the late 1970s and beginning of 1980s economists started to look at SMEs in a different way as they traced a change in the underlying determinants of industrial structure. Since the industrial revolution took place until the 1960s, large enterprises which monopolize economies of scale were seen to be the dominant engine for economic development but after the appearance of computer based technology in production, information and administration the importance of economies of scales has been reduced and SMEs became more innovative and more efficient in producing intermediate goods (Gebrmariam, Gebremedhin, and Jackson.2004).

Several studies done by (Loveman & Sengenberger 1991, Acs *et al*., 1990 and Audretch, 1993) reported a restructure in industry which caused a shift towards an increase in the role in of smaller firms due to changes in labor supply, higher level of education, consumer demand, production technology and the need for flexibility and efficiency,these studies also found that the shift's extent and timing are the same in all countries. (Loveman & Sengenberger, 1991; Acs *et al*., 1990 and Audretch, 1993).

According to Van stel 2005 wennekers *et. al* studies that use data from developed countries suggest a positive relationship between SMEs and economic growth while studies done using data from developing countries suggests a negative relationship between SMEs and economic growth. Those differences were explained by (ACS *ET AL* 2008) to occur in empirical results due to the different responses of entrepreneurship to the institutional arrangements. (ACS *ET AL* 2008)

One of the most important studies in this topic was provided by (Beck& Demirguc- Kunt &Levine 2005) as it provided the first cross sectional evidence on the linkages between SMEs, economic growth and poverty alleviation. A regression of GDP per capita growth on SME was done based on the 1990s data from forty five countries. the share of the manufacturing labour force were used to measure the relative size of SMEs. The study yields three results:

(a) There is a significant positive relationship between the relative size of SMEs and the GDP per capita growth even after controlling other characteristics of countries involved that might account for differences in economic growth,

(b) The study failed to support the idea that SMEs exerts a casual impact on growth. (This supports the idea that larger size of SMEs sector is a characteristic of a growing economy not a cause for this rapid growth.)

(c) No evidence was found about the contribution of SMEs in reducing poverty or decreasing income inequality.

It should be referred that this study examines SME employment not SME subsidization which means that even if it is proved that SMEs increase economic growth ,enhance economic development and reduce poverty; that does not mean that subsidizing SMEs by government would have those beneficial effects.(Beck *et. al* 2005).

A limitation in the existing empirical studies examining SMEs and their impact in economic growth is that most of these studies are based on data from developed countries one of the few studies examining SMEs in developing countries is done by Ming-Wen Hu & Meng-chun Liu, the study provide an empirical study using data of thirty-seven countries both developed and developing over the period 1960s till 1990s to examine how SMEs sector affects the economic growth. The study reported a positive relationship between SMEs and economic growth and they also concluded that in mature economies the SMEs' contribution in   economic growth is driven from the inherited entrepreneurship, while in less developed countries SMEs enhance economic growth through job formation, so each economy needs its own SMEs policies according to its structure and size. (Ming-Wen Hu and Meng-chun Liu 2003).

One of the recent studies about the impact of SMEs in economic growth was done in Loughborough university by (Cravo, Gourlay,Becker 2009) which examines the relationship between SMEs sector and economic growth in brazil, they use the employment share of SME sector and the level capital in SMEs to examine the importance of SMEs sector using annual panel of Brazilian states during the period (19985-2004).The study found a negative relationship between relative size of SMEs and economic growth and they reach a conclusion based on the study indicating that the level of human capital in SMEs is more important for economic growth than the relative level of SMEs. (Cravo, Gourlay, Becker. 2009).

In this paper the researcher will also depend on time series data as the main objective is to examine the impact of SMEs in enhancing the Egyptian economic growth and poverty reduction.

Other limitation in the existing emperical studies most studies examining the impact of SMEs in economic growth provide cross sectional data of several countries, very few provide time series data. This paper for example must need time series study because it aims at investigating the relationship of SMEs sector in Egypt in the Egyptian economic growth, so it would be more efficient to use time series data than using data from many countries.

(Gebremeskel H. Gebremariam& Tesfa G. Gebremedhin& Randall W. Jackson, 2004) examined the role played by small firms in economic growth and poverty alleviation in West Virginia. The paper tried to establish a statistical relationship between the development of small business and economic growth using state-specific time series data .the study also attempted to test the evidence from time-series based poverty literature on the linkage between macro economic performance and poverty by using Virginia's aggregate time series data. the objective of the study is to evaluate the role of small business in economic growth and poverty alleviation in West Virginia so they used time series data for the period (1980 to 2001) as. (Gebremariam *et.al*, 2004) who used four econometric equations to find the following results:

(a) There is a robust, positive relationship between the size of small firms and economic growth even after controlling for many other growth determinants

(b)There is an intense inverse relationship between the relative size of small firms and the presence of poverty,

 (C) A negative relationship between per capita real gross state product growth and the existence of poverty was found.

(D) The impact of relative size of small business on poverty rate is weak and insignificant, this suggests that the inverse relationship between the size of small firms and poverty existence is not a direct one, rather it is indirect as it could be achieved through economic growth, so the impact of small business on poverty alleviation is obtained mainly through economic growth.

In this paper the first equation had to be modified to become more adaptable to the Egyptian economy in order to investigate the impact of SMEs expansion on economic growth (section #IV).

As previously discussed, SMEs sector boost the economic growth in developed and developing countries through different ways, as it enhance the economic growth in developed countries through inherited entrepreneurship and in developing countries through creating jobs. (Ming-Wen Hu and Meng-chun Liu 2003).

As a developing country, Egypt mainly benefits from SMEs' through the jobs created by this sector which contribute in economic prosperity through raising the GDP and social and political prosperity through reducing poverty and redistributing income in favor of the lower income group.

However, it is a debatable issue among scholars whether SMEs provide better job opportunities in the economy or not, as some economists argued that large firms are better in job formation(Armington and Odle, 1982; Dunne *et al*., 1989; Brown *et al*., 1990; Acs and Audretch, 1993; Duncan and Handler, 1994; Harrison, 1994 as cited in Beck, *et.al* 2005) while others (Brich 1979,miller 1990,thurik 1996,Caree and thurik1988)referred to SMEs as the best sector to generate jobs.

Brich (1979) believed that small firms are important in job creation, his study examined the American economy in the period between (1969 to 1979) he reported that firms which are employing less than 100 employees contributed by 80% of jobs created in the American economy over the period 1969 to 1979 (Brich 1979) ,while Miller (1990) found that in the period between 1980 to 1986 net employment growth in existing small rural firms were much faster than in large firms.(miller 1990)

Thurik (1996) applied data from twelve of the European Union countries to test whether the growth of small firms exert a significant higher effect on GNP growth than large firms' growth, he found that smaller firms were to be more influential in solving the European unemployment problem and the weak competitiveness problem.

According to the evidence from 13 European countries Carree and Thurik argued that in 1990s the increase in the share of large firms' employment over the overall employment level led to negative effects on the economic growth meaning that SMEs employment leads to better effects on economic growth. (Carree and Thurik (1998).

Other studies do not agree that SMEs create jobs, enhance economic growth or reduce poverty. (Armington and Odle, 1982; Dunne *et al*., 1989; Brown *et al*., 1990; Acs and Audretch, 1993; Duncan and Handler, 1994; Harrison, 1994 as cited in Beck, *et.al* 2005).These studies show that despite of the large growth rate in percentage term most of the new firms do not grow.

Forexample,Biggs *et. al* (1998) found that in sub Saharan Africa larger firms were the main source of net job creation in the manufacturing sector.

One of the main points taken against SMEs sector is the quality of jobs it provides (Rosenzweig, 1988; Brown *et al*., 1990) have proved by empirical evidence that larger firms provide more stable employment, higher non-wage

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(Rosenzweig, 1988; Brown *et al*., 1990) have proved by empirical evidence that larger firms provide more stable employment, higher non-wage benefits and higher wages than small firms in both developed and developing countries.

Some empirical evidence showed that firm size does not well predict labor intensity as it differs more across industries than across firm size groups within industries it could be that some small firms are more capital intense than large firms in the same industry(Little, I. M.D., Dipak Mazumdar, and John M. Page, Jr, 1987; Snodgrass and Biggs,1996).

(Davis *et al* (1993) a as cited in Beck, *et.al* 2005) argued that while it is true that the gross rates of job creation and destruction are larger in small firms but there is no systematic relationship between net job creation and firm size.

Beside job creation innovation is one of the main important forces for economic growth as it increases the potential GDP that the economy could reach. As discussed above, Schumpeter referred to larger firms as more innovative and thus more useful to the economy than smaller ones which are less innovative however, many arguments have been raised claiming the small firms could be more innovative.

While Pagano and Schivardi (2001) used sample of European industries and show that large firms perform faster innovation rates than smaller firms ,(Arrow and Reynolds ,1999) on the other hand pointed out that large firms may depend on their monopoly power to postpone the outcomes of innovations and they also lake the motivation and incentives to increase their productivity so their contribution to economic growth could be less than the contribution of SMEs which are always motivated to improve its productivity.

The existing literature does not include any empirical study done to examine the impact of SMEs in the economic growth with Egyptian data, the reason for that is the unavailability of SMEs data in Egypt, that in some cases is impossible to obtain accurate or semi accurate data for a larger number of years. This is also a limitation in the existing empirical study.

The aim of this paper is fill the gaps in the current literature by providing an empirical study investigating the relationship between the expansion of SMEs and economic growth using data from Egypt for the period (1980-2009)

Model specification

As previously mentioned the main objective of this study is to investigate the impact of SMEs expansion on the economic growth of Egypt while simultaneously controlling for other macroeconomic factors that affect economic growth.

Most of the studies done to examine the impact of SMEs on the economic growth uses cross-sectional models, but the main aim of this study to specify the impact of SMEs expansion on the economic growth in Egypt

specifically, so a time series model with Egyptian data will be much more efficient to accept or don't accept the paper's hypothesis, that the expansion of SMEs and economic growth have a positive relationship.

One of the very interesting models about that topic is a model adopted by (Gebremariam, Gebremedhin, Jackson 2004) which was investigating the link between SMEs expansion economic growth and incidence of poverty in West Virginia. The first equation used in the model is examining the impact of SMEs expansion on economic growth in west Virginia.

The study actually includes other models to examine the impact of SMEs in the incidence of poverty but this paper is also interested in examining the impact of expanding SMEs sector in economic growth only).

After reading and studying most-if not all- models developed to address that topic, it was found that this model is the most suitable model to study impact of SMEs in the Egyptian economic growth due to many reasons, unlike most studies this study is one of the very few models that uses time series cross sectional data, so it is to the point that the researcher is aiming to prove.

The model adopted in the study is a time series regression that uses real gross domestic product per capita (RGDPC) as a dependent variable, while using the employment created by of small and medium enterprises (SME) as a proxy to SMEs expansion, and it also uses the unemployment rate as a proxy for the effect of business cycle on the rate of growth of real GDP per Capita The model will use the consumer price index to control for inflation. In the model adopted by (Gebremariam, gebremedhin ,jackson 2004) they use government transfers to persons per capita and rate of inflation as control variables but in the model adopted by this study ,the researcher tried to find a proxy to the government transfers that is of more importance in the USA, so subsidies per capita is the best Egyptian alternative for the American transfers . and it also include trend variable T to reflect the aggregate trend in the real GDP per capita ,finally the error term is represented by u_t.

This relationship is depicted in the following equation:

$$GDPC_T = \beta_0 LSME_T + \beta_2 LCPI + \beta_3 UNMP_T + \beta_4 LSUBC_T + \beta_5 T + u_t$$

Table one show the expected signs of the variables

expected signs

| variable	DISCRIPTION	Expected sign
LSME	LOG of SMEs employment	POSITIVE
LSUBS	Log of subsidies per capita	POSITIVE
LUNMP	Log of unemployment rate	NEGATIVE
LCPI	Log of consumer price indices	NEGATIVE

Table 1

Data Analysis

Real GDP Per Capita (GDPC)

Real GDP per capita is used as a dependent variable to explain the impact of SMEs expansion on the economic growth. It is calculated by dividing the real GDP by the total population. .

Real terms not nominal terms are used in the model as they are more efficient to measure the real changes, because they are adjusted to consider changes in the price level.

The data of Real GDP per capita for the period (1980-2009) is extracted from the world development indicator (World Bank) and CAPMAS, they are expressed in dollar terms, using Purchasing Power Parity (PPP) approach with year 2000 as a base year.
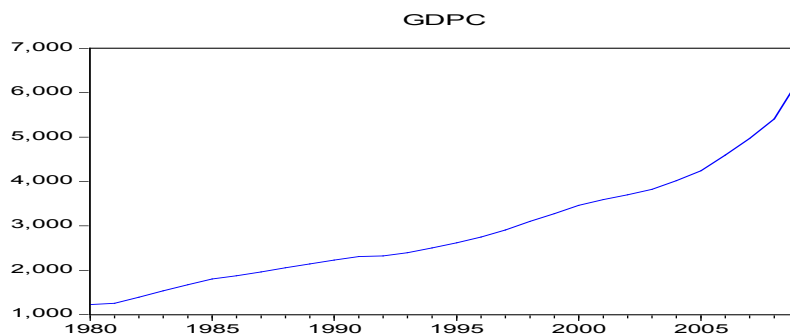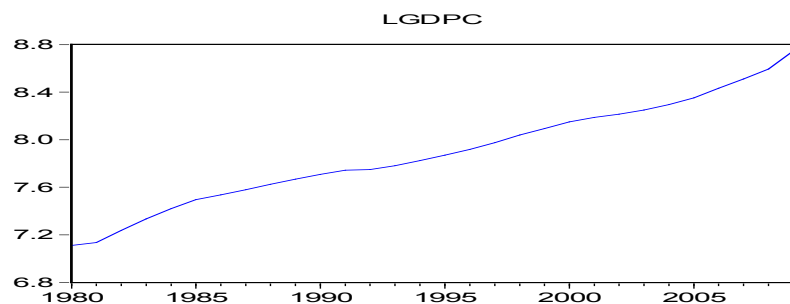

Source: World Bank and Capmas Fig 1

As shown in the fig GDP per capita has an upward sloping trend but with a magnitude of less than that of the population growth.

It varies between $1223.856(minimum) and $6300(maximum) with an average or mean of $2913.432 and its median 2560.433 and its standard deviation is 260.1438.

Log of GDPC (LGDC) will be used in the model (represented in the following graph

Fig. 2: Source World Bank and Capmas

LGDPC varies between 8.74(maximum) and 7.1(minimum),with average or mean of 7.886 and median of 7.84 and standard deviation of 0.43 Using the unit root test to test for stationarity it was found that including the intercept the data found to be stationary at 1st difference (I1).

Small And Medium Enterprises Employment

In their model (Gebremariam, Gebremedhin ,Jackson 2004) used the employment share of private firms employing less than 500 workers as a cut off for SMEs However, because Egypt is different than USA, the same definition could not be used.

After talking to Mrs./Reem El Saidy the manager of the SMEs unit in the General Authority For Investment (GAFI) and some other officials in CAPMAS and ministry of economic development, based on what they all confirmed ,it was concluded that it is impossible to find yearly data on SMEs using the employment definition. So as a proxy to SMEs employment, an excellent alternative will be used in the study which is: (SME) the total expected employees that are recorded at the time of the firm's founded at GAFI.

The data was extracted from GAFI the general authority for investment. The cutoff definition of SMEs (based on the best available data and the Egyptian law 43) is according to the capital.

Based on their capital, Small firms are defined as firms which capital is more than five hundred thousand L.E and less than one million L.E. and medium enterprises are defined as firms with capital more than one million L.E. an less than five million L.E.

The log of SME will be used as proxy to the expansion of SMEs sector.(represented in the following graph):
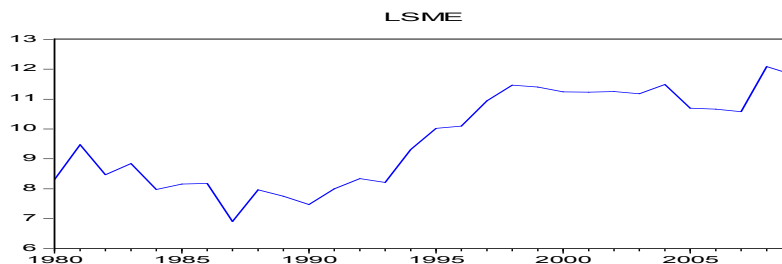

Fig. 3: Source : Gafi

As shown in the graph the number of SME has increased sharply since 1990 when new economic reforms was adopted and they increased more after 2005 when new economic reforms that encourage investments took place but it decreased again after 2007 due to the effect of financial crises that hit the whole world.

The logs of SME vary between 12.08577 (maximum) and 6.906755(minimum) with an average (mean) of 9.650700 and median 9.746687 with standard deviation1.574.

Unit root test is used to test for stationary; including intercept it was found that LSME is stationary at first difference. (I1)

Unemployment rate (UNMP)

Unemployment rate is used in that model as a proxy for business cycle effect on real GDP per capita.Unemployment rate could be calculated using two methods(Hassan, Sassanpour 2008) , the narrow one which is: The

percentage share of unemployed people of the labor force given that the unemployed people are defined as people who are at the age of work (15-65) and are actively seeking job and could not find. While the broad one is the share of unemployed people including both those who search for a job and those who do not. The definition implied in this study is the narrow one.

Data for Unemployment rates for the period (1980-2009) are extracted from the world development indicator (World Bank) and the missing dates was extracted from CAPMAS and world financial statistics (IMF).The log of unemployment LUNMP will be used in the model.(represented in the following graph:
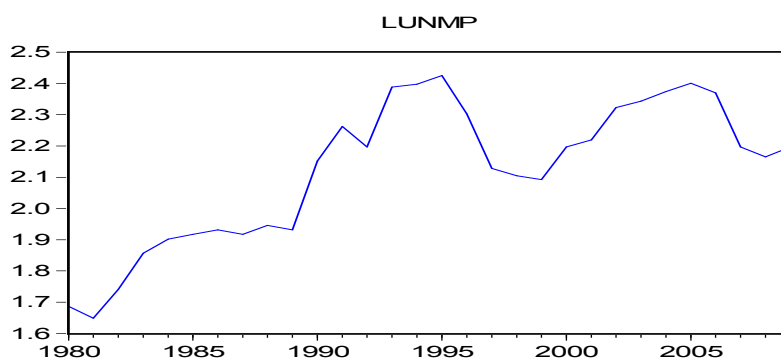
Fig. 4: Source : Capmas and World bank

The Unemployment in Egypt in the period 1980-2009 ranged between 5.3 and 11.02 with average or mean of 8.4322 and a median of 8.76,it reached its maximum(11.02%) in 2005 while in 1980 it was at its minimum (5.3%.) .the standard deviation of unemployment data set is 1.747

The log of unemployment in Egypt for the period 1980-2009 ranges between 1.65(minimum) and 2.42(maximum) with a mean of 2.12 and median of 2.18 and standard deviation of 0.226. As shown in the previous graph, although showing some fluctuations over that period, unemployment tends to adopt an upward trend

When the government was publicly investing in heavy industries and was exercising import substitution activities until the mid-1970s Egypt experienced high growth and employment. in fact the government adoption of guaranteed employment policy helped more in the absorption of unemployed people as the unemployment rate was ranging between 2%and 3% but when Sadat came to adopt more liberal and open market activities in the mid 1970s although achieving high investments which positive effect are reflected in more growth and productivity, it did not help that much in creating employment opportunities(unemployment rates increased to range between 5-7%) because as suggested by (El Ehwany 2004)   there was a high rate of inflation and the currency was highly overvalued and the monetary policy was

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expansionary one all these factors lead to high capital intensity in Egypt at that time (Hassan Ataal.2008).

As shown in the previous graph even since 1990s the unemployment rates was still high (ranging from 8-11%) ,the economic reforms that took place in the beginning of 1990 to mid 1990s although increasing the growth but its impact on employment creation was not that great.

In the early 2000 the Egyptian economy was stagnated so as shown in the curve the unemployment even rose significantly.

In the mid-2004 Egypt adopted an economic reform program, and the external economic environment was so healthy so in 2005 the economic growth rose sharply. this rise in the economic growth that occurred obviously in end of 2004 has sharply driven the unemployment rate down because the characteristics of growth has changed being more broad based and job rich as between the end of 2004-2007 the unemployment rate has fell by about 1%.

In the 2008and 2009 the employment has dropped due to the effect of the global financial crisis that was rooted from the USA.

Unit root test was done to test for stationary of the data and including intercept it was found that LUNMP is stationary at first difference. (I1)

Subsidies Per Capita

Subsidies could be considered as financial aid, given by the government to poor people.

In the model subsidies per capita was included to control for the effect of subsidies offered by government on the real GDP per capita, logs were taken to smooth the graph.
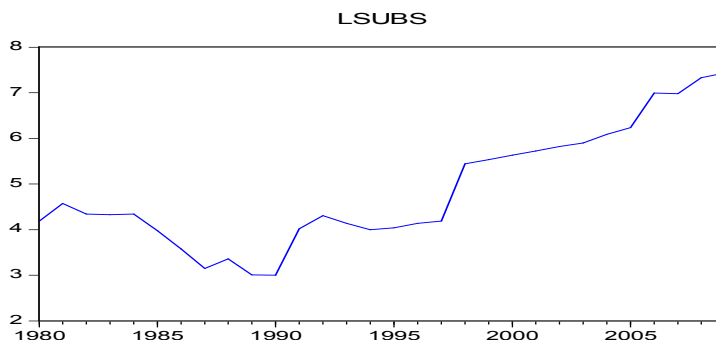
Fig. 5: Source: IMF, World Bank indicator ministry of economic development and Capmas

LSUBS varies between 3 (minimum) and 7.4(maximum) with average or mean of 4.9 ,median of 4.33 and standard deviation of 1.3

Data of total subsidies and other transfers are expressed in dollar terms and are extracted from many sources due to the unavailability of data for some years in all sources. Those sources were CAPMAS, WDI, IFS and ministry of economic development.
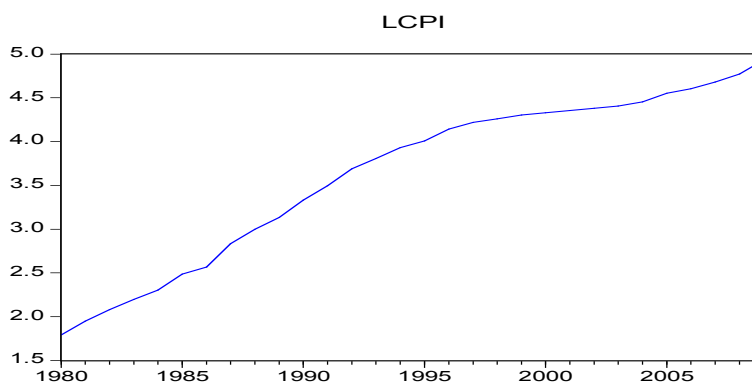
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To test for stationary unit root rest is used, and the result was: including intercept the data was found to be stationary at the first difference. (I1)

Consumer Price Index

CPI is used in order to control for the effect of price changes in the real GDP per Capita

Consumer price index is an inflationary indicator used to measure price changes of a fixed basket containing a set of necessary goods and services.

The model will use the log of CPI data (reflected in the following graph)

Source : World Bank fig(6)

As shown in graph LCPI for the period (1980-2009) tends to have an upward sloping trend indicating a continuous increase on the general price level. Data on log CPI for the period (1980-2009) ranges between 4.9(maximum) and 1.7 (minimum) with an average or mean of 3.63363 and median of 3.969579 and its standard deviation is 0.69.

Data of CPI is extracted from the world development indicator with base year 2005.

In order to test for stationary, unit root test is used and the result was **:** including the intercept the data found to be stationary at 1st difference (I1).

Empirical Results

Before running the model Co-integration test is used to determine whether there is at least one long run relationship between the variables or not. In fact it was found that at most there are four long term relationships between the variables.

The model will take dummy variables as exogenous factors for two years (2005 and 2008),as the economy stagnated in 2005 and a global financial crisis happened in 2008,both could be considered as exogenous factors affecting the real LGDPC

The previous table shows the results of the model. In fact the model is expressed in double log form so the coefficients represent how elastic the dependent variable to the independent ones.

The form of the model is

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$$GDPC_t = 7.347923 + 0.024670 \, LSME - 0.034785 \, LCPI - 0.079053 \, UNMP - 0.015870 \, LSUBC + 0.05302T + u_t$$

LSME is a significant variable .The economic growth elasticity to one percent increasing in SMEs is 0.024, which indicates a positive relationship between economic growth and SMEs expansion.

For unemployment, by the negative sign attached to its Coefficient, it proves its counter-cycle effect on the real GDP Per Capita, meaning that if unemployment rate increase by one percent, it will cause the real GDP Per Capita to fall by 0.07%.

For subsidies per capita, it does not come with the expected positive sign, a reason for that is that in some cases subsidies and other transfers act as a disincentive for people to work as they depend more on those aids.

CPI also proved its counter-cycle effect on economic growth as its coeffiecient has a negative sign meaning that if the prices increase by one percent this will lead to a fall in GDP per capita by 0.03 percent.

Based on the result shown in the above table, the coefficient of the Trend variable has positive sign reflecting the fact that real GDP per capita is increasing over time.

These results indicate a positive relationship between SMEs expansion and the economic growth, which is the thesis of this study.

The adjusted r-squared is 0.90 indicating that this model is a strong one meaning that 90% of the variability in the dependent variable (GDPC) is explained by the variability of the independent variables included in the model.

After running the model, the following results were found:

Name of the variable	Results
Constant	7.347923
LSME	0.024670 (0.00489) [-5.04025]
LUNMP	-0.079053 (0.00948) [8.33834]
LSUBC	- 0.015870 (0.00272) [5.83923]
LCPI	-0.034785 (0.00876) [3.96895]
Trend	0.053302
ADJUSTED R-SQAURED	0.907668

Numbers in ( ) is the standard errors an numbers in [ ] is the t-statistic

Conclusion and policy recommendations

The impact of SMEs expansion on economic growth is one of the debatable issues among economists and policy makers. This paper provides an empirical study to examine the impact of SMEs expansion on economic growth; it proves that the expansion of SME sector has a positive impact. In fact, SMEs sector in Egypt suffers many problems that hinder its

development and performance. Before recommending solutions and policies to be adopted it is essential to present the most important problems in the SMEs sector, which are:

The huge informal sector:

One of the most important problems that hinder the SME sector to exercise its strong impact of the society is that most SMEs are informal. According to (Attia 2009) about 82% of total economic units are informal ones and about 40% of total employment is in the informal sector. The huge volume of the informal sector is a disaster to the SME sector as it distorts competition in SME sector and reduces the efficiency of the policies taken by the government.

Data Unavailability:

One of the most difficult steps in this research was collecting the data, the data about SMEs is almost unavailable although many institutions and ministries are working to support SMEs, none of these institutions possess accurate or near to accurate annual data about the employment share of SMEs, the capital or the annual sales.

All the officials complained about the unavailability of a strong data-base collecting all data related to SME sector.

The weak connection and cooperation between institutions supporting SME sector

Although many institutions are working to support SMEs, they suffer a huge problem, as there is no coordination or cooperation among these institutions.

In fact the set- up of the SME sector is too complicated in Egypt, as many parties are involved in its policies. For example the institutional framework for SME policy comprises:

    A.GAFI from the ministry of investment

    B. Industrial modernization center, Industrial development Authority (IDA|) and the ministry of trade and industry

    C.SME development unit from the ministry of finance

    D.RDI program from the ministry of higher education and research

All these institutions issuing policies without a bond connecting them altogether, this reduces the effectiveness of policies adopted by each of them.

SME's are not monitored:

There is no unit in Egypt to monitor the performance of SMEs after their initiation; the government is actually unaware of what these firms are doing and how they develop. (Reem El Saidy)

The difficult access to funds:

In fact, many SMEs shut down because of the failure to access funds. In general banks prefer lending large corporation with a strong credit history, the bank will not take the risk to lend a small or medium enterprise and they can't issue shares in Cairo and Alexandria stock exchange market. So they suffer a huge problem in finance.

Those are the weak points in the Egyptian SME sector, the researcher will then try to find solution for those problems.

Policy recommendations:

In order to solve the informality problem, the researcher suggests that the government should attract the informal sector to join the formal sector by providing tax compliance and more privileges and aids to the formal firms in order to convince the owners of the informal businesses that the benefits of being a formal SME outweighs the costs. The government should also aggressively penalize those who are caught running an informal business.

In order to solve the data unavailability problem, the CIDA (Canadians International Development Agency) arranged with the CAPMAS a data base that would collect all possible information about SME sector. Data should be updated annually in order to help policy makers to take decisions based on scientific basis to make sure that policy adopted are realistic to achieve the targeted goals and if not they would be changed quickly in order to save wasted resources.

There should be a separate unit which is independent form all involved parties, its mission is to put a unified framework for all involved institutions to be abide by and to make sure that they are working in harmony with each other. To avoid the weak connection and poor cooperation problems between parties involved in the sector.

Basically SMEs should be supported; moreover monitoring firms of that sector over their life time is important in order to be aware of the changes, problems and challenges facing SMEs in order to support them with aids not only at their initiation but also during several stages of operation.

The problem of financing SMEs in Egypt is partially addressed by the establishment of NILEX exchange market which supposed to help SMEs to access funds, but what is equally important to the establishment of such an institution is to convince investors to invest in this market, because if the stock market is established and people are still uncomfortable to invest in SMEs, it would be useless ,so, campaigns and advertising should be used to attract investors and make them aware of the potential gains they could have.

In conclusion, the study found a positive relationship between the expansion of SME sector and the economic growth, this result suggests that the government should directly encourage SME sector to achieve higher economic growth.

The government should rationalize the efforts to support SME sector, aids and policies should be implemented wisely to identify the problems and solve them professionally then this sector will be a strong base to overcome the socio-economic problems facing Egypt.

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دور منظمات الاعمال الصغيره والمتوسطه في التنميه الأقتصاديه في مصر

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تهدف هذه الدراسه الي تقدير حجم مشاركه منظمات الاعمال الصغيره والمتوسطه في التنميه الأقتصاديه حاليا والدور الذي يمكن ان تلعبه هذه المنظمات في تنميه الأقتصاد المصري اذا ما تم تذليل العقبات التي تعوقها اعتمادا علي التحليل الأحصائي بأستعمال السلاسل الزمنيه في خلال الفتره من ١٩٨٠ ـ ٢٠١٠ وقد اثبتت الدراسه ان هناك علاقه ايجابيه بين زياده المظمات الصغيره والمتوسطه وزياده النمو الأقتصادي في مصر خلال سنوات الدراسه كما تعرضت الدراسه الي استكشاف بعض اوجه القصور الواجب علاجها واقترحت بعض الحلول التي يمكن اخذها في الاعتبار لتشجيع التوسع في هذه المنظمات من حيث الكم والحجم.

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