The Impact of Privatization on Company Performance, the Case of Egypt

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Dedication

To the soul of my dad and to my mum.

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Abstract

Privatization continues to be one of the debated topics among scholars and policy makers for decades now. This study will assess the results of the biggest privatization program in the Middle East; Egyptian programme. In the study, the impact of the Initial Public Offering privatization mode on the State Owned Enterprises will be assessed for 61 companies over a period of 16 years. The objective of the study will be achieved by examining two key aspects; first, the impact of privatization will be assessed by comparing pre to post privatization performance. Secondly, in order to relate the impact of privatization to the transaction itself, the performance of the privatized companies will be assessed in comparison to a fully private set of companies. The analytical framework that will be used to analyse the performance of IPO privatized companies will be done by examining the profitability, operating efficiency, the sales, employment level and leverage.

By applying various statistical models and techniques, the results of the study indicated that the privatized companies post treatment examined a significant positive change in profitability, and operating efficiency and a negative impact on the leverage and employment level. Further, by relating the performance of the privatized companies to that of private companies the study concluded that the privatization brought in a significant increase in EBIT and ROE while not having significance for ROS, and ROA for the profitability measures. Further, there was not significant change for Sales Efficiency and significant for the Income Efficiency; While the results of the leverage measures indicated that the privatization treatment TD/TA to be not significant and on the contrary to the TD/TE. The results of the Employment measures and Sales were significant. The comparison relative to the private gave interesting results where the DID coefficient was significant for the EBIT, ROE, the employment, sales, the leverage and the Income Efficiency; While the results was not significant for ROS, ROA, Sales Efficiency.

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Chapter 1: Introduction

1.1 Overview

Privatization as an ideology has been dominating the scene of economic reform for the last three decades all over the world. The spread of the idea gained pace with more than eighty countries adopting privatization programmes and more than 6500 State Owned Enterprises being privatized (Hinnawi and Ahmed, 1995). The phenomenon spread from the UK, the pioneer in privatization, to smaller economies and less developed countries as an effective tool for economic reform.

The conceptual idea behind privatization is preliminary extending the ownership base of State Owned Enterprises through selling or leasing assets, forming partnerships, or contracting out management. The privatization transition in most cases will lead to efficient company operations due to the change in objectives of the companies and due to the pressures being put on mangers by markets to improve performance. This will consequently be reflected in the profits of the companies and the maximization of the shareholder's wealth. Therefore, it clear that privatization can play a crucial role in any economic reform programme.

The government decision to implement a privatization program will for sure have a predefined set of objectives that need to be achieved by adopting this tool of economic reform. The objectives of any privatization program (Eytan Sheshinski and Luis F. López-Calva 2003) are mainly:

- To reduce the overall budget deficit
- To create competitive markets
- To extend the ownership base
- To develop capital markets

The common objectives of any privatization programmes mentioned above highlight the fact that the privatization programme is usually being used by centrally planned economies to move towards a more liberalized market.

The Egyptian experience shows that after adopting a centrally planned economic policy for more than 2 decades, the government decided to move toward an open market model in the mid of 1970s. The Egyptian economic reform faced lots of obstacles and inconsistency in outcomes over the last 2 decades due to lack of vision and clarity. The phenomenon of economic reform became an inherent activity in the Egyptian economic life through which the government aimed to achieve economic stability. However, it cannot be denied that the Egyptian government didn't have a broad and clear economic reform policy till the early 1990s with a central focus to privatize public sector and to move toward a market based economy (Omran, 2002). Although the economic reform started with minor step toward a more liberalized market approach in the mid-1970s, the economic reform is viewed by researchers to embark only toward the early 1990s.

The 1990 economic reform policy was based on the concept of giving the chance to the private sector to drive the economic development. Therefore, the government launched a major privatization programme and the first step was to cut subsidy to the State Owned Enterprises. Thereafter, the government started by putting a program to start the privatization of around 314 State Owned Enterprises. The first company group was privatized in the year 1994 which represented a drastic change in the Egyptian economy. The Public Enterprise Office was the government agency which drove the whole restructuring program. The major role of the office was to set the privatization plans and to monitor the restructure of such plans. The Egyptian government took several steps to show its commitment toward privatization. That was clearly evident in the issuance of the Public Business Sector Law in 1991 where it was a solid commitment from the

government toward economic liberalization, enhancement of the private sector participation in the economy and to proceed with the privatization program. When the law was issued, it was estimated that the public sector accounted for around 75% of the gross industrial production and to around 56% of the non-oil exports; (Dultz, Oliver, 1998).

Upon the issuance of the law, the publicly owned companies were transformed somehow into independent business entities. Further, a management framework was established to gradually eliminate the ties between the goals of the publicly owned companies and to exert some pressures on the companies to run as profit driven organization by reducing the ties with the overall macro-economic objectives of the government.

The publicly owned companies that were chosen as the first batch to undergo privatization were chosen according to the following criteria:

- The industry had to be strategic

- The company needed regulatory reforms

- The company had to be large in size

By adopting this strategy and criteria of selection, the government kept the major companies looking after utilities, banking and Insurance, and Oil and Gas as part of the government activities (Omran, 2002 and Roads, S, 1997).

The issued law has highlighted that the privatization program should be implemented with the following restrictions:

- To encourage the competition in the economy

- To encourage the public to participate in the economic development through participating in the IPOs of privatized companies

- Transferring the private sector experience in management to the public sector.

The publicly owned companies which are being prepared for privatization are called affiliated companies and they are organized under the umbrella of the holding company. The affiliated companies' management is responsible for running the company on daily basis and to ensure the performance of the company is enhanced. The goal of this structure was either to prepare the company for privatization through proper restructuring and present value maximization or to prepare it for liquidation. The intention of grouping affiliated companies was to club the profitable and unprofitable companies and to create a sectorial mix rather than concentrating the companies in sub sectors and also to end any monopolistic tendencies (Weiss, Dieter, and Ulrich Wurzel, 1998).The Law was the cornerstone that triggered the whole privatization and restructuring in the Egyptian economy, by creating a level playing field for both publicly owned and privately owned companies. Further, the law sets clear rules for the publicly owned companies:

- Profit maximization

- No direct or indirect subsidies to those companies

- No soft loans.

- Full autonomy in operations and decision taking.

Also the law freed the companies from pre-set prices and sensitivities of moving prices, and it gave the management the freedom to hire the needed labor force without considering any access (Omran 2009).

From different perspective, it is worthwhile mentioning that there are some legal weaknesses in the Egyptian privatization law (Tesche and Tohamy, 1994). A major weakness was nominating government ministers as heads of the Holding Companies. This in one way or another will affect the relationship with the government and will keep the government intervention present in the privatization process. Another weakness was the fact that there is no timeframe on how long should the affiliated company continue to incur losses before the holding company takes the decision to liquidate the company.

The model adopted by the Egyptian Government is based on having Holding Companies with affiliated subsidiary companies. At the point when the Holding Company feels that the subsidiary company is ready for privatization the decision is then taken and the process will then start. It is mainly the role of the Holding Company is to prepare the companies for privatization. The relation can mainly be seen from an agency theory point of view where the directors of the Holding Company are agents who work on preparing the companies for privatization. The government is in the position where it is encouraging the director to implement the policies for privatization.

1.2   Research Objectives and Hypotheses

This thesis examines the privatization programme of Egypt and assesses the impact of change of ownership on performance of Egypt's privatized companies. The thesis will have the following goals:

1. To assess the impact of Egyptian privatization program on the performance of IPO privatized companies pre- and post-privatization

2. To compare the post-privatization performance of Egyptian IPO privatized companies with matched private companies in the same sector.

In order to achieve the objectives shown above for this thesis, there are two main hypotheses to be tested:

Hypothesis 1: Privatization of Egyptian companies through IPO will result in the improvement of the performance of those companies following privatization.

Hypothesis 2: Privatization results in improvement of performance relative to private companies' performance

1.3 Importance of the study

The Egyptian economy has been very well known until the nearly the end of the twentieth century to be one of the regional economies managed through a big set of State Owned Enterprises where they have governed more than 70% of the economy. The State Owned Enterprises did not demonstration any sort of efficiency in delivering their objectives to the Egyptian economy. This incapability to serve the economy's objectives was the main reason to trigger the ambitious reform programme. The Egyptian government was sure that the role to be played by the private sector in the economic reform will be vital and that's why the government started the privatization programme to increase the private sector participation in the economic development. Also, another reason was to benefit from the efficient management of the private sector in running the State Owned Enterprises. This research work is intended to study the impact of the privatization as a transaction on the performance of privatized companies in Egypt.

There are several studies done to inspect the impact of privatization on the privatized companies among which the work done by Megginson, W. L., Robert C., Matthias V. (1994), Dewenter, K. and Paul H. M. (2001), Boubakri, N. and Jean C. (1998), D'Souza, J. and Megginson, W. L.. (1999), Omran (1999) and Boardman, A. and Aidan R (2002). All of these studies have concluded that the privatization as a transaction has a positive impact on the overall financial performance of privatized companies when compared to their performance pre-privatization. Further, all of these studies have taken a generic assessment of privatization transaction and didn't consider assessing any given mode of privatization. On the contrary, this research work will examine only the privatized companies in Egypt through an Initial Public Offering which is considered different to the above studies in the time spam taken, the jurisdiction as a transitional economy in Middle East and Africa, and the mode of privatization used. Therefore, this study is expected to shed light on the importance of the governing level of ownership whether it is partially or fully owned by the private sector which was not covered in the above mentioned empirical studies.

Another, contribution of this study is to assess the impact of privatization transaction and other contributing factors on the privatized companies by comparing them to pear private ones in similar sector. This will even give a deeper understating of the real impact of privatization programme in Egypt on the company performance. Boubakri and Cosset (1999) in their study examined the privatization transaction though market adjusted measures without going deeper to the sector level analysis due to the data availability which this study will cover. The outcome model will offer an understanding of the impact of privatization, Size, Gearing and government ownership on the IPO privatized companies versus a fully private company performance. Considering the privatization through IPO is an important factor in executing this analysis due to the fact that the companies privatized through an IPO are usually bigger in size and have more strategic importance to the

country. It is evident that this analysis will offer a better understating on the benefits gained by privatization programme in Egypt as the comparison is done with a fully private and efficient profit driven company within similar sector.

1.4   Data

The dataset used to analyse the above mentioned hypotheses pertained to the duration from 1994 to 2010 when the full privatization programme in Egypt was put on hold. This timespan represent the full privatization programme in Egypt. The dataset collected represent annual financial and operational figures drawn directly from the following sources:

1.   General Authority for Investment
2.   Capital Market Authority
3.   Cairo & Alexandria Stock Market Exchanges
4.   Kompass Egypt Financial Year Book

The sources mentioned above were used to collect both the privatized as well as the private dataset. For the pre privatization data, the prospectus of each company was an important resource for gathering reliable data. This is the main reason that the pre privatization data was limited to three years to ensure that the published data from the prospectus was used.

All the companies that were privatized in Egypt are around 282 companies through different modes of privatization; Table 1 below shows a description of all the privatized companies in Egypt and the different modes of privatization:

Table 1 Privatized Egyptian Companies and the Mode Used to Privatize

Mode of Privatization	Number of Companies
Asset Sale	44
Liquidation	34
Lease Contract	25
Anchor Investor	85
Employee Shareholders Association	33
IPO Majority	38
IPO Minority	23
Total	282

Source: The Egyptian Exchange Monthly Bulletin September 2011

As shown above in Table 1, the IPO privatized companies are 61 companies including both the partially and fully privatized companies. This constitutes the full data set of the companies used to examine the impact of privatization and to test the two hypotheses mentioned in the previous section. Those companies were then matched with control group of fully private companies from similar sector and with comparable asset base. The set of the matched companies included a set of a similar 61 companies which bring the total number of companies used in this study to 122 companies.

1.5   Analytical Framework

The first hypothesis in this research work examines the pre and post privatization performance of the IPO privatized companies. The hypothesis states that:

Privatization of Egyptian companies through IPO will result in the improvement of the performance of those companies following privatization.

In order to examine this hypothesis, the following tests will be used as an analytical framework:

1.   The parametric t-test,

2.   The non-parametric Wilcoxon signed-rank test

3.   The proportion test

Those tests will shed light on the change in performance of IPO privatized companies before and after the privatization transaction taking place.

As for the second hypothesis, stating

Privatization results in improvement of performance relative to private companies' performance

The analytical framework used was the DID model which estimates the impacts of a 'treatment' on 'units'. In this research, 'treatment' is the effect of privatization and units are companies, either that received the treatment, i.e., were privatized, or were already private (the control).

1.6   Constraints of the Research

While conducting this study, there were some limiting factors that need to be highlighted. As emphasized above, this study covers the IPO privatized companies, the data set covered only 3 years pre privatization and 3 years post privatization. Analysis of more number of years post privatization might assess the impact of privatization over a longer period of time which can fine-tune the performance of privatized companies. In addition, this study considered only the companies privatized through an IPO and this might limit the generalization of the outcomes. However, all the IPO privatized companies in Egypt were considered as part of this study.

The matching process was based on the best match within similar sector and size in a given timeframe, as some of the companies were actually delisted at some point of time. The second best

match was taken during the period that the privatized company was listed. In addition, this research work didn't include the financial services sector, it only focused on the all the other industrial, commercial and services sectors. This was done to avoid the fundamental differences between the financial sector reporting requirements compared to other sectors.

1.7   Organization of the Thesis

This section of the thesis will shed light on the method this thesis is organized. Each of the chapters and their purpose as part of the thesis will be discussed briefly. The thesis is divided into three main parts,

1. Part 1: Chapters 2 and 3 present a theoretical framework of privatization and a description of the Egyptian economy.

2. Part 2: Chapter 4 presents a full literature review of the privatization and its impact on companies' performance.

3. Part 3: Chapters 5 to 7 introduce the methodology used, and the empirical results of the study.

This all will be concluded by a final chapter highlighting the conclusions of the study and recommendation for future research.

Part 1:

Chapter Two: Privatization in Theory

In this section of the thesis, the research introduces the conceptual ideology of privatization. Further, the importance of the privatization as a reform tool is discussed in depth and how it was

implemented in different developed as well as developing countries with all the controversy voiced about it.

Chapter Three: A description of the Egyptian Privatization Program

This chapter presents a full historical background of the Egyptian privatization program starting from the early nineties until date and thoroughly discussing the different changes in economic policy moving from a centrally planned economy to a more liberalized economy. This chapter will also discuss the reasons behind the change in the economic policy overtime and the driving reasons behind it.

Part 2

Chapter 4: Privatization in Literature

This section of the thesis will provide a detailed discussion of the literature done on the impact of the privatization transaction on the performance of companies and also those studies that have compared the performance of privatized companies with State Owned Companies. In addition this chapter will also review the literature on the impact of ownership and size on the performance of the privatized companies.

Part 3

Chapter 5: Research Methodology

This section of the thesis will discuss the entire methodology to be used in this thesis including:

1. Research Objectives

2. Hypotheses to be tested

3. Econometric Tests used

At the end of the chapter the analytical framework to be used will be justified and discussed in length.

Chapter 6: Pre and Post Privatization Comparative Analysis

This chapter represents the results of the first set of tests used to achieve the thesis purpose. The analysis will cover both the performance of the partially and fully privatized companies in both stages pre and post privatization.

Chapter 7: Privatized and Private Companies comparison

This chapter introduces in details the results of assessing the impact of privatization, size, gearing and government ownership on the performance of privatize as well as the private (control group) companies.

Chapter 8: Discussion

The discussion chapter will present the detailed discussion of the results obtained by testing the hypotheses in chapter 6 and 7. Each of the tests results will be thoroughly discussed and analyzed to present the researchers view on the results.

Chapter 9: Conclusion and Recommendations

This chapter sets out the final conclusion of the study and the possible research to be done to complement the work done in this thesis and to extend to understand better the impact of privatization on performance of companies.

Chapter Two: Privatization In theory

2.1. Introduction

Privatisation remains to be a disputed topic among economists and politicians where setting the border line between limit and function of the government and the private sector, (John Stewart Mill, 1848).

The Privatisation programmes have been commenced in many countries globally. There have been three different groups that have implemented privatization programs across the world. The first categories of countries that have adopted privatization include those countries with transition economies in Central and Eastern Europe. This group started the program after 1989, the year of the fall of the Soviet Union. The intention was to enhance the process of instituting a market economy. Further, the second group of countries include privatisation programmes carried out in developing countries as a direct result of the influence of international financial institutions, such as the World Bank (WB) and International Monetary Fund (IMF). The third and last group include the privatisation programmes carried out by developed countries. The most comprehensive programs were carried in the United Kingdom in the 1980s and 1990s (Bishop M.R., Kay J.A. 1989.).

In some countries the process of privatisation is sometimes referred to as de-nationalisation or disinvestment. The privatization process includes the transfer of property from public or government as an ownership structure to private sector. It also includes transferring the management of any service or activity from the government to the private sector.

2.2. Definition of Privatisation

Privatisation is defined as "the deliberate sale by a government of the State Owned Enterprises (SOEs) to the private sector or the sale of SOE's assets to private economic sectors" (Megginson, W. L., and Jeffry N., 2001).

The way privatisation is defined varies from one researcher to another; for instance:

- Letwin, Oliver (1988) defines privatisation to be the transfer of State Owned Enterprises to the private sector.

- Plane, P (1997) and McLindon, M.P (1996) defined the privatization to be the process of transferring the State Owned Enterprises to the private sectors through a partial or full sale of the government assets to the private sectors.

- Beesley, M.E. and Littlechild, Stephen (1989) defined privatisation to be the as the sale of at least 50% of the shares of State Owned Enterprises to private shareholders.

- Farinos, J., and Jose, C, (2007) settled that privatisation is defined not only to be the transfer of State Owned Enterprises equity or assets to private sectors, but also to include the change in management style from a communist/socialist style to capitalist style or to open market style

The Privatisation of State Owned Enterprises signifies one critical task within the general framework of the economic transition process. A successful privatisation programme will eventually lead to an increase in productivity, creating stable enterprises, reducing the level of unemployment, improving working conditions and more secure employment. To have a successful privatization program, there are six preliminary steps that need to be followed. The steps for a

successful privatization program include the following (OECD Report 2003 and Robert Grosse and Juan Yañes1998):

1. *Favourable Investment Climate*

Governments should establish the needed legislations that will eventually create an attractive investment conditions that will attract foreign as well as private investors.

2. *Addressing Ownership Structure and Debts*

The government should clearly put in place a robust mechanism that will resolve the concern of ownership structure and debts. This step will be vital for high value companies with foreign investors' interest.

3. *Addressing Redundant Labour*

The third step to ensure a smooth privatisation process is to address the possible lying off of some workers as a result of privatization. This can be easily done by establishing a fund for this purpose that will compensate those workers on fair basis.

4. *Strong Infrastructure Sector*

Enhanced Infrastructure is a key enabler for a better privatization process.

5. *Advisors*

To achieve an effective privatization program there should be highly skilled advisors to assist in the privatization transaction. This will give more confidence to investors on how the governments are handling such complicated transactions.

6. ***Labour Unions***

Unions play a vital role in enabling a smooth implementation of any privatization programme. They tend to get buy-in of all the workers and act as a link between the government and workers and at a later stage between the private management and the workers.

Based on the above discussion, it clear that privatization works on shifting the burden of doing business from the government to the private sector by reducing the ownership level or by just commercialising the activities of State Owned Enterprises. In order to achieve this objective there should be efficient market mechanism to ensure that privatization will take place through the best privatization process given the nature of business to be privatized. There are several methods of privatization ranging from management contracts, voucher programmes, operating, leasing, financing, or selling all or part of the privatized companies' assets to the private sector. Nevertheless, the definition of privatization shouldn't be limited to the fact of transfer of ownership from government to private. Privatization definition should capture also the fact of moving from monopolistic model to a more competitive or regulated economic model. Through the movement from monopolistic model to a more competitive model issues like efficiency and cost reduction, customer satisfaction, quality enhancement will be addressed.

2.3. Objectives of Privatisation Programs

In order to achieve the wanted outcomes from any privatization program then there should be a set of defined goals and objectives that need to be achieved. Setting the proper goals and objectives at the beginning of any privatization program enables a successful and a smooth implementation

of the program. There is a multidimensional goal and objectives of any privatization program that can be summarized to be:

1. Expand the ownership of companies

2. Economic Objectives

3. Financial Objectives

4. Social Objectives

5. Political Objectives

The following section will highlight the importance of each objective in ensuring the successful implementation of any privatization program.

2.3.1. Expand the Ownership of Companies

Extending the ownership of State Owned Enterprises is an important objective of any privatization program. The broader share ownership that can be implemented through any privatization program is an efficient way of building strong capital markets and especially in developing countries. In addition, it can also be used as a motivational driver within companies to enhance efficiency and improve performance by giving a certain percentage of company shares to employees (Williams, J., & Nguyen, N, 2005). The implementation of this objective requires governments and State Owned Enterprises to take certain steps to ensure achieving the goal. This includes encouraging the public to participate in any IPO for such government entities. Also, this will require the use of a transparent and fair procedure in the privatization program as well as promoting the benefits of privatization through media (Vickers, John and Yarrow, George, 1988).

2.3.2. Economic Objectives

The economic objectives of any privatization program will affect directly the efficiency level as well as quality of service provided to the public.

2.3.2.1   Efficiency Enhancement

Any government while implementing a privatization program will always have the objective of enhancing efficiency. This will always enhance the overall efficiency of the economy in delivering services and also will directly impact the competitiveness of the economy in the local and international markets in delivering services and commodities.

Promoters of any privatization program will always tend to market the idea of enhancing the efficiency of privatized companies and boosting the economic development of the country by creating competition. Therefore, enhancing competition will tend to affect the market forces to allocate the resources efficiently among different alternatives in an optimal way (Barro, R., 1991).

2.3.2.2   Enhancing Quality of Service

The monopolistic position of many of the State Owned Enterprises will tend to directly affect the cost of delivering the service as well as the quality of service delivered to the public. The government subsidy plays a vital role in maintaining a poor service quality in certain sectors. In some sectors it cannot be avoided to have a natural monopoly and this call for a strong and independent regulatory body to ensure the efficiency of privatized entities and the quality of service delivered to the public.

2.3.3. Financial Objectives

Decision takers to promote privatization usually argue that it will help in rationalizing the public expenditure and will eventually lead to reduce the burden on the government budget. This will mainly happen by giving way to the private sector to finance and operate privatized entities. In many cases when the privatization takes place the government will tend eliminate or reduce subsidy in some cases. Also, once privatized, companies will tend to have their own budgets that will enable them to increase capital expenditure without the need to get any help from the government thus relieving the government budget from this burden.

2.3.4. Social Objectives

Social objectives tend to be very sensitive once discussing the privatization programs in any country. Privatization usually observed in some countries in a negative way when viewing it from a social dimension. In all countries the human resources is the fundamental factor that leads to economic development. Therefore, increasing employment opportunities and using the optimal workforce needed is seen to be an essential requirement for any privatization program. The privatization program should by all means improve the economic environment within the economy to help in incentivising the creation of job opportunities through the help of the private sector. The privatization is used to deal with excess labour by developing them through required training to meet the requirements of the private sector.

Further, it should be noted that the Social objectives will also include encouraging the private sector to effectively participate in the overall economic growth. The private sector will be in a better position to assess the sectors where growth potential is evident. To achieve this, privatization

programs should be built around sectors where the participation of private sector will enhance competition. Also, it should ensure the flow of funds to those sectors to ensure positive growth potential and movement toward more commercialized management approach.

2.3.5. Political Objectives

Privatization programs will tend to attract local and foreign investors to invest in former State Owned Enterprises. Also, it will help developing and strengthen capital markets. One advantage of privatization is the ability to reduce corruption and fraudulent activities made by government officials and by politicians (Ashour, A; Hendy, M; Hnafy, A; and Ezzat, M. 1988). In order to achieve this, governments should always facilitate the involvement of foreign investors in all privatized entities and to continually develop capital markets to attract more foreign investors.

2.4. Drivers of Privatization

Boutchkova, M. and Megginson, W. L. (2000) revealed that privatisation is linked to an increase in sales, income and productivity of the company and also to efficiently reducing the size of the labour force. They have shown that the privatized companies of less than 2 years will tend to have labour productivity growth similar to that of State Owned Enterprises. Nevertheless, the companies that are privatised for 3 or more years will tend to have a significant improvement if compared with their State Owned counterparts. This section will highlight the needed for privatization and also it will touch on the benefits versus drawbacks of privatization.

2.4.1 Justifying Privatisation Transaction

There are many explanations to describe the need to privatize State Owned Enterprises. These explanations are as follows:

1. Privatization will tend to eliminate corruption in State Owned Enterprises.

2. Privatization will assist in enhancing cost reduction within the privatized companies.

3. Privatization will help the government to shift operational risks to private sector.

4. The privatized companies will have access to the latest technology and best management practices that will result in a more efficient use of resources.

5. Human resources development is a key outcome of privatization; where labour will have better chances of developing.

Although all of the above-mentioned reason justifies the adoption of privatization; still there are some opponents for privatization as an ideology. They see that privatization still have some drawbacks that need to be highlighted. The following table will set a comparison between proponents and opponents of privatization (Bjorvatn, K., and Tina, S., 2005).

Table 2 Proponents and Opponents of Privatization

Proponents Views	Opponents Views
Any Private companies will create value by marketing its products to consumers. Further, private companies will tend to serve the exact need of the customers. The ability of the customers to pay will drive the ability of	Private companies are seen to have one goal, to maximize profits. Opponents view private companies serving the needs of those who can pay, rather than the needs of the majority.

private companies to serve their customers better (Varouj A., Ying G., and Jiaping Q., 2005).

Governments usually run businesses to address social objectives and it is not possible to have a purely profit driven organization managed and owned by a government.	Returns from private enterprises will go to the bank accounts of small number of owners rather than being available for the government to serve the public needs of a wider category of population.
Politicians tend to use national industries to serve their needs rather than creating overall value for the economy.	In natural monopoly situation, it is not possible get the needed outcomes of privatization.
Governments tend to improve the performance of a State Owned Enterprise in cases where the service provided is socially and politically delicate	When a company is privatized, the public will not be able to properly control or regulate the entity. Further, private owner will be selective in providing the service and might exclude those who are poor or in remote areas.
Privatized firm will tend to have easy access to financial markets to raise funds.	The public companies will be backed by the credit rating of the government and thus can easily raise funds.

2.4.2   Forms of Privatization

There are various forms of privatization that the government can use as a tool to disperse the State Owned Enterprises. The privatization tools that the government can use include, deregulation, contracting out, vouchers, management contracts, joint ventures, private infrastructure development and operation, asset sale or long-term lease and financing contracts. The government choice from different forms of privatization is vital as it contribute to either having a successful or unsuccessful privatization program. Governments will tend to use more than one form to achieve certain objectives. Consequently, setting clear objectives for any privatization program will assist in choosing the most suitable e privatization form that will help in achieving the needed outcome. The following section will shed light on different forms of privatization.

2.4.2.1   Deregulation

Primarily, deregulation is conceptually based on decreasing the role played in any economy by the government represented by the public sector for the private sector. This objective is ultimately done by strengthening policies favouring the free markets within an economy. Deregulation is ideally eliminating public regulations in a specific sector or industry to allow for competitive forces to act in a market (AKTAN, Coşkun Can, 2003).

2.4.2.2   Asset sale

Asset sale is another form of privatization. In this form of privatization, the government sells assets of a certain industry to private sector. The private sector in this case runs the industry with an objective of maximizing profits. This form of privatization is usually used when it is not possible to use any other form of privatization (Hanke, 1985). There are different ways of implementing this type of privatization under an asset sale form of privatization; the government might sell the assets to private sector with an intention to lease it back at a future date. Another way of implementing this form of privatization is the employee buyout; where the employees within the same company will buy it out.

This form of privatization gives flexibility during the negotiations phase and it is also easier and faster to implement if compared to other methods. Further, in this method the government will have the ability to assess the seriousness and commitment of the buyer and whether he will deliver what he promises or not.

2.4.2.3   Vouchers

In this form of privatization the government distribute to citizens vouchers that will represent potential shares in those State Owned Enterprises. This mode of privatization was used for huge privatization programs that took place during the 1990s in transition economies in Central and Eastern Europe. This mode of privatization gained it publicity as it is more appropriate for economies moving from planned to open market as it distribute the benefit of privatization to a huge number of citizens. Therefore the State Owned Enterprises will tend to pass faster to private sector and will develop the community involvement in the market economy.

In this mode for privatization the vouchers are distributed free of charge or for a nominal price and it usually used for the privatization of huge industrial companies, housing, agricultural companies and land. Further, some governments used to issue vouchers which are tradable and other issued ones that are not tradable. Some of these vouchers were given a monetary value while others were just dominated in points as a mean to curb the increase in the money supply and inflation (Bridge, G., 1977). There is some major drawback of this mode of privatization which is the failure to create revenue to the government if compared to selling the assets to the highest bidder (Ellerman, M., 1998). Also, it doesn't bring new management techniques or technology. It also tends to give even more power to the same executive management who are running the State Owned Enterprise to have more controlling power after voucher privatization.

2.4.2.4 Public-Private Partnerships

This mode of privatization is similar to a Joint venture agreement where two or more companies enter into a contractual partnership agreement to achieve a common business target while sharing accruing profits, losses and any associated risks. This type of partnership can take place between two or more private companies, or between a private company and a public enterprise the latter will constitute what can be called "private sector joint venture agreement" or "public and private joint venture agreement". This type of partnership can be done locally in an economy between the private sector and the government or internationally through an international company and the government. This mode of privatization is used by some governments in privatizing companies offering product development, general trade, technology development, consultancy services, human resource development, oil and gas, and mining.

2.4.2.5 Contracting-out

Contracting-out or outsourcing is the activity of engaging a private company to deliver goods or services to the government. Under this mode of privatization although the service is provided by a private company, the government remains completely accountable for the provision of services and government continues to control management decisions, while the private company will perform the service.

This type of privatization is used to privatize services such as public transportation, public safety services, computer centres services and maintenance (Savas. E. 1987). This form of privatization is efficient and effective as it initiates competition and reduce the dependency on the government. Also, it gives more flexibility to respond to the changing needs of citizens (AKTAN, Coşkun Can, 2003). On the other hand, this form of privatization might have several drawbacks, like the possibility of having a biased process of tendering and awarding. It also, social implication as it promotes lying off of employees from State Owned Enterprises.

2.4.2.6 Management Contracts

This form of privatization gained publicity among governments of the developing countries in the last two decades. In this form of privatization, the government will transfer the management of state owned enterprises to a private investor for a defined time period against an agreed fee. This will enable the government to ensure a more efficient way of managing the State Owned Enterprises. This mode of privatization is used mainly in the hotel management, healthcare facilities, and public transportation (Shirley, Mary M &Xu, Lixin Colin, 2001).

The Management contracts are usually used when the government is in the process of privatizing a frim and needs experienced management to operate the company for a limited time period to uplift the performance. Further, it used to in capital intensive projects where the government prefer to limit its role to injecting capital and transfer the management to private sector.

This form of privatization possesses lots of benefits. It assists in transfer of skills from the private sector to the public companies. It also provides access to capital markets for financing the operations of those entities and also creating new markets (Abdel-Khaliq, G. and Hana K., 2002; Ramsey S., 1998 and Abdel Shahid, S, 2002). On the other hand, this form of privatization has drawbacks like the liability of paying the contract fee even if the company is losing. Further, the financial strength of the owner plays a key role in the success of this form of privatization. Also, it is complex process to structure those contracts and owner will lose the control over the daily activity of the business (Hegstad, S. and Newport, I., 1987).

2.4.2.7   Leasing contracts

Another form of privatization is the Leasing Contract where private investor leases the facility or assets from the government against a predefined fee paid to the government. Also, the agreement defines the responsibilities of each party towards the other. Therefore, this form of privatization transfers the management and operations of a State Owned Enterprise from government to private sector (Bjorvatn, K., and Tina, S., 2005).

2.4.2.8   Financing Contracts

This form of privatization is considered to be a bit complex if compared with the aforementioned forms. In this form of privatization, the investor is expected to provide full funding for the project (Shirley, Mary M &Xu, Lixin Colin, 2001). There are different types of leasing contracts:

- The Lease Build Operate (LBO)

- Build Transfer Operate (BTO)

- Build Own Operate Transfer (BOOT)

- Buy Build Operate (BBO)

- Build Own Operate (BOO)

The private investor will then recover his investment by selling the service to the government or to the public.

2.4.3   Privatisation Methods

Privatisations methods are the means by which the government can privatize State Owned Enterprises. There are various methods by which government can privatize; this section will shed light on all of these methods.

2.4.3.1   Mass Privatisation

The Mass privatisation refers to implementing a privatization program through mass participation from all possible entities such as citizens, and mutual/pension funds. Many of the privatization that took place in different countries used the mass privatization model through public offer of shares. In this model, governments can sell fully or partially a State Owned Enterprises by use of

certificates, as the main means of payment. The use of this method is relatively simple and fast if compared to other methods (Saul S., John B., Giovanni U., and Jamrs W., 2007). Nevertheless, this method in practice leads to the transformation of capital only and it doesn't induce further investment locally or internationally. Further, this method doesn't allow for an efficient distribution of State Owned capital due to the prevalent use of vouchers as the main means of payment (Grosfeld I. and lraj H., 2003).

2.4.3.2   Direct Sale to the Private Sector through the Stock Market

This method of privatization is appropriate to be used with State Owned Enterprises characterized by being stable with long term feasibility. Further, this method can either be implemented by offering fully or partially the shares of the company (100% of the shares or >51%) for public subscription. In order to have a successful Public Offering, there should be available enough audited financial information of the company. Also the size and level of activity within the capital markets as well as the availability of the liquidity within the market plays a vital role in increasing the chance of having a successful offering (Wahish N., 2006 and Butler S., 1988).

2.4.3.3   Sale to an Anchor Investor

The sale to a strategic investor is the perfect choice when the government is confident that the investor will be capable of providing the essential financing, management efficiency and technology to the State Owned Enterprise. The main advantage of this method is availability of funds and specialized management team needed to transform any business. On the other hand, this method tend to limit the investment opportunity to big investors and to exclude the small ones.

Also, it does not support the concept of expanding ownership base and thus benefit will be passed to a limited number of investors. In addition, usually this method is coupled with high possibility of having problems with staff (Abdel Shahid, S., 2002).

2.4.3.4 Tender

Tendering method of privatization requires the announcement of pre-tendering conditions and then the tender is floated and the government will then receive bids that meet the pre-set conditions. The method is widely used in privatization of state capital and it provides an inflow of capital to the government. However, it can be misused due to the lack of transparency.

2.4.3.5 Small-Scale Privatisation by Auction

The auction method of privatization was used by many developed countries to privatize State Owned Enterprises. In this method the auctioneers will bid the value of the company in an open public bidding process. There are two types of bidding; common auction where the bidders will increase the price till the highest bidder wins the auction. The other type is the special auction where the government progressively reduces the price till it gets the first bid.

This method of privatization helps to avoid transparency issues and will ensure that the bidder with the highest bid will buy the company. It also ensures that inflow of capital will happen as the bidder will pay in cash and not in vouchers (Aknazarova J., 2007). On the other hand, auctions don't give importance to assessing the viability of future plans of the investor.

2.4.3.6   Other Methods of Privatization

There are several other methods of privatization, one of which is offering the shares of the company to sale to its employees at market price. Another way is allocating partially the shares to the company employees. Those methods of privatization are usually used for low profitably companies or for companies with productivity issues. This is used to encourage employees to improve performance when they own the company shares. Other privatization method includes the debt-swap where the company debt is transformed into shares in favour of the creditor.

2.4.4   Benefits of Privatisation

The privatization programs will help governments to boost economic development through a structured reform programme. It will also help governments to increase the overall productivity of the privatized sector by enhancing efficiency and the introduction of new technology and transfer of knowledge. Further, from a strategic level, privatization will tend to force companies to concentrate more on core activities and knowledge. In addition, at the operational level, privatization will boost efficiency and cost reduction by ensuring that operation is done by the most productive, cost-effective measures (Willner J., 2003). Moreover, Privatization removes the burden of providing noncore services from the government and it shifts it to the private sector along with the financial risk associated with providing the service (Buxton, A., 1992). In addition, the profit maximization is an enough motivation for privatized companies, when compared to public ones, to improve performance and thus will eventually lead in reducing the bureaucracy from the economy.

2.4.5   Drawbacks of Privatisation

The disadvantages arise in the short term and they cannot be avoided. In general terms privatization will affect the employment levels and will eventually create social tensions in any society. Further, one of the disadvantages of privatization stems from the fact that once privatization program is initiated people will tend to have high expectations of how it can resolve issues and improve economic performance (El Rashidy, A., 1996). Therefore, the expectations level should be set a realistic level because privatization is only one tool that can be used to improve the overall economic performance. Further, sometimes the privatization is viewed as a tool used by the government to repay part of its debt.

Privatization programs might also be faced with the lack of enough government tools needed to regulate the transformation toward open markets. Countries like Russia faced the same issue when initiated its privatization program. Also, countries like the United Kingdom faced the same issue at the early stages of the privatization program the Thatcher-era.

Some opponents of the privatization program see privatization as not being able to incentivise capital investment in the newly privatized companies; the privatized rail-track leasing is an example of this issue (Sutter N., and William L. M., 2006). In addition, the abuse of the monopolistic position in some of the cases might also be a disadvantage of privatization as the end user will be the loser in this case.

2.4.6 The Washington Consensus

The Washington Consensus is referring to a set of concepts and economic concepts developed and backed by internationally well know economists and economic organizations/ countries like the

International Monetary Fund, the World Bank, the European Union and the United States of America Stiglitz, Joseph (1999),. The Washington Conesus promotes certain economic phosphides related to free trade, floating exchange rates, free markets and macroeconomic stability. It was developed covering ten fundamental principles as articulated by John Williamson in 1989, Stiglitz, Joseph (1994):

1. Lowering the government borrowing, fiscal discipline

This is mainly related to the policy shift in directing the public spending of subsides to the provision of the growth opportunities and the elevating the poor services primary education, primary health care and infrastructure investment.

2. Reforming the taxation system

The concept here is stressing on the need to have a moderate marginal taxation rates. The interest rate is one of the very strong economic tools to be determined by the market and should be moderate in real terms to enable a stable economic growth.

3. Liberalizing interest rates

4. The liberalization of interest rates will reinforce the economic development across the economy and will enable a more sustainable economic growth.

5. Exchange rates

The exchange rates should be competitive to allow for a more favorable economic environment.

6. Liberalizing trade

The liberalization of trade especially imports and eliminating any barriers, like licensing and trade protection.

7.   Liberalizing inward foreign direct investment

This will also allow for a more competitive economic setup and will allow the economy to create more employment opportunities.

Privatizing the State Owned Enterprises

8.   The privatization of state owned enterprise will enable the creation of a more efficient economy on the long term.

9.   Deregulation

The deregulation of markets will enable competition which is term will work as a catalyst to improve the overall efficiency of the economy. So the market barriers should be removed except for those that protect the safety, environmental and consumer.

10.   Property rights

The legal security of property rights is very important as it work on enhancing the overall innovation and knowledge across the economy.

The abovementioned ten fundamentals of the Washington Consensus were used as the basis for the economic reform policies adopted in Latin America, South East Asia and other countries Shair, Osama Abu (1997).

2.4.6.1 Implications of The Washington Consensus.

The adoption of the Washington consensus as articulated in the above ten principles highlighted that there was a full support from the World Trade Organization and North Atlantic Free Trade Association to lower or evening eliminating any trade barriers, Stiglitz, Joseph (1997a). Further, the IMF also changes its policy to promote the fragmental principles of the Washington Consensus and linked receiving any financial support to implementing market reforms. This will result in countries specializing in goods or services that they have competitive advantage in. therefore, the developing countries will only be producing primary goods Amsden, Alice H., Jacek Kochanowicz and Lance Taylor (1994).

2.4.6.2 Washington Consensus Critic

Some economists argue that based on the strategic trade theory, the free trade is not always in favor of the developing countries Stiglitz, Joseph (1994). A very stringent implementation of the free trade and comparative advantage can result in the developing economies will end up producing only the low growth and the price volatile primary products Stiglitz, Joseph (1994). In order for countries to promote new industries, an incubatory phase is required for both selective tariffs on cheap imports in order to protect the industry. An example of this policy, it he Brazilian government support offered to Embraer which help Brazil to become one of the successful airplane manufacturers, Ramamurti Ravi (1996a).

To lower the overall government borrowing is not always the right solution. The Implementation of certain farcical rules can result in an avoidable economic hardship Stiglitz, Joseph (1996). For instance, the fiscal consolidation which took place during the great depression resulted in lower

economic growth rate and didn't result in reducing the debt to GDP ratio, Ramamurti, Ravi (1991). In the case the governments need to lower spending, this will result in higher poverty rates as the welfare support programs will also be affected. Nevertheless, it is always advisable to be more cautious and reduce the overall structural borrowing to be within acceptable levels, Amsden, Alice (1997).

China adopted a very unique model. The Chinese firms have invested around $110 bn in the developing countries in Africa and Latin America in the last decade Chirwa, E. (2004). This is more than what was invested by the World Bank. The Chinese approach involved huge investments directed towards the infrastructure projects and public sector investments. This in turn is showing that the economic development might need at a certain stage an intervention to enable the huge returns rather than leaving it to the free market forces, Ramamurti, R. (1997).

The Washington consensus adopted privatization as one of the ten fundamental principles. The privatization as a tool has strong capacity to enhance the overall efficiency and quality of services offered to the public Stiglitz, Joseph (1996). Nevertheless, a major drawback of privatization when adopted without a strong regulatory regime is the fact that in key public sector industries might not be delivering the expected outcome. This is evident as the implementation of privatization policy doesn't take into consideration the social objectives, Amsden, Alice (1997). A clear example on this fact is the Bolivian experience in privatizing the water sector which resulted in the water being cut off from the poorest citizens, Helleiner, (1994).

One of the key critics that the Washington Consensus got was the fact that it ignored the need to redirect the public spending toward the enhancement of the public sector initiatives related to primary education, primary health care and infrastructure van Cranenburgh, Oda (1998). The

Washington Consensus focused more on the market oriented policies and less on the government needed interventions Berg, Elliot (1994). Many of the scholars have linked between the macro-economic crisis of Latin America in 1980s and South East Asian crisis in 1990s and the implementation of the Washington Consensus, Cook and Kirkpatrick, (1995). Further, it should be noted that the credit crisis that took place 2007 has clearly indicated that the free markets can create instabilities and high unemployment in the long run, Christian Wolf (2009). The impact of the financial deregulation might have been potential threat to the financial markets.

2.4.6.3 Pro Washington consensus Views

The above-mentioned ten policy fundamentals of the Washington Consensus showed a strong economic validity. In broader terms, it can't be denied that the tax reform and sustainable growth borrowing among other principles will lead to an economic development of nay economy Cornia, G.A. and G.K. Helleiner (1994). Further, introducing privatization alone with enough competition and regulation will also result in potential befits to the nation. For such policy proposals, it is very easy to undermine the whole policy proposal when things go wrong. This is what has happened when the South East Asian economies were in great difficulties in the 1990s Stiglitz, Joseph (1996). Under such circumstances, economists will be tarnished and such reform policies will tend to be unpopular Stiglitz, Joseph (1996).

On the other hand, it should be noted that any similar broad reform policies require a diligent way of implementation, Bennell, Paul (1997). The way each country adopt and implement such policies will define to a great extent whether they will be successful or not. Further, the timing of adopting such reform policies will also have an impact on the expected results. In general, the implementation of free trade is sound economic policy Ramamurti, R. (1997). However, limited

trade protection might also help some economies diversify. Choosing the right sector to protect in order to diversify is very crucial Kumssa, A. (1996). For instance, if African countries try to protect the car industry, it is very probable that they will fail as the economy as whole doesn't possess the fundamentals to enable such a huge industry. On the on the contrary if they protect the primary product processing, they will tend to get much better results.

As similar concepts applies to the privatization. It will all depend on the industry the government is trying to privatize Kolodko, Grzegorz (1999). The UK experience in privatization is unmatchable when it comes to the privatization of British Telecom; however, the privatization of British Rail was a bit more controversial privatization transaction. The only difference between the two transactions is the fact that the social benefits associated with each industry are different as one of the then is a natural monopoly Martin, S. and D. Parker (1997).

Therefore, it should be noted that a one solution won't be fit for all the economies Lorch, Klaus (1991). Developing a structured economic policy for developed countries will definitely differ from that for a developing country. Using a universal prescription might be of help to drive economic reform and define the areas that need improvement but it does really mean that it should be implemented as it is Babai, Don (1988).

The deviations of the Washington Consensus from the initial intention set by John Williamson led to the evolvement of the post Washington Consensus lead by Stiglitz. Joe Stiglitz is one of the loudest critics of the Washington Consensus. In his book he favored the gradual liberalization of trade and diligent implantation of privatization. However, he didn't object the implementation of other reform policies. The next section will highlight the views of Stiglitz on the Washington Consensus.

2.4.6.4 Privatization in Washington Consensus

Privatization is considered to be the one of the most noticeable manifestation of the Washington Consensus. The privatization as a policy has been in the center of attention for most policy makers since the early 1980's (Cook, 1997). The World Bank has been pushing the privatization as one of the economic reform tools to all the countries applying for loans. About 70% of the structural adjustment loans granted during the 1980s contained at least one privatization aspect (Cook and Kirkpatrick, 1995). The African countries have been a clear example. The Washington Consensus had more focus on privatization as a development remedy. This view of the privatization drove the emergence of the Post Washington Conesus which combined the privatization as a tool with need to have better regulation and competition policy and frameworks (Kolodko, 1999).

The World Bank has not always been pro market approach; the relationship with the private sector has been always a hesitant relationship, Cook and Kirkpatrick, (1995). The turning point came with the Berg Report (World Bank, 1981) which put the blame for the failure to implement development plans in the sub-Saharan African country on the governments due to the excessive intervention of the governments. The report at the time recommended the introduction of competition and enabling a more prominent role of the private sector. The privatization as a policy wasn't yet introduced , the main focus was the need to reform the SOE , market pricing as well as the elimination of the subsides. The report at that time gave more weight to the competition than ownership type as a key enabler for reform (World Bank, 1983).

Till the early 1990s the scope of privatization an economic tool for economic reform was still limited. The World Bank came to the conclusion that the public sector reform was unsuccessful (Shirley and Nellis, 1991). At the time, privatization was not seen more than a tool to enhance

efficiency. The shift in perception came with the 1992 publication: Privatization: the lessons of experience (Kikeri et al, 1992). In this publication, a great emphasis was put on ownership as a key driver for a sustainable performance enhancement. Unlike the commercialization which was considered to be a short-lived solution. Privatization was considered as a reform approach that will not be reversed. This shift was further boosted by the World Bank empirical study of 1992 that concluded that the privatization of monopolies can result in welfare gains (Galal et al, 1995). This has opened the door to include privatization as integral part of economic reform policy of so many countries and it included the privatization of almost everything. Further World Bank publications during the 1990s have reinforced this idea. The idea of privatization was introduced in the literature as unquestionably beneficial for all countries. The publications didn't extensively address the reasoning behind the policy shift and the objectives to be achieved (Cook 1997). The assessment was more inclined toward the implementation rather than how the outcomes of this transition relate to the initial objectives set. It was very common at that time the World Bank assessment is done based on the speed of implementation and the number of privatized entities.

As governments continues to face policy failures in different economic areas, the privatization at that time was used a cure to all economic issues. The privatization program in all the developing countries have been very optimistic and burdened with many objectives. In some of the cases those objectives used to be contradicting like mixing the long term development objectives with the short term fiscal fixes. It has been always the case that the privatization as a transaction had a clear goal to maximize the private sector and national ownership. Critics have always stressed on the fact that the Washington Consensus the simplicity of implementing privatization policy and also the possible gains of this transaction Cook (1997); Heald, (1992). On the other hand, the World Bank also discovered that the efforts to boost privatization hasn't been delivering the structural

adjustments needed, Helleiner, (1994). In the review of the Washington Consensus, Stiglitz studied the outcomes and recognized that that privatization wasn't well planned: "From today's vantage point, the advocates of privatization may have overestimated the benefits and underestimated the costs", Stiglitz, (1997a). From Stiglitz's point of view, most countries preferred to have a solid regularity setup before moving to the privatization phase; however, privatization was pushed as the reform was taking place and there was a worry how long it will continue to be allowed , ibid, (2000). This resulted in a very tricky situation where the key enablers of privatization were not set in place before embarking on such a key policy.

The post Washington Consensus as per Stiglitz (1994) work is stemming from the fact that the Washington Consensus treated privatization as an end in itself rather than a tool to reach an economic reform. The Washington Consensus also didn't touch on the fact that there is a need to set first a clear competition policy to enable the change to take place. Further, according to the earlier work done by Stiglitz (1994), privatization in theory shouldn't be only based on the competition assumption, the information imperfections is also an important matter to be considered.

On the other hand, it can't be denied that in practice, privatization results in significant benefits. Those benefits as discussed earlier in the thesis ranges from increasing the transaction costs of securing government protection and subsidy to selecting the efficient entrepreneurs. Nevertheless, Stiglitz (1998b) claims privatization is not the most prominent policy tool; the chines economy has been examining a rapid growth without the help of any privatization program.

It is important to mention that the privatization policy should be coupled with competition to ensure that the market structure will enable an efficient implementation of the privatization

program. Stiglitz (1998b) argues that the economic policy reform require the liberalization, privatization and above all a macro economic adjustment. He also stresses on the fact that subsidies and protection, under very definitive situations, are required and useful policy tools. The privatization is only a way that reduces the dependency on such tools. Further, Stiglitz (1998b) in his study stresses on the need to balance the relation between the government and the markets whichever of them will have the competency to deliver the service efficiently, then it should be given the opportunity to deliver. Therefore, the privatization will have a bigger role where the governments are less capable but this should also be coupled with the competition policy requirement

2.4.6   Summary of the Discussion:

This chapter summarized the different definitions of privatization and especially when it is involved with decreasing the involvement of the government in the business activities to offer services or goods to the public and enhancing the role of the private sector in these activities. The direct result of this policy will be the evolvement of a strong free market economy. Privatizations programmes will always work on the widening of the ownership base of State Owned Enterprises. This chapter put forward the different objectives of the privatization programmes. This included the financial, social, political and economic goals. These objectives cannot be achieved without a clear roadmap as defined in the steps to ensure a successful implementation of any privatization programme. Further, the chapter elaborated on the various forms of privatization, including the vouchers, contract management, leasing contracts, deregulation, contracting out, and joint venture. In addition, the different method of privatization were also discussed including the mass

privatization, sale to an anchor investor, direct sale, IPO , tendering, auctioning and sale to employees.

The form and method of privatization that any government can use depends on the objectives set by the government at the beginning of any privatization programme. Therefore, and as shown in the chapter, this chapter set the hypothetical framework for any privatization programme by offering an overview of the privatization.

The next chapter will shed light on the Egyptian experience in privatization and also will study the economic development that the Egyptian economy has passed through for the last 60 years.

Chapter 3: A Description of the Egyptian Privatization Program

3.1. Privatisation Program of Egypt

The prevailing economic conditions at the beginning of the 1990s where the public sector was controlling more than 75% of the overall economic activities led to the International Monetary Fund enforcement of economic reform in Egypt against funding the economic activities. One of the enforced economic reform polies is adopting privatization of the State Owned Enterprises.

Therefore, the Egyptian government started the privatization program in the early 1990s. The very early steps of privatization took place in 1991 when the Egyptian government decided to stop subsidizing the State Owned Enterprises and also removing subsidy decision from the control of the direct minster (Field, M., 1995). The second step to restructure the public sector was done also in 1991 when the government grouped all the 314 State Owned Enterprises in 27 groups each under the direct control of a holding company.

The initial success of the Egyptian privatization program didn't last so long as the government decided to keep control over the important State Owned Enterprises and to privatize only the small ones. Although, the downsizing of the public sector was considered to be an important indicator of the Egyptian economic reform program, the government was not willing to change until the Ministry Public Enterprise Sector and the Public Enterprise office was established in November 1991.

The following sections of this chapter will shed light on the privatization program adopted by the Egyptian government over the last two decades.

3.2. Fundamental Requirements of the Privatisation Program in Egypt

In order to have a successful privatization program there should be some steps that will pave the way for that success. In the Egyptian case, the privatization program required reinforcing the market and exposing the State Owned Enterprises to the real market forces. In order to implement an effective privatization program in Egypt there should be five fundamental requirements that will create the favourable economic environment:

1. Creating a competitive market

2. Liberalizing the exchange rate system.

3. Setting a clear pricing policy for privatised entities.

4. Developing a legal framework in which privatised companies operate

5. Setting a Fair Human Resources Policy for privatised companies

In the following section, a brief description of each element will discussed.

3.2.1. Creating a Competitive Market

The common characteristic of most of the State Owned Enterprises is that they operate in a monopolistic environment where no competitive pressure is present to enhance performance. Further, under the government ownership there was no motivation to improve performance and no penalties in case of underperformance. Therefore, the market forces will tend to put pressure on the State Owned Enterprises and will make them reorganize themselves to improve their performance. As a matter of fact, this was one of the objectives of adopting the Open Door Policy in the mid-1970s. Also, the Egyptian government followed this by issuing the anti-monopoly law

and also allowed the private sector to contribute in important industries like the heavy industry (Vandewalle D., 1995). Additionally, the Egyptian government in the 1990s followed those positive actions by introducing the unified tax law and double taxation prevention which played a significant role in assisting the creation of competitive market.

3.2.2. Liberalizing the Exchange Rate System

In order to promote a viable privatization program, there should be a liberalized exchange rate system where market forces will tend to set the exchange rate. This means that prices of goods and services will in the long run reflect purchasing power parity. The liberalized exchange rate system will also include the interest rate and the taxation. As a matter of fact, liberalizing the exchange rate system is the basis of any successful privatization program (Josef C. Brada, 1996).

3.2.3. Setting a Clear Pricing Policy

In order to achieve efficiency in an economy there should be a clear policy on how prices will be set for a privatised service or sector. A clear policy on how prices of privatised companies will be set helps investors to direct their capital to the right investment opportunities. Although there might be several ways of setting policy, there is one viable way of setting prices which is through the interaction between privatised companies and market forces. Setting the clear pricing policy is a prerequisite for a successful privatization program in economies like the Egyptian economy.

3.2.4. Developing a Legal Framework

The appropriate legal framework is an essential prerequisite to initiate a privatization program. All the state Owned Enterprises in Egypt operate under the Law No 203 and other applicable laws.

To implement an efficient legal framework those Laws need to be revised and decreed (Hendy, M. 1996). Further, the overall legal system performance and setup will have a direct impact on the privatization program. For instance the time court decision takes to be issued; robustness of ownership law and profit distribution regulations. All of these legal frameworks need to be either developed or revisited to ensure a successful privatization program

3.2.5.   Setting a Fair Human Resources Policy

The human resources policy is considered to be the cornerstone in setting an efficient procedure in any State Owned Enterprise. This is one of the main issues that the promoted inefficiency in the State Owned Enterprises where the employee is hired with a permanent contract that is not linked to any performance measures. Therefore, there will be no motive for the employee to perform better in the absence of the threat of losing the job. To succeed in privatization a key requirement is to set a fair Human Resource Policy linked to performance.

The conclusion that can be drawn from the above discussion is that the Egyptian privatization program will require fundamental changes in terms of promoting market approach and deregulating many sectors and moving from a centrally planned economic model to a market based one.

3.3. Poor Performance of State Owned Enterprises

The performance of the State Owned Enterprises can be easily explained by the Agency Theory. The theory under consideration shed light on the existence of goal conflict when parties with different goals participate in the same business (Jensen M., and Meckling W., 1976). The two

parties involved in this theory are the principal and the agent; where the principal has hired the agent to perform an activity on his behalf against a benefit that he pays him. As for the principal, he will benefit from the agent only to the extent of the agent is willing to act efficiently on the goals set by the principal. Further, the agent may have other goals than the one set by the principal and here arises the conflict of interest between the two. Therefore, the principal should have techniques to ensure that the agent will not pursue his own goals.

In the privatization process, the public are the principal and the agent in this specific case is the manager running the State Owned Enterprises. Most of the research done in this area indicates that the performance of the State Owned Enterprise will tend to improve once the owners interest and the mangers' interest become one (Aussenegg, W. and Ranko J. 2002, Grigorian, D., 2000).

3.4. Views on the Egyptian Privatization Programme

The opponents of the privatization programme in Egypt view it as being the only resource to bring economic development. The poor performance and the losses that the State Owned Enterprises incur had always supported their views on the issue. One of the major reasons behind the poor performance is the regular appointment of fresh graduates to work in those companies without any study on the human resources requirements (Omran 2001).

On the other hand, the adversaries of the privatization program view it to be a failure that will help bureaucratic sector, the public sector, to maintain its economic power and will lead to more discrepancies in income distribution. Further, they view privatization will fail as the private sector is hesitant to enter into the heavy industries and they are only concentrating on services and light industries where risk is less and profits are reasonable.

3.5. The Goals of Programme

As it was mentioned above, the Egyptian government shifted to the privatization program and to the private sector practically to run the economy due to the failure of the public sector to drive economic development. The view was that the privatization is the basic solution to implement economic reform. The anticipated efficiency gains were thought to be achieved through efficient utilization of assets and improving labour productivity (Mohi-eldin M., Sahar N., 1996). Further, the government planned to achieve broader ownership base of State Owned enterprises through privatization (Hassan, M., 2001). Additionally, the Egyptian Government objectives from implementing the privatization program included also several macroeconomic benefits to the economy. Among these is the inflow of cash to the government treasury through the increased tax income and interest savings on debts of those companies as well as the cash sale of the companies which will help in financing the government deficit by reducing its debt (Jones, L., 1991).

3.6. Approach of the Egyptian Privatization Programme

In the initial phase, the privatization method that the Egyptian government adopted to privatize the State Owned Enterprises was public offering. This was done through the two major stock markets in Egypt, the Cairo Stock Exchange and the Alexandria Stock Exchange. The Egyptian government by choosing this method aimed to boost the image of privatization and to enhance the market activity.

Later, the Egyptian privatization programme passed through different phases where the government used a number of methodologies to divest its share in the State Owned Enterprises. As mentioned above public offering through the two major stock exchanges was the first to be

adopted. Then it was followed by the sale to a strategic investor through auctioning and finally, the selling of the State Owned Enterprises to Shareholder Associations. Liquidating some of the State Owned Enterprises was also used as a privatization method (Mckinney, B. M., 1996).

Table 3   Methods of Privatization in Egypt

Particulars	Number of Companies	Sales Proceeds LE Million
Majority Public Offering	38.00	6,064.00
Minority Public Offering	23.00	11,003.00
Liquidation	34.00	-
Asset Sale	44.00	3,437.00
Anchor Investor	85.00	32,208.00
ESA	33.00	932.00
Leasing	25.00	-
Total	282.00	53,644.00

Source: Egyptian Exchange Monthly Bulletin, September 2011

The table above highlighted the privatization decision starting from 1994 and till 2010. It should be noted that the start of the program faced several difficulties and it was noticed to be slow. By the year 1996 the privatization program gained some momentum due to the appointment of a new cabinet. The privatization program was a on the top of the agenda of the new cabinet and as soon as they started announcing it, it started to gain international investors attention. Also, as a step to strengthen the stock market, the government inclined to fully privatize companies rather than partially. As a result, the value of the privatized entities increased and the overall market performance improved till the end of 1998. At that time, the privatization program faced the difficulty of the liquidity shortage in the markets and the Asian financial crises which affected the overall stock market performance.

3.7. Accomplishments of the Programme

The ultimate goal of the Egyptian government by adopting the privatization program was to increase the role played by the private sector in the economic development and to develop the overall economic performance. To this end, the Egyptian government started by preparing 314 State Owned Enterprises as potential companies for privatization. The companies offered a striking investment opportunity to local as well as international investors. The privatization program then started by fully privatizing 3 big companies, Coca-Cola, Pepsi, and Al Naser Boilers. The sale happened as result of direct negotiations with strategic investors who bought the companies during the period from 1991 to 1996.

Other companies were also privatized later in a group approach where around 4% to 25% of shares of different State Owned Enterprises were offered through the stock markets. Those companies offered during the period were the most profitable, the main reason is that the government in order to publicize the privatization program has offered them at a discount and for most of the offerings oversubscription was always evident. By the year 1996 and as a new cabinet was appointed, with a top agenda item to promote the privatization program and to bring it back on track. The new cabinet started by internationally publicize the program where many key international investors showed interest. Also, the new cabinet started and for the first time to sell 51% of its stake in State Owned Enterprises through the stock market. The stock supply increased and the market performed better allowing for speedier privatization of State Owned Enterprises.

Nonetheless, the privatization program didn't maintain the same momentum as it faced some difficulties toward the end of the last century. One global problem that affected directly the ambitious privatization program of Egypt was the Asian economic crises which spread its affect

to most of the Asian economies as well as the economies of Russia and Brazil. As the Egyptian economy was becoming more and more Liberalized, the consequence of the crises affected directly the stock prices and a sharp decline took place. The bad performance of the stock market was coupled by a number of terrorist attacks on touristic places which negatively affected the performance of the economy at the time. All of the above-mentioned factors had a severe negative impact on the investment climate and foreign direct investment shifted from Egypt to other developing markets. Unlike the beginning of the privatization program where the offering used to oversubscribe several times, the offerings that took place toward the turn of the century failed to cover the subscription which was a clear indication of a poor market performance. On the top of those reasons come the liquidity shortage and the long selling procedure and lack of proper investment information from the holding companies to contribute to the overall slowness in the privatization program.

In order to address those issues, the government formed the Ministerial Privatization Committee. The committee toward the end of 1998 adopted a more market approach in the privatization program. This decision of the committee ensured bringing back the privatization program on track. Also, due to the global; economic issues at the time, the Committee focused more on selling the State Owned Enterprises to strategic investors and put on hold the IPO method. Several companies were privatized in that period and in different industries ranging from agriculture, food and beverages and milling to real estate and construction.

Furthermore, in early 2001, the scope of privatization included and for the first time huge infrastructure utilities like airport, electricity and telecommunications through either direct acquisition or Build-Operate-Transfer method (Abdel Shahid, S., 2002). Also, financial services and oil and gas companies were for the first time on the privatization program. To gain back the

trust of investors in the privatization program, the government had to succeed in selling three of biggest utility companies, the Telecom Egypt, Greater Cairo and Canal Electricity Companies. The government was required to sell 20% of Telecom Egypt to public and 10% to a strategic investor and to sell 20% of electricity utilities to public to prove that privatization is back on track.

Following this step, several other companies were privatized through public offering in the period between 2003 and 2006. This included 20% of Alexandria Mineral Oils, 30% of Nasr City Housing and Reconstruction, 20% of Sidi Kerir Petrochemicals, 40% of the Suez Iron and Steel and 100% of Shibin el - Kom Spinning and Weaving and Farta for paper and cardboard among many others. In addition, there was another major sale that took place in 2006 which was the sale of 100% of the biggest department store in Egypt Omar Effendi to a strategic investor

3.8. Impediments of the Programme

The Egyptian privatization program faced several issues during the span of 20 years. The issues that the privatization programme faced during the period can be summarized in 4 major categories (Massaad, N., 1996) and (Khattab, M., 1998). The major issue are the difficulty in performing a financial restructure of the companies, unemployment, the power exerted by the Holding Companies in each sector, the stock exchange. The following section of this chapter will shed light on each of these difficulties that have faced the privatization program.

3.8.1.   Financial Reform

In order to improve the performance of a State Owned Enterprise, there should be a financial restructuring process where the debt is reduced to help company turn to profitability as a

requirement of pre-privatization. Most of the State Owned Enterprises suffer from having short and long term debt to the extent that they cannot service the interest and repay the debt. Balance sheet restructuring is very crucial to ensure that a State Owned Enterprise is ready to be privatized and also to attract investors who will not be interested in investing in company which is not financially viable.

3.8.2. State Owned Enterprises' Employees

The size of the labour force working within the State Owned Enterprises is considered to be around 1.3 million employees. This huge labour force count is considered to be one of the major obstacles facing the Egyptian privatization program due to its political sensitivity (Qandil, A. , 1998). The State Owned Employees view their job to be more secure than those in the private sector. The early stage of the privatization program witnessed reducing the overall work force in the State Owned Enterprises by around 2%. Even though the reduction is very minimal, but when seen with other factors in the economy like the increase in the size of jobseekers per year and the failure of the private sector to create more job opportunities, then this is considered to be a major obstacle facing the privatization programme.

3.8.3. Powerful Holding Companies

When the holding companies were formed back in the early 1990s, they were given the responsibility of getting the companies ready for privatization and also, on deciding when the State Owned Company will be ready for privatization. The slow decision taking within the holding companies as well as the slow restructuring of those companies delayed the overall implantation of the privatization program. Further, the agency problem also is evident in this relationship as the

mangers in the holding companies will have their own goals which are different from the goals of the government. They tend to prolong the process of privatization to secure their future as they will tend have less security if the programme is implemented.

3.8.4. The Stock Market Role

There is no doubt about the benefits that the privatization program will bring to the stock markets. However, during the mid-1990s the stock markets witnessed sharp decline in stock prices which made the government think of slowing down the privatization program to avoid further complications. In the next year the government took the decision to offer the shares of the State Owned Enterprises to the Public and to the employees. This led after some time to the rise of the stock market as the small investors were enticed by the quick capital gains and the big investors were encouraged to speculate on the stock market.

3.9. Summary of the Discussion:

The Egyptian economy went through a major change that made the 76% of total investment which was owned by the private sector before 1952 revolution turn to create the public sector which owned and governed the economy of Egypt for decades. The application of Law 258 in the year 1956 was the early steps of creating a centralized economy through the nationalization of all private companies and establishing the State Owned Enterprises. The State Owned Enterprises shortly monopolized all the economic activities and for more than 3 decades continued to control more than 80% of the investments in the economy. A turning point in the economic history of Egypt took place in 1974 when the government started what is called the "Open Door Policy" where the government stated to reduce the dependency on the Public sector and promoted the role

of the private the sector. The government worked on attracting the foreign direct investments to the economy and to liberalize the financial system to support the government initiative to increase the involvement of the private sector in the economic development. When the private sector started contributing to the economic growth the Egyptian government realized that the State Owned Enterprises were of less efficient and viable if compared to their private peers. The weak management of the State Owned Enterprises was the main driver for such poor performance, and these entities at one point were considered as the main contributor to the overall government budget deficit. At that point, the government turned to the International Monetary Fund to assist, and this was the time that the economic reform programme was enforced on the Egyptian government by the International Monetary Fund. The Egyptian government were forced to introduce a comprehensive privatization programme and to reduce subsidy to the Public Sector. The privatization programme was implemented starting from 1991 as an integral part of the overall economic reform programme. The Egyptian programme followed a gradual approach to dissolve this sector where different methods were used.

The next chapter will focus on the literature review on empirical studies done on privatization. This will include studies done on the Egyptian Privatization programme as well as those done on other developed and developing countries.

Chapter 4: Privatization in Literature

4.1. Introduction

The Privatization as an economic reform tool has been part of the policy kit used by many countries for the last decades. Since the beginning of the use of privatization, researchers have generated enormous empirical studies that examined the effect of privatization on the financial performance of the former State Owned Enterprises. The studies examined indicators at different levels, starting from the company and the economy and internationally. The studies also covered privatization experiences from developed as well as developing countries. Up to date research in this area was more focused on the frim performance itself post the privatization. This chapter of the thesis will review all the empirical studies done till date that influences the hypotheses defined for this research.

4.2. Company Performance Pre and Post Privatization

This section will summarize all the literature that is related to the performance of privatized frim after the transaction of privatization taking place and comparing it to the period before the transaction taking place on the overall performance of companies.

Megginson, W. L., Robert C., Matthias V. (1994) in their study examined the performance of 61 privatized companies from across 32 different industries from18 countries. The sample covered the privatized companies in the period from 1961-89. The study compared three years average post privatization financial and operating ratios to a similar period pre-privatization. The study tested the significance in median changes in post versus pre-privatization data set. Further, the

researchers used binomial tests for the companies changing as predicted. The result of the study proved that there is a statistically significant post privatization increase in sales, operating efficiency, profitability, investments, and dividend payment. Also the study showed a significant decrease in leverage. The research also showed no proof of any downsizing of the labour force as a result of privatization. On the contrary, the results showed that the median of employment level has increased by 10%. Also, the results showed that there were major changes in the managerial level. The study concluded that the privatization improves the performance of companies when compared to the pre-privatization performance.

Dewenter, K. and Paul H. M. (2001) in their study they tested the impact of privatization on the frim performance by examining the performance change in a data set of 63 large high-information companies from developing countries privatized during the period from 1981 to 1994. The comparison of performance pre and post-privatization was done over a short-term period and a long-term period as well. In addition, the researchers have tested long-run return performance of privatized entities using a relatively large sample of 1500 frim years of both private as well as State Owned Enterprises. The results of the study showed substantial increase in profitability and also a decrease in the leverage and size of labour forces in the short and the long term. The results also showed that the operating profits had increased only in the period preceding the privatization of the State Owned Enterprises. In addition, the stock return analysis resulted in considerable positive long-term abnormal returns. Those results were rigours in developing countries like Hungary, Poland, and a developed country, the UK.

Boardman, A. E., Claude L., and Aidan R. (2003) in their research work have examined the change in performance of nine companies privatized during the period from 1988 to 1995 in Canada. The researchers have compared financial and operating ratios for pre and post privatization

performance of the nine companies. Also, they have computed the 5 years stock returns for the nine privatized companies. The results showed that the profits have increased by more than double and the operating efficiency as well as the sales has increased drastically. In addition, the leverage and the employment levels have considerably decreased while the capital expenditure has increased. The nine privatized companies have outpaced the stock market over long-term.

Martin, S. and David P. (1995) in their research have examined the effect of privatization on the overall performance of the companies by examining the profitability and efficiency pre and post privatization transaction. The data set used in the study included 11 privatized British companies during the period from 1981 to 1988. To assess the profitability of the company, the researchers used return on invested capital and the annual growth in value added per employee hour to assess the efficiency gains. The result of the study showed that less than 50% of the sample has performed better after being privatized. They discovered evidence that the many of the companies have improved their performance before the privatization announcement but didn't maintain the trend after privatization.

Researchers Saal, D. and David P. (2003) in their study also examined the effect of privatization on the performance and productivity of UK privatized companies. The study observed the productivity level and price performance of water and sewage privatized companies. The studies also observed the impact of introducing a new regulatory regime in 1989.They have used the Total Factor Productivity to measure the productivity of the companies. The result showed that the labour productivity has significantly improved post privatization. Further, outcome showed that the productivity growth didn't improve as a result of privatization. The last outcome of the study showed that post privatization the output prices have increased and exceeded the input prices and resulted in an increase in economic profit.

Jones, L., Yaha J., and Nilgun C. (1998) studied the performance of the privatized companies in Ivory Coast. The research covered 80 privatized companies from the electricity sector as well as companies operating agriculture sector and service sector where more competition is evident. The conclusion they have reached is that the performance of privatized companies showed a significant improvement when compared to the performance pre-privatization. Also, they have observed that privatization contributes to economic welfare.

Rakesh, Garg, (2011), investigated the impact privatization has on four big Indian privatized companies pre and post privatization. The study covered a period of ten years. The researcher tested the impact of privatization on profitability, liquidity, sales efficiency and solvency position of the selected companies. This analysis was done using the ratio analysis, mean, standard deviation, coefficient of variation and paired t-test. The results of the study showed that the sales efficiency, liquidity ratio has increased while the debt to asset ratio has decreased. The overall impact on the privatized companies post privatization is positive.

Sun, Q., Jin J, and Wilson T. (2003) examined the performance of 634 Chinese State Owned Enterprises that were privatized and listed during the period from 1994 to 1998. The study is one of the most comprehensive studies done on the Chinese privatization programme. The study examined the change in performance as a result of the effect of state versus private shareholding level. The researchers used the methodology developed by Megginson, W. L., Robert C., Matthias V. to examine the change in performance pre and post privatization. Also, they have used a panel data regression test to examine the impact of partial and full privatization on profitability, output, and efficiency. The results showed that post privatization there is significant improvement in return on sales,real sales, employee productivity, and the level of real profit. Additionally, they found

that better performance is evident in the recently privatized companies when compared to those privatized long back.

Boubakri, N. and Jean C. (2003) studied the change in performance due to privatization by comparing pre privatization performance to post privatization for 16 African companies privatized during the period from 1989 to 1996 though an IPO. They have used also Megginson, W. L., Robert C., Matthias V. methodology. The researchers discovered that there is a considerable increase capital expenditure and relatively no effect on profitability, efficiency, output, and leverage.

D'Souza, J. and Megginson, W. L (1999) in their research have tested the performance of privatized companies from developing and developed countries during the period from 1990 to 1996. The sample used included 85 companies from 13 developing countries and 15 developed countries. The study was done by comparing the operating performance ratios 3 years pre and post privatization. The results showed a proof that the mean and median levels of profitability, real sales and operating efficiency increased considerably. Also, the results showed a significant decrease in leverage and employment and minor increase in capital expenditure. In addition, the results of the study showed also that the privatized company in competitive industries produce rapid and stable benefits to the economy.

Subrata S. and R. Sensarma (2010) studied the impact of partial privatization on 26 banks in India over the period from 1986 to 2003. The researchers adopted a methodology to assess the total factor productivity and four accounting measure, Operating profit ratio, net interest margin, operating cost ratio, and staff expense ratio were used to assess the change in performance pre and post privatization for the sample. The result of the study showed that partial privatized banks in

India have exhibited improving performance during the period 1986-2003. There was a significant increase in the operating profit and the net interest margin with a decrease in operating cost and staff expenses post privatization. The results showed that the effect of listing on performance is not a temporary phenomenon and is in fact persistent beyond the year of listing. Thus, performance of partially privatized banks continues to improve further after listing

Verbrugge, J., Wanda O., and Megginson, W. L (2000) in their study analysed the change of performance pre and post privatization of banks in developed and developing countries. The sample used was for 32 banks from developed countries and 5 banks from developing countries for the period from 1981 to 1996.further, the study covered also the offering terms and share ownership structure for 65 banks that were privatized during the same period. The results of the study showed that there are considerable improvements in the privatized banks in the developed countries reflected in a significant increase in the ratios of profitability, net income, andcapital adequacy; besides a significant decline in leverage.

Boubakri, N. and Jean C. (1998) examined the how success the privatization program was in the developing and developed countries during the period from 1980 to 1992. The sample used by the researchers comprised of 79 companies from 21 developing countries and 31 developed countries. The researchers compared the financial and operating ratios for a period of 3 years pre and post privatization. Further, they have used the binomial tests to measure the per cent of the frim change as per the prediction. In addition, they have reach the conclusion that there is a significant increase in in real sales, operating efficiency, profitability, capital expenditure and dividend payments, also there was significant decreases in leverage for all companies as result of privatization. They also have found cogent evidence that there was significant increase in capital expenditure to sales levels

and to total assets. Also, they have shown that the there is an increase in the level of output as measured by indexed nominal sales.

Ariff, M., Cabanda, E., & Sathye, M. (2002) studied the efficiency improvements as result of privatization programme implemented in Japan, Philippines, Malaysia, and Australia. They have tested the operating and the financial performance of telecommunication companies over a period of 12 years. They have adopted the Megginson, W. L., Robert C., Matthias V. model and the Data Envelopment Analysis to assess the changes. The results of the study showed that the privatized companies improved productivity of 3% to 50%. Also, they have shown that in Japan, Philippines, and Australia there was a considerable increase in total factor productivity. In addition, the results showed that there was an increase in profitability for companies in Malaysia, and Australia

Omran (2001) in his study examined the performance in 69 privatized Egyptian companies privatized during the period from 1994 to 1998. The data set used by the researcher included companies privatized with different methods. It included 33companies privatized through a majority sale, 18 companies privatized through partial sales, 12 companies privatized through sales to Employee Shareholding Associations, and finally 6 companies privatized though sales to anchor investors. The research applied the Megginson, W. L., Robert C., Matthias V. model to study the sample. The results showed that profitability, operating efficiency, capital spending, dividends, and liquidity increased. On the other hand, the leverage, employment, and financial risk decreased.

EI-Shahat, A. (2003) in his study performed a comparison of the financial and operating performance of Egyptian construction companies. He used a t- test to measure the change in the operating and financial indicators. The results of the study showed that there was an increase in profitability and labour productivity and an improvement in financial risk (measured by the debt

ratio and the inverse times interest earned). Further, the results showed that there is a decrease account receivable after privatization and an increase in liquidity of inventory.

Habib A., Z. Abbas, and Zulfiqar A. Shah, (2011) studied the impact of privatization on the performance of 11 Pakistani companies over a period of 11 years. The researchers used financial ratios to examine the change in performance pre and post privatization. The methodology used in the study was paired sample t-test. The results of the research work indicated that the p value of EPS and Tobin's Q is below 0 .05 and also the mean post privatization is higher than mean pre privatization for both. This result indicates that the Market value of company to Total Assets value and the earning per share increased as a result of the privatization transaction taking place. The cost of capital and unsystematic risk also slightly increases with privatization but that increase is not proportionate to the returns.

Sun, Q., Jin J, and Wilson T. (2002) examined the effect of privatization on the performance of 24 companies privatized through public offering in Malaysia in the year 1997. The researchers compare the financial and operating performance ratios pre and post privatization. The methodology adopted to analyse the sample was Megginson, W. L., Robert C., Matthias V. methodology. Also, they have used panel data regression to test the sources of performance changes. The researchers found that the privatised companies increased profits by 300% and 200% increase in real sales and also reduced the leverage. Further, the results of the study also showed that the returns of the stocks were normal. All of the results shown that privatization affected the performance positively.

The empirical studies shown above shed light on the research done to compare the performance of privatized entities pre and post privatization, the finding of all the research showed that the

privatization transaction affected positively the profitability, output, efficiency, leverage, and dividend payments. The results of the studies also exhibited significant performance advances using both the Wilcoxon (median) and binomial (proportion) tests. Also, it should be noted that most of the studies used the Megginson, W. L., Robert C., Matthias V. methodology. The researchers agreed to the fact that this methodology tends to examine and compare samples of companies from different industries, in different counties, and over different time periods. Further, the methodology is strong in examining the Initial Public Offerings and thus eliminates any selection bias for instance considering privatization cases where political influence is evident.

It is also evident from the research work done that the studies didn't inspect the effect of the privatization method on the performance of privatized companies' pre and post privatization.

4.3. Privatized Company Performance or Private Company Performance

This section of the literature review will consolidate the research work done on comparing the performance of the privatized companies' pre and post privatization with the performance of private companies. Many empirical researches were done in this area and the following will show a summary of the key literature done to examine this subject.

Boutchkova, M. and Megginson, W. L. (2000) in their study examined the stock ownership methods for privatized companies. They have compared the stockholders numbers for privatized companies against the stockholders numbers of private companies in the same markets. The match between privatize company and private companies was done based on comparable market value between the two. They applied a condition for selection, that the company should have at least 250,000 shareholders. The final sample after applying the section criteria consisted of 86 couples

of privatised and private companies. The sample was analysed using the Wilcoxon signed rank test to test if the mean of shareholders numbers of privatized companies is higher than that of the private matching companies. The results showed that the privatized companies tend to have more shareholders than the pears in the private sector.

Omran (2007) in his study examined the impact of ownership and privatization on the bank performance in Egypt. The researcher used a sample of 12 banks that were partially or fully privatized during the period from 1996 to 1999. The researcher in his study examined Pre and post privatization performance of banks, and he assessed the change in performance in privatized banks with private owned and mixed-ownership banks on matched adjusted basis. Additionally, he studied the post privatization performance of privatized banks in comparison with other group equivalents. In the analysis he used fixed-effect regressions over the study period. The results of the study showed that certain profitability and liquidity ratios declined while the asset quality, capital risk, operating efficiency, and asset growth didn't change much. The comparison between the relative changes in performance of privatized banks compared with private owned banks and mixed ownership with majority private ownership showed similar results. While, the relative performance changes of privatised banks are significantly better than majority state-ownership banks and it is poorer than state-owned banks. Therefore, it clear that the performance is directly related to the level of ownership of the private sector in the banking sector in Egypt.

Laurin, C. and Yves B (2001) have studied the productivity and profitability of two rail carriers in Canada pre and post privatization. In the study they used financial ratios for a period of 17 years starting from 1981 to 1997. They then split the analysis into three blocks, the first from 1981 to 1991 and this represents the State Owned period. The second from 1992 to 1995 this represents the pre-privatization period and lastly the period from 1995 to 1997 which represent for the post

privatization period. The results of the study showed that the productivity of State Owned Enterprise was less than that of the private owned company in the first period. The second period showed similar performance between the two. While the third period showed that the privatized company outperformed the privet frim which clear indications of efficiency.

4.4. Ownership Structure and Privatized Frim Performance

This section of the literature review is related to Hypothesis 2 of this research. It will summarize the research done on the impact of ownership structure on the performance of privatized companies.

Grigorian, D. (2000) deliberated on the connection between the different ownership types and the company performance in the Soviet Republics. The researcher investigated the impact of privatization on both the financial and operating performance of privatized entities. The sample used in the study included 5300 Lithuanian companies ranging from small to large privatized companies over a period of 3 years from 1995 to 1997. The financial data was analysed using a regression analysis to study the relationship. The results of the study showed that privatization through different ownership types positively affected the performance of privatized companies.

Villalonga, B. (2000) examined the impact of ownership change on the efficiency level of fully privatized Spanish companies over the period of 9 years from 1985 to 1993. The data set included the financial data for the 24 Spanish companies fully privatized over the period. The results of the study showed that there were no material change in the efficiency level post privatization. However, there was a significant increase in business life cycle efficiency and improvement for the capital intensity and the foreign ownership. The researcher's results showed that the

privatization leads to inefficient results in the short term of 5 years and conversely, it leads to high efficiency gains on longer term of 7 years.

Earle, J. S., (1998) investigated the effects of ownership structure types with the productivity of companies in Russia. The study used the data from 86 State Owned Enterprises, 299 partially privatized companies and 45 private companies to study the impact of ownership types on the performance. The researcher used Ordinary least Squares Regression method to analyse the data. He also adjusted for the tendency of insiders to dominant the ownership of the privatized company with the highest performance. The results of the study showed that there is a direct relationship between the private ownership on productivity when compared to the state ownership. In addition, the results showed that the outsider ownership significantly affects the improvement in productivity. The study concluded that the insider control will tend to have a negative effect on the performance of privatized companies in Russia over the long run.

Claessens, S., (1997) examined the effect of ownership style on the share prices in Czech and Slovak Republic for privatized companies. The data set used included 1491 privatized companies and was analysed using regression analysis. The results of the study showed that the share prices increases when traded in secondary market and the majority of the shareholders are nationals. The fact that nationals own the majority of shares put pressure on the change of management style within those companies. Further, the outcomes of the study show that privatization results in changing and improving the management style of these companies to match their peers in the private sector. The improvement in the management style leads to increase efficiency and profits and thus result in the increase in share prices.

Boardman, A. and Aidan R. (1989) examined the change in performance between forging industrial companies operating in the United States with various types of ownership structure, government owned, privately owned and partial privatized companies. The data set used for the study covered 500 largest foreign companies operating in the United States in 1983. The researcher used profitability ratios and X-efficiency measures. The results of the study showed that government owned and the partially privatized companies are less productive when compared to eh private companies. Also, the profitability of government owned companies and partially privatized companies is almost the same. The study concluded that it is crucial to have fully privatized companies in order to achieve improvements in efficiency and profitability.

Ehrlich, I., Georges G., Zhiqiang L., and Randall L. (1994) examined the difference in productivity between the State Owned Enterprises and privately owned companies. The data set used for the study covered 23 international airlines with different ownership structures for the period from 1973 to 1983. The results of the study showed that there is a significant relationship between ownership and rate of productivity growth. Also, the private ownership results in higher rate of productivity growth and a decrease in the costs over the long term. The results showed the shift from fully government owned to fully privately owned will lead in the long term to the increase of the annual rate of productivity by around 2% and will also lead to the decrease in unit cost by 1.95%. Further, the partial privatization has no effect on the rate of productivity growth. The study concluded that the fully private ownership results in better rate of productivity when compared to the partially and State Owned Enterprises.

Jones D. and Niels M (2002) studied the possible relationship between the ownership structure and the production efficiency for Estonian companies. The researchers used the fixed-effects production functions to examine the relationship between the ownership level and the productive

efficiency for a set of State Owned Enterprises, privatized and privately owned companies. The data set used included 660 companies over a period of 5 years from 1993 to 1997. The results of the study showed that the privatization programme in Estonia resulted in a diverse ownership structure. Also, the results showed that the privately owned companies when compared to the State Owned Enterprises are more efficient by 13% to 22%. Further, the private foreign ownership when compared to the private domestic ownership showed that the former is more productive by 21% to 32%.

Laura Cabeza Garcıa and Silvia Gomez Anson (2012) examined the impact of ownership structure and concentration, whether internal or external, on performance of privatized companies. Also the study tested the impact of foreign ownership and concentration, competitiveness of the market and the economic condition on performance of privatized companies. The data set used for the study covered 70 Spanish companies over the period of 15 years from 1985 to 2000. The researchers used the pooled cross-sectional time series regression using a generalised least squares model to test the hypotheses. The result of the study showed that the greater the renunciation of government control and the lower the ownership percentage owned and controlled by managers and/or employees, the better the companies' performance after the privatization taking place. Further, privatisations of companies that are accompanied by liberalisation programmes and taking place during resilient economic cycles turn out to be more successful.

Kocenda, E. and Jan S., (2003) in their study examined the impact of ownership on performance in privatized companies in the Czech Republic. The data set used by the researchers covered around 2,949 measures in an unbalanced panel of 1,540 medium and large Czech companies inspecting six different categories of ownership. The results of the study showed that the foreign ownership will result in an improvement in the performance of the privatized companies when

compared to the State Owned ones. Further, the study showed that the domestic ownership will not result in improving the performance of the privatized companies when compared to the foreign ownership, as the latter tends to bring a different strategic approach that increase profits and cut costs. As a result, the study confirmed the relationship between performance of privatized companies and the ownership.

I. Iwasaki, M. Szanyi, P. Csizmadia, M. Illessy, C.Makos (2010) Used yearly census data of Hungarian companies covering a period of four years starting from 2002 to examine the impact of ownership structure on the financial and operating performance of privatized companies. Also they studied the impact of level of concentration and foreign investors' possession on the overall performance of the privatized companies. The researchers used a panel data regression modelling using different performance measures as dependent variables and then produce these estimates using meta-analysis techniques to observe the hypotheses under study. The results of the study exhibited that in order to perceive the effects of ownership transformation, it is essential to distinguish the probable bases of privatization advances. Further, the results showed that foreign investors overtake domestic investors faster for medium and small-sized State Owned Enterprises sold in the early 2000s.

Christian Wolf (2009) investigated the effect of ownership on the performance of the global oil and gas industry companies and assessed the methodical performance and efficiency discrepancies between State Owned Oil Companies and International Oil Companies. The data set used covered 130 companies over the period from 1987 to 2006 comparing output efficiency, revenue generation and profitability. The panel-data regression analysis was used to analysis the data. The resulted showed that the, state-owned companies have been significantly underachieving when compared to the private equivalents, by 21%. The results on the revenue generation to the output do not

specify a steady advantage of any ownership structure. As for the profitability, the private companies are significantly higher.

D'Souza, J. and Megginson, W. L, Nash R. (2007) investigated the effects of restructuring and changes in corporate governance post-privatization operating performance of privatized companies. The sample used covered 161 companies which were privatized over a period of 38 years from 1961 to 1999. The researcher used multivariate OLS regression to inspect the impact of restructuring, governance changes, and supplementary factors are influencing the post-privatization performance. The result of the study confirmed that reform is an important factor affecting the post-privatization performance. Also the results showed that restructuring enhance efficiency. Further, the improved corporate governance as a result of privatization of companies also complements the enhancement of performance. Another outcome of the study indicates that the foreign ownership result in overall improvement in performance and a decline in the employment level. Moreover, there is a negative relationship between government ownership levels and the overall performance. As a final point, the outcomes showed that profitability declines due to the rise in the employees' ownership share.

Laura Cabeza Garcıa and Silvia Gomez Anson (2011) analysed the relationship between the private ownership concentration and overall efficiency of the privatized company. The data used in the study covered a range of 126 Spanish privatized companies over a period 8 years. The study was carried using a regression model. The results of the study indicated that three important factors explains the privatization impact on the private ownership level which are, the privatization mode, the industry, the size and the risk. Further, the study proved the direct relationship between company efficiency after privatization and the level of private ownership.

Omran (2009) examined the post-privatization corporate governance for a data set of 52 newly privatized Egyptian companies covering a period of ten years. The study observed the ownership structure as a direct outcome of privatization and its development. Further, two other aspects were also tested to assess their impact of the overall performance of privatized companies, first the concentration of the private ownership, and second the board of directors composition. The results of the study indicated that the government tend to lower its control over time; however, government in Egypt still holds one third of the control of those companies. The study also recognized a tendency in private ownership concentration over time towards foreign ownership. In addition, the study concluded that the size, sales, industry, and timing and mode of privatization play a vital role in setting private ownership concentration level.

Ownership concentration and identity of the private owner ownership, particularly the foreign investors, showed a positive impact on privatized company performance; on the other hand employee ownership concentration has an adverse impact. Additionally, the higher the number of the independent and professional directors and the change in the board structure post privatization will have positive impact on the overall performance of the privatized company.

The results of the study indicated important policy inferences where the private ownership of any foreign investors tends to increase the value addition for any privatized company. While on the contrary, the higher the employee share the lower the performance of the privatized companies. Also, governments are recommended to abandon their control level and permit changes in the board of directors post privatization taking place as this will enhance the overall performance of the privatized companies.

Kwoka, J. (2002) examined the influence of ownership structure on the performance of companies in the United States of America. The data set used by the researcher included data from hundred and forty seven privately owned utilities and three hundred and sixty nine state owned utilities in 1989. His study tried to prove if there are any differences in efficiency levels between the privately owned and the publicly owned utilities. The results of the study showed that there were differences between publicly owned and privately owned utilities as the publicly owned utilities had less cost advantage when compared to the privately owned utilities that owned the generation facilities. On the other hand the publicly owned utilities had a competitive advantage in distribution business. The study concluded that there is no connection between ownership and the performance of the privatized companies.

4.5.   Discussion of the Literature Review:

All of the studies documented above in this section of the thesis indicated clearly that the privatization result in an overall improved performance. In these studies, several hundreds of firms from more than forty countries have been examined covering most of the industries present in any economy. Villalonga, B. (2000) in his study where the privatization literature was reviewed concluded that there is a discrepancy between the privatization in theory and the evidence in the research approach. In the Villalonga research, he reviewed more than 150 publications to reach this conclusion.

On the other hand, the studies reviewed above considering the privatization as an event comparing the pre and post privatization performance, (Megginson, W. L., Robert C., Matthias V., 1994; Boubakri, N. and Jean C. 1998 and D'Souza, J. and Megginson, W. L.1999) indicated a consistent improvement in the performance of the privatized firms. The research also indicated that the

performance improved at a higher pace in the more developed countries compared to the less developed ones. This might be attributed to the fact that the legal system in those countries is more developed. The improvement in performance is also higher in the natural monopoly businesses and highly regulated sectors like the telecommunications and the utilities sectors. This might be a direct result of the incentive schemes that the regulators usually put in place to enhance performance.

Pre and Post Privatization Performance

Further, the empirical studies shown above shed light on the research done to compare the performance of privatized entities pre and post privatization, the finding of all the research showed that the privatization transaction affected positively the profitability, output, efficiency, leverage, and dividend payments. The results of the studies also exhibited significant performance advances using both the Wilcoxon (median) and binomial (proportion) tests. Also, it should be noted that most of the studies used the Megginson, W. L., Robert C., Matthias V. methodology. The researchers agreed to the fact that this methodology tends to examine and compare samples of companies from different industries, in different counties, and over different time periods. Further, the methodology is strong in examining the Initial Public Offerings and thus eliminates any selection bias for instance considering privatization cases where political influence is evident.

It is also evident from the research work done that the studies didn't inspect the effect of the privatization method on the performance of privatized companies' pre and post privatization. This study will examine the impact of the privatization type, partial or full privatization, on the performance indicator set in the Megginson, W. L., Robert C., Matthias V. study. Further, the results of the studies also showed that there was a positive impact on the performance of the

privatized firms after the new management team is appointed post privatization. This is mainly due to the fact that the new management replacing the public management will usually have more appetite to take risk and they tend to be more profit driven.

Ownership Structure and Size

The same positive results will also be achieved when the ownership of the privatized companies will be majority private sector; which indicate an important element in improvement of the performance of the privatized firms. This is a direct result of the controlling shares which allow the private investors to drive the investments in the right direction and will also allow them to take more aggressive commercial decisions which the public management usually avoids. This will lead to the conclusion that the concentrated ownership of the private sector will result in better performance when compared to the defused ownership structure. The concentrated gives more controlling power and focus to one private owner to drive the companies into a higher level of efficient operations. The foreign ownership is another important element that enhances the performance of the privatized firms. This is mainly due to the fact that the technical know-how will usually bring better efficiency measures that can drive better performance. In the developing economies this will tend to bring even more enhancement of the performance due to the lack of advance management techniques in the public management team and also due to the transfer of knowledge that usually takes place.

The size is another measure that the literature reviewed above indicates that it plays a vital role in the enhancement of the performance of the privatized companies. This measure plays a key role in enhancing the financial performance of the privatized companies. The size tends to give the privatized companies a competitive advantage over other smaller companies. The ability to have

better international relationships to exports the products was found to be a key advantage for those privatized firms with bigger asset base. All of those factors will enable the privatized companies to enhance their financial performance by leveraging their size.

The conclusion that can be drawn from the above discussion is that the privatization as a conceptual framework has been a debated topic among politicians and economists. The empirical studies shown above summarize some of the empirical work done on privatization. It is clear that some researchers were able to explain the performance of privatized companies by comparing financial and operating performance pre and post privatization. The studies of Megginson, W. L., Robert C., Matthias V., 1994; Boubakri and Cosset, 1998; and D'Souza and Megginson, W. L, 1999 were able to show that the privatization will lead to clear increase in profitability, efficiency, and capital investment spending, output, and dividend paid. Furthermore, their studies showed also that there is a significant decrease in leverage. Nevertheless, their results didn't agree on the impact of privatization on the employment levels. On the other hand, the studies of Boardman, A. E., Claude L., and Aidan R. (2003), Saal, D. and David P. (2003), Sun, Q., Jin J, and Wilson T. (2003), Verbrugge, J., Wanda 0., and William M. (2000), and Omran (2001) didn't agree whether the positive results achieved were mainly a direct result from the privatisation process or due to different reasons. Boubakri, N. and Jean C. (1998) in their study tested if the change in performance can be justified by economic effect.

Further, some scholars have associated the performance of State Owned Enterprises with the performance of privately owned companies to assess the change in performance. Dewenter, K. and Paul H. M. (2001) study concluded that privately owned companies are considerably more profitable with less debt, and labour than State Owned Enterprises. Further Tian, G. L. (2000) showed that the Chinese privately owned companies performed better than companies with mixed-

ownership. Additionally Vining, A. and Boardman, A (1992) and (1989) shown that privately owned companies are more profitable and efficiently run when compared with State Owned Enterprises or even mixed-ownership enterprises. In addition, La Porta, R. and Lopez-de-Silanes, F. (1999) in their study documented that the privatized companies have improved their output and sales efficiency which bring the performance to nearly that of the private companies in a controlled group.

Further, the studies shown above highlighted the impact of ownership on the overall performance of the privatized companies. Most studies evidently support the fact that the ownership structure affects the performance of privatized companies when compared with the performance pre-privatization. Further, the outside investor ownership significantly impacts the performance of the privatized companies and particularly when foreign investors take role in the ownership structure. In addition, the private ownership structure always improve the performance when compare with the partial state ownership. Further, the concentration of the private ownership also plays as crucial role in improving the overall performance of privatized entities when compared with diffused ownership structure.

4.6.   Originality of the Study

From an empirical perspective, many of the studies carried earlier that compared pre privatization to post privatization financial and operating performance shed light on the comparison with SOE performance. Megginson, W. L., Robert C., Matthias V., 1994; Boubakri, N. and Jean C., 1998; and D'Souza, J. and Megginson, W. L.., 1999 in their studies established that privatization transaction results in a significant improvement in profitability, efficiency, and capital investment

spending, output, and dividend pay-out. Further, the privatization as a transaction results in significant decrease in leverage and the studies didn't confirm the impact of employment level.

Nevertheless, all of these studies and several other studies like the work done by Boardman, A. E., Claude L., and Aidan R. (2003), Saal, D. and David P. (2003), Sun, Q., Jin J, and Wilson T. (2003), Verbrugge, J., Wanda 0., and Megginson, W. L. (2000), and Omran (2001) didn't establish the fact that the results achieved were a direct result of the privatization process or maybe due to other factors. This was mainly due to the fact that the studies referred to above, didn't consider establishing a benchmark of control group of companies matched to the privatized companies. Some of the empirical studies like the one done by Boubakri, N. and Jean C. (1998) examined if some of the performance results were attributed to the economic effect by using market adjusted financial performance measures. However, in the study, they didn't consider the industry performance benchmark due to data limitation.

According to Megginson, W. L., and Jeffry N. (2001), it is hard to compare SOEs to privately owned firms due to two methodological difficulties. The first difficulty is related to the problem of determining the appropriate set of benchmarks, especially in developing economies with a limited private sector. The second difficulty is that, generally, there are fundamental reasons why certain industries are government-owned and others are privately owned.

By mapping all the studies reviewed above, it is clear that most of empirical studies related to the privatization companies' performance have examined the change in performance without comparing the change in values to the change in indicator values of the private companies'. This thesis will test the performance change of the IPO privatized Egyptian companies after matching them with a control group of private owned companies based on the relative size and industry. The

originality of work is to evaluate the values of each of the performance indicators based on the privatization type, partial or full privatization. This will be done using data from a developing country, Egypt, which has an overall different environment from the other studies and hasn't been studied earlier. In addition, this examination will be the first to study in Egypt that assesses the performance of the privatized companies with the performance of the private companies and also examine the impact of size, leverage, and ownership level on the performance of privatized companies. As a last word, even though the privatization transaction has been extensively studied in literature, the privatization as transaction is till different in the developing countries due to the differences in economic, social and legal aspects and in particular Egypt.

Chapter 5: Research Methodology

5.1. Introduction:

"Research" as a word means "to know" in ancient Latin. In order to perform research the researcher will tend to perform several rounds of scientific procedure that will result in setting clear definition of any problem. The scientific procedure will result in data that can be used for further analysis and investigation.

Further, the word methodology is defined to be the hypothetical examination and testing of techniques and process related to the area of research. The methodology of research has several models that include the set of theory, notations, comparing several methodologies, and the assessment of individual methods (Creswell, J. W., 2003).

To understand the notion of "Research Methodology", it is clear from the above mentioned definitions that it refers to a pre-defined method that will be followed to prove the ultimate goal of the research.

The previous chapter on Literature review has clearly shown that most of the empirical researches done on the performance of the privatized companies have adopted the Meginnson, Nash and Rederbourgh method. In addition, the research already shed light on how to measure the difference if any between the pre-privatization performance and the post- privatization performance.

This chapter of the thesis will set the research methodology to be used to assess the performance of the privatized companies' pre and post privatization and it will also define the contribution to the body of knowledge that will be achieved by performing this research.

This chapter will cover 9 sections, the 2nd of which will shed more light on the research methodology to be used to achieve the overall objective of this research work. The third section will clearly frame the objective of the research. Then the next section will discuss the methodology to be used to perform the research and the statistical methods that will best achieve the overall objective of the research. The next section will define the measures to be used to assess the performance of the privatized companies in the period pre and post privatization. The next section will describe the data set to be used and how it was sourced. Finally, a summary section will summarize the key points discussed in the chapter.

5.2. Research Methodologies

There are two major research methodologies known to be used in research, the quantitative and the qualitative. Each methodology has its own strengths and the usage of each differ based on the area of research. The quantitative research methods are used mainly in social sciences where models, theories and hypotheses are being developed and tested using empirical data. This research method is ideal for assessing the attitude and performance by designing a precise and consistent measure that allow for further statistical analysis of the data using different statistical techniques (Hancick, B., 1998). This research method can forecast the way a model will react to the change in certain variables. There are certain definite advantages and disadvantages of this research method. The advantages of this research method include the possibility of comparing different sets of data , to measure the certain variables and control for others, and capability of generalizing the results to the population. On the contrary, the quantitative research method has disadvantages that include the inability to capture the social dimension, the need for more observations to allow for a robust modelling and results and it is not adaptable to any changes if data gathering starts.

The other known research method is the qualitative research method. This research method is used widely in the social sciences where data is collected through interviews, reviewing documents and observation. The gathered data is used to analyse a given social phenomena. The analysis of this social phenomenon using the qualitative research method will shed light on the commonalities and strength of the responses. Therefore, this research method is strong in areas where the enhancement and fine-tuning of theory is required. Unlike the quantitative research method, this research method doesn't require any statistical skill. However, there is a strong need to have a clear theoretical framework that will result in capturing the correct and precise results and analysis for the system under consideration. As the quantitative research method, qualitative research has both advantages and disadvantages. As for the advantages, this research method provide a clear answer for the " how " as well the " why" while adapting to any changes that might occur during the research. Further, it enables the communication between different groups and allow for analysing the social process that accompany any study. As for the disadvantages, the data to be gathered for the qualitative research tends to be extensive with a tough analysis process.

This research work will adopt the quantitative research method to evaluate the effect of privatization on the performance of privatized companies' pre and post privatization. Further, this study will model the impact of privatization, size and gearing on the performance of privatized companies to performance compared to the private companies. This research method is used, given that the empirical data to assess the performance is available and the model is predictable. Further, this research method will allow for testing the different hypotheses to assess and predict the performance of privatized companies.

5.3. Panel Data

The rise of the panel data studies has been on the increasing since Hsiao's (1986) first edition of Panel Data Analysis was published. As per the records of the Social Sciences Citation index the studies listing the key word "panel data or longitudinal data" has reached more than 1500 publication in 2015 compared to almost 30 studies in 1986. This increase in the applied studies and the development of Panel Data as econometric tool is remarkable since the early publications done by Balestra and Nerlove (1966). This increase in the usage of panel data was mainly due to three contributing factors, the availability of the data to be analysed, the ability of the model to capture the complex human behaviour and the challenging methodology used to do the analysis. The panel data analysis is used in many studies as it prevent some distortions in terms of size that can take place in the time series analysis due to the limited number of the observations used. The reason for that is the fact that the panel data uses both the cross section dimension as well as the time series dimension. The use of this method has a number of advantages and a number of disadvantages. Hsiao (2003), and Baltagi (2001) identified several benefits of panel data analysis, including:

- Providing a large number of observations

- Increasing the degrees of freedom

- Reducing the co-linearity among explanatory variables

Panel data, by combining the inter-individual differences and intra-individual dynamics have several advantages over cross-sectional or time-series data:

1.   It has a more accurate inference of the model parameters. The Panel data typically contain more degrees of freedom and less multicollinearity than cross-sectional data which can be observed as a panel with $T = 1$, or time series data which is a panel with $N = 1$, therefore, this will enhance the efficiency of econometric estimates, Hsiao, Mountain and Ho-Illman (1995).

2.   The Greater capacity panel data has to capture the complexity of human behaviour than a single cross-section or a time series data. As per Heckman, Ichimura, Smith and Toda (1997), Hsiao, Shen, Rosenbaum and Rubin (1985) , the panel data analysis is more effective than the cross-sectional as the latter usually suffers from the fact that those receiving treatment are different from those without receiving the treatment. In other words, it is not possible to observe what will simultaneously happen when the unit that receives the treatment or when it didn't. The unit will be observed as either receiving the treatment or not receiving the treatment. In the case of using the difference between the treatment group and the control group the difference between the treatment group and control group might suffer from two causes of biases, the first id the selection bias due to differences in observable factors between the treatment and control groups and the second is the selection bias due to endogeneity of participation in treatment.

        a.   The panel data also allows controlling the impact of the omitted variables. It is often argued that the real cause a researcher finds, or not, certain effects is due to disregarding the effects of certain variables in the model specification which are correlated with the incorporated explanatory variables. The panel data includes information on the inter-temporal dynamics and the individuality of the entities which will allow controlling the effects of missing or unobserved variables MaCurdy's (1981).

b.   Further, the panel data analysis enables the uncovering dynamic relationships. According to Nerlove (2002), the Economic behaviour is inherently dynamic so that most econometric relationships are explicitly or implicitly dynamic. Nevertheless, the estimation of the time adjustment trend using the time series data usually has to rely on some sort of arbitrary restrictions beforehand, Griliches (1967). Using the panel data, relying on the inter0indivdual differences can reduce the collinearity between current variables as well as the lag variables in order to estimate unrestricted time-adjustment patterns, Pakes and Griliches (1984).

c.   The panel data is also capable of generating more accurate predictions for the individual outcomes. This takes place usually by pooling the data and not generating the predications of the outcomes using the data on the individual question. Further, if the individual behaviours are similar, then the panel data will provide the chance to learn the individual behaviour by observing and taking into consideration the behaviour of others. Therefore, it will be possible to acquire a more precise description of the individual's behaviour by complementing the observations of the individual in the question with the data from other individuals, Hsiao, Chan, Mountain and Tsui (1989).

d.   The panel data also provides for a micro foundation for the aggregate data analysis which usually invokes a representative agent as an assumption. Nevertheless, if the units used are heterogeneous, then the time series properties of the aggregate data will be different from the disaggregate data and the policy evolution based on it will be very much inaccurate, Granger (1990); Lewbel (1994); Pesaran (2003). In addition, the prediction of the aggregate outcomes is usually less precise if compared to the prediction using micro-

equations, Hsiao, Shen and Fujiki (2005). The panel data with time series observations will be perfect to examine the "homogeneity" versus "heterogeneity".

3.   Panel data simplify the computation and the statistical the statistical inference. This is due to the fact that the panel data include a minimum of two dimensions for a cross-sectional and time series. Nevertheless, in some cases the availability of the panel data will tend to simplify the computation and inferences.

a.   This is the case when the time series data used is not stationary; in the large sample approximation in the distribution of the least squares and the maximum estimators will not be normally distributed, Anderson (1959), Dickey and Fuller (1979, 81), Phillips and Durlauf (1986). However, in the case of the panel data, the observations will tend to be part of the cross-sectional units and independent, thus it is possible to invoke the central limit thermo on the cross-sectional units to highlight the limiting distributions of the estimators will continue to be asymptotically normal (Binder, Hsiao and Pesaran (2005), Levin, Lin and Chu (2002), Im, Pesaran and Shin (2004), Phillips and Moon (1999)).

b.   Further, the measurement errors will result in a possible under-identification of an statistical model Aigner, Hsiao, Kapteyn and Wansbeek (1985). The several observations for any given individual or at any given time period allows the researcher to achieve several transformations to induce different and deducible changes for the estimators resulting in an identification of unidentified model Biorn (1992), Griliches and Hausman (1986), Wansbeek and Koning (1989).

c.   In the case that the variable is reduced, the actual realized value will not be observed. If the outcome variable depends one way or the other on the previous realized

value and it is not observed, then there should be integration over the truncated range to get the probability of observables. In the dynamic framework where the missing data is big, the multiple integration will not be achievable. However, in the panel data, the problem can be addresses and minimized by concentrating on the subsample where the previous realized values are observed Arellano, Bover, and Labeager (1999).

5.4. The Objectives of the Study

The objective of this study is to examine the performance of Egyptian privatized companies' pre and post privatization. And also, to model the impact of, size, gearing and ownership on the privatized companies' performance compared to the matched private companies. As it is shown above in the literature review, all empirical studies have focused on observing the performance of privatized companies alone or to compare their performance with that of the State Owned Enterprises. Some studies also, have compared the performance of the State Owned Enterprises to the performance of private companies to test for the viability of privatization. In this study, the researcher will observe the change in performance of the Egyptian privatized companies by matching them to a control group of fully private companies. By performing this, the research study will not only test for the change in performance variables, but also will answer the question whether the performance of privatized companies compares with that of fully private companies.

5.5. The Research Hypotheses of the Study

The Egyptian government has adopted the privatization programme in the early nineties to help rescue the State Owned Enterprises from the poor management and financial position that has affected directly the performance and efficiency of those enterprises. This made the financial

viability of those enterprises a debatable issue at that time. The need for market forces to affect the performance of those State Owned Enterprises and also the IMF pressure for economic reforms, paved the way for the privatization programme to take place. We first do a number of bivariate comparisons between privatised companies pre- and post-privatisation and between privatised companies and private companies' post-privatisation (of the privatised companies). Since these comparisons do not control for all possible variables that may explain the outcomes, this procedure is then followed by a multivariate analysis using the Difference in Differences (DID) approach (Michael Lechner, 2010).

The following hypothesis will test for the improvement in performance post privatization:

Hypotheses 1: Privatization of Egyptian companies through IPO will result in the improvement of the performance of those companies following privatization.

Bivariate Comparisons

1. **Privatization increase the profitability of companies**

This will be examined by testing whether Earnings before interest and tax (EBIT), return on sales (ROS), return on assets (ROA) and return on equity (ROE) increase post privatisation

2. **Privatization enhances operating efficiency of companies**

This will be examined by testing whether sales and income efficiency increase post privatisation

3. **Privatization enhances output of companies**

This will be examined by testing whether the Sales will increase post privatization.

4. **Privatization improves Leverage Ratios of companies**

This will be examined by testing whether total debt to total assets (TD/TA) or total debt to total equity (TD/TE) decrease post privatisation[1]

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[1] These hypotheses are not independent as by definition we have E=TA-TD so that E/TD=TA/TD-1.

5. <u>**Privatization enhances efficiency of companies by lowering the number of Staff**</u>

This will be examined by testing whether the number of Staff will decrease post privatization

Multivariate Comparisons

As mentioned above, in order to relate any improvement in performance specifically to the privatization programme, it is necessary to use a multivariate approach. A powerful way for doing this is to model the impact of size, gearing and ownership on the performance of privatized companies compared to a set of matched private companies (control group). We performed a matching based on similar industry and comparable size of the control group companies. The following hypotheses compare the difference in performance between those two sets of companies.

Hypotheses2: Privatization results in an improvement of performance relative to private companies' performance

To test this hypothesis, the following hypotheses will be examined:

1. <u>**The Profitability Ratios of Privatized and Private companies are not significantly different.**</u>

This will be examined by testing whether the EBIT, ROS, ROA and ROE are significant. The Null hypothesis is that they are not.

1. <u>**The Operating Efficiency of Privatized and Private companies are not significantly different.**</u>

This will be examined by testing whether the sales and income efficiency of privatised and private companies are significantly different. The Null is that they are not.

2. <u>**The Output of Privatized and Private companies are not significantly different.**</u>

This will be examined by testing whether the sales of privatised and private companies are significantly different. The Null is that they are not.

3. <u>The Leverage Ratios of Privatized and Private companies are not significantly different.</u>

This will be examined by testing: whether the leverage ratios, (Total debt/Total Assets and Total Debt / Total equity) are significantly different. The Null is that they are not.

4. <u>The number of Staff of Privatized and Private companies are not significantly different.</u>

This will be examined by testing whether the Staff numbers of privatized and private companies are significantly different. The Null is that they are not

5.6. The Analysis Methodology of the Study

Our multivariate methodology as mentioned above is similar to the methodology used by Megginson, W. L., Robert C., Matthias V. (MNR, 1994), to examine the privatized companies' performance. In addition, this study will examine the same variables used in Megginson, W. L., Robert C., Matthias V. (MNR, 1994), Boubakri, N. and Jean C. (1998), Chen, G.; Michael F.; and Oliver R. (2005), and D'Souza, J. and Megginson, W. L. (2000). This will generate results that can be compared to the results of those studies. Further, adopting this methodology will enable testing and evaluating large statistical sample of companies from across different industries and privatized over a long period of time, 16 years. Further, given the fact that this study is limited to companies privatized through Share Issuance that might yield some selection bias, it is also factually correct that this method of privatization is the most politically driven privatization (Megginson, W. L., and Jeffry N., 2001). The Share Issue Privatization represents around 2/3 of the total revenue generated from privatization programmers between 1977 and 2001 (Megginson, W. L., and Jeffry N., 2001).

Methodology for Hypothesis 1

We use financial performance measures that are based on the International Accounting Standards, IAS. The same financial measures and methodology will be used to compare the performance of privatized firms post privatization to the performance of the fully private matched companies.

Methodology for Hypothesis 2: DID General Model

This hypothesis relates to causal the impact of privatization on companies. In other words, it examines whether the changes that are observed are actually the result of privatisation or something else.

Experimental design

We recall from my previous section that the dataset used include cover 65 privatized companies in a variety of industries and have been matched on size and industry. The most general form of experimental design is that 'treatment' and 'control' membership is assigned randomly. This is usually not possible ex post with economic or firm data. There are pluses and minus to various matching techniques, but the DID method is the most appropriate to our task.

The DID model estimates the impacts of a 'treatment' on 'units'. In this research study, 'treatment' is privatization and units are companies, either that received the treatment, i.e., were privatized, or were already private (the control). There may be also unobserved company level and time-invariant effects that must be accounted for, as well as time-varying-firm invariant impacts that are unobserved and should be accounted for. The DID method effectively sorts these effects out in how the coefficients are interpreted. The following discussion follows closely that of Villa, Juan (2012).

Villa, Juan (2012) describes the DID method as the impacts on an outcome variable. In our case, the outcome variables are a group of company performance measures. We will test the hypotheses of H2 as described above, and the outcome variable will be the ones described, e.g., EBIT, ROS, ROA, ROE, NIEFF, SALEFF, SALES, EMP, etc.

Without inclusion of independent explanatory variables as covariates the DID method is effectively a dummy variables regression, where the coefficient's can be interpreted as the differences in the means of the dependent variable under different states of the world. Our general equation is of the form:

$$Y_{it} = \beta_0 + \beta_1 period_{it} + \beta_2 privatised_{it} + \beta_3 period_{it} * privatised_{it} + \varepsilon_{it} \text{----------------- (1)}$$

Where period and treated are dummy variables. In our case, period is a zero-one variable, which takes the value of 0 during the pre-privatisation period, and 1 otherwise; this is the same for each of the privatized and already-private-matched companies. The variable 'treated' is also a zero-one dummy variable. It takes the value of zero for the companies that are not private, and 1 if private. We include an interaction term to allow for the fact that treatment effects may be influenced by period effects.

The correct interpretation of the coefficients in the standard DID setup is also described in Villa, Juan (2012). The mean outcome, say, mean EBIT, is equal to the estimate of β_0.

The estimated mean outcome of the control group, in our case the private companies, in the follow up or post-privatisation period is: $\beta_0 + \beta_1$; the estimate(s) of:

β_2 is the impact of difference between the privatized and the control group at the baseline (privatization date).

$\beta_0 + \beta_2$ is the mean outcome for the privatised group at the privatisation date.

$\beta_0 + \beta_1 + \beta_2 + \beta_3$ is the mean outcome for the privatized group in the post-privatisation period.

β_3 is the impact of privatization.

Villa, Juan (2012) presents a table that summarizes the above nicely in how the STATA command outputs the above results:

Table 4 DID Standard Setup

Number of Observations in the DIFF-IN-DIFF: #

	Baseline	Follow-up
Control:	#	#
Treated:	#	#

R-square: 0.0

Outcome Variable	Base Line			Follow Up			DIFF-IN-DIFF
	Control	Treated	Diff (BL)	Control	Treated	Diff (FU)	
Outcome Variable Std. Error t/z P>I t/z I	β_0	$\beta_0 + \beta_2$	β_2	$\beta_0 + \beta_1$	$\beta_0 + \beta_1 + \beta_2 + \beta_3$	$\beta_2 + \beta_2$	β_2

* Means and Standard Errors are Estimated by Linear Regression
** Inference: p<0.01 ;**p<0.05; *p<0.1

DID Set up

In the model, the estimate of the coefficient on the interaction term between the treatment dummy and the period dummy is the estimate of the treatment impact. This can be interpreted as the estimated difference due to the treatment effect, in our case privatisation.

Inclusion of other independent variables is straightforward; the variables we have are size or log of size, percent of the industry that is in government ownership, which may be proxying for a

variety of factors such as the degree of competition or the degree of regulation, openness, etc.
Also in some cases a measure of total debt to total assets was included, as debt raising may
enable the company to raise more capital, increase earnings, etc. Model (1) then becomes:

$$Y_{it} = \beta_0 + \beta_1 period + \beta_2 treated + \beta_3 period * treated + \beta_4 size + \cdots + \varepsilon_{it} \text{--------------- (2)}$$

The models are estimated using STATA[2]. This program also enabled us to collect and graph
residuals from the basic models and use these for standard diagnostics.

5.7. Defining the Variables and How to Measure Them

Based on Megginson, W. L., Robert C., Matthias V. (MNR, 1994) methodology, this study will
examine the performance of the privatized companies through Share Issuance in Egypt using
financial variables. The variables to be used will test five different key areas to be assessed which
are, profitability, operating efficiency, output, staffing and leverage. The study will test whether
the privatization transaction will increase profitability, operating efficiency, and output and
decrease the staffing and leverage. This study will use several measures to assess each area. The
normalized indexed Earnings Before Interest and Tax, Return on Sales, Return on Assets and
Return on Equity will be used to measure the profitability of each company. As for the operating
efficiency, it will be measured using the Sales Efficiency and the Income Efficiency proxies. Those
two proxies represent the Sales per staff and the Earnings Before Interest and Tax per Staff.
Further, the Output of privatized companies is assessed using the normalized indexed Sales of each
privatized company. The Staffing level is calculated using the number of staff in each company.

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[2] STATA contains a specific command to implement the DID model and this is used for
convenience as the outputs are readily arranged into a handy table.

In addition, the Leverage is measured using two measures, the Total Debt to the Total Asset proxy and the Total Debt to the Total Equity. The following table will summarize the Financial Ratios to be used and their definition and formula used to calculate them:

Table 5 Financial Ratios & Definitions

Performance Measure	Ratio	Definition and Formula
Profitability	Earnings Before Interest and Tax	It is the normalized and Indexed Earrings Before Interest and Tax.
	Return on Assets	It is the normalized and Indexed Earrings Before Interest and Tax divided by the Total Assets.
	Return on Equity	It is the normalized and Indexed Earrings Before Interest and Tax divided by the Total Equity.
	Return on Sales	It is the normalized and Indexed Earrings Before Interest and Tax divided by the Sales.
Output	Sales	It is the normalized and Indexed Sales.
Employment Level	Total number of Staff	It is the total number of registered staff in each company.
Leverage	Total Debt to Total Equity.	It is the Long Term Debt divided by the Total Equity.
	Total Debt to Total Assets.	It is the Long Term Debt divided by the Total Assets.
Operating Efficiency	Sales Efficiency	It is the normalized and Indexed Sales divided by the number of staff.
	Income Efficiency	It is the normalized and Indexed Net Income divided by the number of staff.

As it is indicated above, this research is based on the methodology of Megginson, W. L., Robert C., Matthias V. (MNR, 1994), and the financial ratios shown above are calculated based on the same methodology. The data used for each company is based on the financial performance for a maximum of three years pre privatization and for 3 years post privatization.

Based on the Megginson, W. L., Robert C., Matthias V. (MNR, 1994) methodology the median and mean were calculated for the proxies. As for the year when the privatization transaction took place, the hybrid structure of state owned and privatization was present; therefore, the researcher excluded this year from the analysis. All the ratios were indexed based on the Consumer Price Index.

Bivariate Comparisons

An underlying Normal distribution is assumed in the mean comparison tests. In order to assess whether the financial ratios are normally distributed or not, the researcher applied standardized skewness and the standardized kurtosis tests. It is anticipated though that the financial ratios don't form a normal distribution. Therefore, to assess the difference, if any, between the medians of the performance financial ratios, the nonparametric Wilcoxon signed-rank test was used. Furthermore, the parametric-test to test for any significant change in the mean of the privatized and private companies was also used. Those two non-parametric tests are the best tool to analyse the data given that the data doesn't form a normal distribution (Barber, B. and Lyon, J, 1998). In order to assess significance of the change that has happened to the proportion of privatized companies, the proportion test was used.

To analyse the privatization effect on the performance of the privatized companies more deeply, this research work, will compare the performance of the privatized companies with a private set of match companies, control group. The matching process is based on the total asset base and industry of the privatized and the private companies. The comparison will be done for the post privatization performance of those companies with the matched private ones. The researcher used the DID methodology to achieve this objective and to test the hypothesis.

5.8. Data Used and its Basis

5.8.1. Data Set

5.8.1.1. Secondary Data Sources Used

The data set used was collected from different sources. The data set was obtained from two main sources. The first subset of data related to the *pre-privatization period*. For this period the data was obtained from General Authority for Investment and Capital Market Authority. For the *pre privatization data*, the prospectus of each company was also an important resource of reliable data. Pre privatization data was limited to three years to ensure that the published data from the prospectus was available.

Post privatization performance and the *private company data* were gathered from the Capital Market Authority, the Kompass Egypt Financial year book and the Cairo & Alexandria Stock Market Exchanges.

5.8.2. The Sample Used

As highlighted in the Literature Review chapter, all the studies done studied the performance of the privatized companies by comparing the pre and post privatization performance. However, none

of these studies compared the performance of the privatized companies with those of the fully private companies. They are therefore subject to the criticism that they cannot identify the causal effects of privatisation. To remedy this in the present thesis, the researcher matched the privatized companies with a private set of companies of equivalent size and from the same industry.

5.8.2.1.   The Privatization Data Set:

Background to privatisation in Egypt

The Egyptian Economy went through the restructuring phase in the early 1990s. However, it should be noted that the privatization hype that started then didn't proceed as planned and it faced several obstacles. The last few years of the old regime faced lots of difficulty in putting the programme back on track. Further, after recent revolution which took place in 2011, the new regime announced officially that the privatization programme was cancelled and they would try to find other ways to restructure the remaining companies of the public sector. To date, the number of the companies that have been privatized through an IPO is **61**. Table 1 below shows the split of different methods of privatization used and the number of companies privatized till the programme was put on hold in 2010.

Table 6   Privatization Programme from 1990 to 2010

Fiscal Year	Total Number of Privatization Operations	Value of Sale in Million EGP
1991 – 1994	11	418
1994 – 1995	14	867
1995 – 1996	12	977
1996 – 1997	29	4595

1997 – 1998	23	2487
1998 – 1999	33	1824
1999 – 2000	40	4708
2000 - 2001	18	370
2001 – 2002	10	952
2002- 2003	7	113
2003 – 2004	13	543
2004 – 2005	28	5643
2005 – 2006	65	14612
2006 – 2007	53	13607
2007 – 2008	22	3984
2008- 2009	4	1653
Total until	**382**	**57353**
End of 2009		

Source: Egypt Stock Market Bulletin September 2011

The chronological representation of the privatization programme shows clearly that the start of the privatization programme in Egypt was a bit slow. Nevertheless, from the beginning of the year 1994 the programme started to gain momentum; however, it was not permitted by the government to sell more than 20% of the shares of any company. By the year 1996, the programme gained more momentum and the new cabinet appointed at that time headed by Kamal Ganzouri. One of the important agenda items for the cabinet at that time is to start publicizing the privatization programme internationally to attract foreign investors. This initiative resulted in selling more than 50% of the government share in the State Owned Enterprises through the stock market.

In the early 1990s, around 314 State Owned Enterprises were classified to be under 27 holding companies each one looking after one major sector in the economy. By early 2007, around 73% of all of these State Owned Enterprises were privatized. The Focus of the Cabinet at that time was

to fully privatized those companies and improve the performance of the Stock Market by increasing the number of stocks supplied to the Egyptian Stock Market. This policy has resulted in an increase in those stocks prices by the year 2000.

Toward the end of the year 2000, the programme again faced challenges which led to some delays in implementation, due to the foreign currency crises and money supply which negatively affected the performance of the Stock Market.

Data used in this study

The data to be used in this study will cover fully and partially privatized companies through IPO issuance for the period from 1991 till 2010 when the privatization programme was put on hold. The data of the IPO privatized companies will tend to be more reliable and will have equivalent audited financial results. In addition, privatization through IPO is used to privatize huge companies within any privatization programme.

For all companies the data set includes pre and post privatization financial data. For the pre privatization, the data is limited to a maximum of three year pre privatization performance data for which was acquired mainly from the prospectuses.

The data set used in this study will cover the period from 1991 to 2010. It consists of a balanced panel with three years pre and three years post the privatization event taking place.

Based on the data shown in Egypt Stock Market Bulletin September 2011, the number of fully and partially IPO privatized companies are 61, all of which are included in the study. Table A1, included in the Appendix, shows the identities of the 61 firms to be used in the study and their sectors per the Egypt Stock Market classification.

In order to achieve the objective of this study, all the privatized companies will be matched to Private companies of similar size and from the same industry. Therefore, the sample size will double based on the matching process used in this study.

5.8.2.2. Matched Private Data Set

As mentioned above the data set used in this study captures the fully and partially privatized companies in Egypt through IPO issuance. The control group of private companies is constructed based on the following methodology:

a) Determine all the companies listed within the Egypt Stock Exchange in each sector.

b) Calculate the average asset base (using the average total assets) for the private listed companies over the period of the study, 16 years or at least 10 years.

c) Compare the size of the private companies with that of the privatized company within the same sector.

d) Match the privatized company with a private match of comparable size, 70% to 130% range of the size Barber and Lion (1998) and within similar sector.

All the above-mentioned steps will be applied on all the companies and across different sectors mentioned in table A1 in the appendix. The following is a description of the above methodology applied on the Food and Beverages sector and the outcomes.

Step Number 1: Determining all the companies (private and privatised) listed within the Egypt Stock Exchange in Food and Beverages sector.

The following table shows all the listed fully private companies within the Food and Beverages sector along with their Average Asset Base. The following table shows that there are 14 companies within the Food and Beverages Sector that are fully private.

Table 7   List of Food and Beverages Sector (Fully Private)

Fully Private Company	Average Asset Base
Ismailia National Food Industries	637,451
Ismailia Misr Poultry	13,279
Cairo Poultry	629,316
International Agricultural Products	177,972
Egypt for Poultry	1,846,665
El Nasr For Manufacturing Agricultural Crops	118,735
Cairo Oils & Soap	148,653
Delta Sugar	1,266,206
Sharkia National Food	58,409
Northern Upper Egypt Development & Agricultural Production	56,205
National company for maize products	754,063
The Arab Dairy Products Co. ARAB DAIRY	452,551
Mansourah Poultry	77,590
AJWA for Food Industries company Egypt	286,256

***Step Number 2: Calculating the average asset base (using the average total assets) for the* private** *listed companies over the period of the study, i.e. for 16 years or at least 10 years.*

We calculate the average asset base for each of the 14 companies shown above. Each of these private companies is listed for the period of the data used in the study or at least 10 years. The following formula is used to calculate the Average Asset Base for each of the private companies as well as for the privatized companies:

$$Average\ Asset\ Base = \frac{Total\ Asset\ Base\ in\ the\ Period}{Number\ of\ Years}$$

Step Number 3: Compare the size of the private companies with that of the privatized company within the same sector.

After calculating the Average Asset base for both the Privatized and Private companies, then the asset base of the privatized company is compared to all the private companies' asset base to match it with private match within the range of 70% to 130% Barber and Leon (1998). The following is the formula used to calculate the comparable ratio of both asset bases of the private and the privatized companies:

Percentage Size

$$SizeRatio = \frac{Privaitzed\ Company\ Average\ Asset\ Base}{Private\ Company\ Asset\ Base}$$

Step Number 4: Match the privatized company with a private match of comparable size,

Once the Size Ratio between the Privatized companies' Average Asset Base and the Private Companies' Asset Base is calculated, the next step is to match the Privatized companies with a private company match that is within the range of 70% to 130%.

The following table shows the results of applying the above equation on the Average Asset Base of Both Privatized and Private companies:

Matching Process Between Privatized Companies' and the Private Companies

Table 8 Privatised Matching with Private Companies

	Av. Asset Base	East Delta Flour Mills	Alexandria Flour Mills	Upper Egypt Flour Mills	Egyptian Starch & Glucose	Middle & West Delta Flour Mills	Extracted Oils	North Cairo Mills	BiscoMisr	South Cairo & Giza Mills & Bakeries	Middle Egypt Flour Mills	Alahram Beverage	Alnasr for Dehydrating	El-Wadi for Agricultural Export	Nobaria Agricultural Engineering	General Silos & Storage	Misr Oils & Soap
	Av. Asset Base	325,146	330,301	331,259	136,951	438,849	341,154	355,605	137,766	207,554	441,552	609,466	12,842	157,325	42,799	739,566	309,015
Ismailia National Food Industries	637,451	51%	52%	52%	21%	69%	54%	56%	22%	33%	69%	96%	2%	25%	7%	116%	48%
Ismailia Misr Poultry	13,279	2449%	2487%	2495%	1031%	3305%	2569%	2678%	1038%	1563%	3325%	4590%	97%	1185%	322%	5570%	2327%
Cairo Poultry	629,316	52%	52%	53%	22%	70%	54%	57%	22%	33%	70%	97%	2%	25%	7%	118%	49%
International Agricultural Products	177,972	183%	186%	186%	77%	247%	192%	200%	77%	117%	248%	342%	7%	88%	24%	416%	174%
Egypt for Poultry	1,846,665	18%	18%	18%	7%	24%	18%	19%	7%	11%	24%	33%	1%	9%	2%	40%	17%
El Nasr For Manufacturing Agricultural Crops	118,735	274%	278%	279%	115%	370%	287%	299%	116%	175%	372%	513%	11%	133%	36%	623%	260%

Cairo Oils & Soap	148,653	219%	222%	223%	92%	295%	229%	239%	93%	140%	297%	410%	9%	106%	29%	498%	208%
Delta Sugar	1,266,206	26%	26%	26%	11%	35%	27%	28%	11%	16%	35%	48%	1%	12%	3%	58%	24%
Sharkia National Food	58,409	557%	565%	567%	234%	751%	584%	609%	236%	355%	756%	1043%	22%	269%	73%	1266%	529%
Northern Upper Egypt Development & Agricultural Production	56,205	578%	588%	589%	244%	781%	607%	633%	245%	369%	786%	1084%	23%	280%	76%	1316%	550%
National company for maize products	754,063	43%	44%	44%	18%	58%	45%	47%	18%	28%	59%	81%	2%	21%	6%	98%	41%
The Arab Dairy Products Co. ARAB DAIRY	452,551	72%	73%	73%	30%	97%	75%	79%	30%	46%	98%	135%	3%	35%	9%	163%	68%
Mansourah Poultry	77,590	419%	426%	427%	177%	566%	440%	458%	178%	267%	569%	785%	17%	203%	55%	953%	398%
AJWA for Food Industries company Egypt	286,256	114%	115%	116%	48%	153%	119%	124%	48%	73%	154%	213%	4%	55%	15%	258%	108%

As a result, the following table shows the matched Private company to the Privatized company based on the four steps methodology explained:

Table 9   Food and Beverages Privatized to private Matched Companies

Privatized Companies	Average Asset Base (Privatized)	Match Ratio	Average Asset Base (Private)	Matched Private Companies
East Delta Flour Mills	325,146	114%	286256	AJWA for Food Industries company Egypt
Alexandria Flour Mills	330,301	115%	286256	AJWA for Food Industries company Egypt
Upper Egypt Flour Mills	331,259	116%	286256	AJWA for Food Industries company Egypt
Egyptian Starch & Glucose	136,951	77%	177972	International Agricultural Products
Middle & West Delta Flour Mills	438,849	70%	629316	Cairo Poultry
Extracted Oils	341,154	119%	286256	AJWA for Food Industries company Egypt
North Cairo Mills	355,605	124%	286256	AJWA for Food Industries company Egypt
BiscoMisr	137,766	77%	177972	International Agricultural Products
South Cairo & Giza Mills & Bakeries	207,554	117%	177972	International Agricultural Products
Middle Egypt Flour Mills	441,552	70%	629316	Cairo Poultry
Alahram Beverage	609,466	97%	629316	Cairo Poultry
Alnasr for Dehydrating Agricultural Products	12,842	97%	13279	Ismailia Misr Poultry
El-Wadi for Agricultural Export.	157,325	88%	177972	International Agricultural Products
Nobaria Agricultural Engineering.	42,799	76%	56205	Northern Upper Egypt Development & Agricultural Production
General Silos & Storage	739,566	118%	629316	Cairo Poultry
Misr Oils & Soap	309,015	108%	286256	AJWA for Food Industries company Egypt

Based on the above results shown in the matching process, the same four steps were applied to all the sectors and all the Privatized Companies to match them with the comparable Private companies. The results of this matching process are shown in the below table:

Table 10   Final Match Privatized Companies and Private Companies

Privatized Company Name	Privatized Company Avg. Asset Base	Match Ratio	Private Company Avg. Asset Base	Matched Private Company Name
Nile Pharmaceuticals	176,092	127%	138,300	October Pharma
Memphis Pharmaceuticals	146,299	106%	138,300	October Pharma
Cairo Pharmaceuticals	176,706	128%	138,300	October Pharma
Arab Pharmaceuticals	110,265	125%	88,320	Advanced Pharmaceutical Packaging Co. (APP)
Alexandria Pharmaceuticals	114,727	130%	88,320	Advanced Pharmaceutical Packaging Co. (APP)
Nile for Kabriet	48,794	128%	38,051	Rubex Plastics
Kafr El Zayat Pesticides	49,496	130%	38,051	Rubex Plastics
Paint & Chemicals Industries (Pachin)	277,051	76%	366,892	Sinai Cement
Misr Chemical Industries	287,805	127%	226,250	El Ezz Porcelain (Gemma)
Construction and Consulting Engineering	140,823	73%	194,214	Cairo Investment & Real Estate Development
El Kahera Housing	89,909	103%	87,156	National Housing for Professional Syndicates
Misr Duty Free Shops	53,946	72%	74,629	Arab Ceramics (Aracemco)
Alahram Beverage	230,296	122%	188,046	Six of October Development & Investment (SODIC)
Medinet Nasr Housing	232,462	124%	188,046	Six of October Development & Investment (SODIC)

El Shams Housing & Urbanization	79,800	123%	64,993	Delta Construction & Rebuilding
Upper Egypt Contracting	97,263	130%	74,629	Arab Ceramics (Aracemco)
Giza General Contracting	105,363	121%	87,156	National Housing for Professional Syndicates
Mahmoudia for Contracting	68,395	105%	64,993	Delta Construction & Rebuilding
Egyptian Contracting (Mokhtar Ibrahim)	873,371	128%	682,265	Ezz Steel
Heliopolis Housing	298,381	81%	366,892	Sinai Cement
Nasr Utilities.	83,452	112%	74,629	Arab Ceramics (Aracemco)
Amiria for Cement	376,576	103%	366,892	Sinai Cement
Misr Mechanical and Electrical Projects (Khromika).	93,283	125%	74,629	Arab Ceramics (Aracemco)
Elnasr for Civil Works.	78,971	106%	74,629	Arab Ceramics (Aracemco)
El Nasr Transformers (El Maco)	82,975	128%	64,993	Delta Construction & Rebuilding
Industrial & Engineering Projects.	274,312	75%	366,892	Sinai Cement
Egyptian Financial & Industrial	228,946	101%	226,250	El Ezz Porcelain (Gemma)
Portland Helwan	446,889	122%	366,892	Sinai Cement
Alexandria Cement	264,410	72%	366,892	Sinai Cement
Torah Cement	875,434	128%	682,265	Ezz Steel
Eastern Tobacco	890,083	130%	682,265	Ezz Steel
Nile Cotton Ginning	135,365	89%	151,523	Misr Conditioning (Miraco)
Arab Cotton Ginning	194,068	128%	151,523	Misr Conditioning (Miraco)
United Arab for Spinning & Weaving	375,215	102%	366,892	Sinai Cement
Bisco Misr	47,845	89%	54,036	International Agricultural Products
Extracted Oils	260,791	127%	204,814	AJWA for Food Industries company Egypt

Misr Oils & Soap	264,328	129%	204,814	AJWA for Food Industries company Egypt
Alnasr for Dehydrating Agricultural Products	34,797	109%	31,822	Ismailia Misr Poultry
Egyptian Starch & Glucose	67,610	125%	54,036	International Agricultural Products
North Cairo Mills	239,361	117%	204,814	AJWA for Food Industries company Egypt
Middle Egypt Flour Mills	336,291	129%	261,490	Cairo Poultry
East Delta Flour Mills	267,263	130%	204,814	AJWA for Food Industries company Egypt
Middle & West Delta Flour Mills	330,797	127%	261,490	Cairo Poultry
Upper Egypt Flour Mills	263,085	128%	204,814	AJWA for Food Industries company Egypt
General Silos & Storage	326,987	125%	261,490	Cairo Poultry
Alexandria Flour Mills	244,399	119%	204,814	AJWA for Food Industries company Egypt
South Cairo & Giza Mills & Bakeries	67,278	125%	54,036	International Agricultural Products
El-Wadi for Agricultural Export.	70,414	130%	54,036	International Agricultural Products
Nobaria Agricultural Engineering.	40,789	128%	31,822	Ismailia Misr Poultry
Arabia & United Stevedoring	163,472	128%	127,509	Egyptian Transport (EGYTRANS)
Paper Middle East (Simo)	87,333	120%	72,862	Suez Bags
Telemisr	242,529	89%	273,233	Misr Conditioning (Miraco)
Electro Cable Egypt	244,574	103%	236,802	ELSWEDY ELECTRIC
IDEAL	220,776	93%	236,802	ELSWEDY ELECTRIC
TELECOM Egypt	40,319,346	85%	47,525,427	AL-EZZ DEKHEILA STEEL ALEXANDRIA

El Nasr Clothes & Textiles (Kabo)	180,832	119%	151,523	Misr Conditioning (Miraco)
Abou Kir Fertilizers	279,735	124%	226,250	El Ezz Porcelain (Gemma)
ARAB POLVARA SPINNING & WEAVING CO	134,231	89%	151,523	Misr Conditioning (Miraco)
Alexandria Spinning & Weaving (SPINALEX)	391,247	107%	366,892	Sinai Cement
Egypt Aluminum	511,149	87%	585,937	Ezz Steel
United Housing & Development	110,605	127%	87,156	National Housing for Professional Syndicates

5.9. Summary of the Discussion

Most of the studies done on performance of privatized companies focus on the comparison between the performances of privatized companies with the performance of the State Owned ones. However, this comparison doesn't necessarily reflect the real change in performance fully. The other side that this study will shed light on is the change of performance when compared to the private companies and how the performance of privatized companies can be compared to that of the private ones. This chapter covered the methodology to be used to assess the change in performance of the privatized companies when compared to the private ones. The methodology used will also assess the effect of certain economic factors on the overall performance of the privatized companies post privatization.

The full research done in this study is based on quantitative analysis using secondary data. The data used to achieve the set objective of this study is based on the IPO privatized companies in the Egyptian economy since the beginning of the privatization programme in the early 1990s. For each company three years pre-privatization is collected from the Prospectuses issued at the time

of floating the companies. The post-privatization data includes a time series until 2010 when the privatization programme was put on hold or until the date some companies were delisted. Therefore, the data set for each company will include three years data pre-privatization and three years' post-privatization. Accordingly, the panel data set used is balanced panel. The data used for this study was gathered from various sources, including the General Authority for Investment, Capital Market Authority, the Kompass Egypt Financial year book and the Cairo & Alexandria Stock Market Exchanges. The data set includes 61 privatized companies and 61 private matched companies; therefore, the full data set is122 companies.

In order to match the privatized companies with a private match company, four steps methodology was used which include:

a) Determining all the companies listed within the Egypt Stock Exchange in each sector.

b) Calculating the average asset base (using the average total assets) for the private listed companies over the period of the study, 16 years or at least 10 years.

c) Compare the size of the private companies with that of the privatized company within the same sector.

d) Match the privatized company with a private match of comparable size, 70% to 130% range of the size Barber, B. and Lyon, J (1998) and within the same sector.

The private match company is then defined and is used in the study to assess the change in performance of the privatized companies.

This study will use a similar methodology to that used by Megginson, et al (MNR, 1994), to examine the privatized companies performance and to assess the viability of the Egyptian privatization programme. The same indicators used by MNR are used in this study, profitability,

operating efficiency, output, employment levels, and leverage In order to achieve these objective

2 hypotheses will be studied;

Hypotheses 1: Privatization of Egyptian companies through IPO will result in the improvement of the performance of those companies following privatization.

Hypotheses2: Privatization results in improvement of performance relative to private companies' performance

In order to compare the pre and post privatization performance of the privatized companies, the first methodology used included the parametric t-test, the non-parametric Wilcoxon signed-rank test, and the proportion test. The second methodology used was DID to model the impact of Ownership, Size and Gearing on privatized companies' performance compared to performance of the private matched companies.

The following three chapters will shed light on the results of the applying the two methodologies to assess the performance of privatized companies pre and post privatization.

Chapter 6: Pre and Post Privatization Comparative Analysis

6.1   Introduction

The privatization programme is an economic trend that has been used by many countries for the last three decades. Egypt was one of those countries that have adopted an ambitious programme to limit the role of the public sector within the economy. The Egyptian privatization programme that started in the early 1990s was one of the first in the Middle East and it was used to as an economic tool to reform the economy as a whole.

In order to assess the outcomes of this privatization programme this research will test two main hypotheses:

Hypotheses 1: Privatization of Egyptian companies through IPO will result in the improvement of the performance of those companies following privatization.

Hypotheses2: Privatization results in improvement of performance relative to private companies' performance

This chapter will be testing the first hypothesis by comparing the pre and post privatization performance of the fully and partially privatized companies. The statistical analysis used in this chapter will compare the change in the financial and operating measures. In order to achieve this, the absolute value is calculated for each measure as well as the relative value. The next step used is to test the significance of change using statistical tests.

To test this hypothesis, the following hypotheses will be examined:

6. Privatization increase the profitability of companies

This will be examined by testing:

6.1. The EBIT will increase post privatization
6.2. The ROS will increase post privatization
6.3. The ROA will increase post privatization
6.4. The ROE will increase post privatization

7. Privatization enhances operating efficiency of companies

This will be examined by testing:

7.1. The Sales Efficiency will increase post privatization
7.2. The Income Efficiency will increase post privatization

8. Privatization enhances output of companies

This will be examined by testing:

8.1. The Sales will increase post privatization

9. Privatization improves Leverage Ratios of companies

This will be examined by testing:

9.1. The Leverage Ratio (Total Debt to Total Assets) will decrease post privatization
9.2. The Leverage Ratio (Total Debt to Total Equity) will decrease post privatization

10. Privatization enhances efficiency of companies by lowering the number of Staff

This will be examined by testing:

10.1.   The number of Staff will decrease post privatization

The next part of this chapter will cover the Descriptive Statistics of the privatized as well as the private matched companies. The second part will present the comparative analysis of the pre and post privatization performance data. In order to establish this comparison, the following is the description of each of the financial and operational measures to be used to achieve the objective of this chapter.

Table 11   The Performance Measure

Performance Measure	Performance Indicator
Profitability	Earnings Before Interest and Tax
	Return on Sales
	Return on Assets
	Return on Equity
Leverage	Total Debt to Total Assets
	Total Debt to Total Equity
Employment	Number of Employees
Operating Efficiency	Income Efficiency
	Sales Efficiency
Output	Real Sales

All of the above indictors are calculated for the each of the privatized companies for the period pre privatization and for the post privatization periods. Further, the same indictors are also calculated for the private matched companies, the control group.

6.2   The Descriptive Statistics Results

The descriptive statistics is one source used to define the nature of the data set used in any study. The results of the descriptive statistics results will shed light on the nature of the data used in this study. To assess the central tendency and variability of the data set used in any study the median and the standard deviations are always used. Therefore, the next section will show the results of the descriptive statistics for the privatized data set.

6.2.1 Privatized Companies Results:

The analysis done in this section will show the results of the descriptive statistics for the pre and post privatization performance of the fully and partially privatized companies. The results shown in the next table are the standard results given by calculating the median, the mean, the standard deviation and the maximum /minimum for the data set used. Further, in order to assess the possibility of modelling the performance of the privatized companies as a normal distribution, the standardized skewness and the standardized Kurtosis are also calculated. For each of the performance indicators, the Descriptive statistics was calculated and is shown in the relevant section below.

The next sections will analyse the results shown in the table for each of the performance indicators.

Table 12 Descriptive Statistics Results For the Privatized Companies

		No of Companies		Means		Medians		Minimum		Maximum		Standard deviation		Standard kurtosis		Standard Skewness	
				Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Profitability	EBIT	23	Partial	0.77	0.99	0.72	0.77	0.31	0.27	2.02	3.56	0.44	0.79	3.78	7.85	2.91	4.61
		38	Full	0.73	0.89	0.61	0.84	0.21	0.03	2.14	2.24	0.46	0.43	3.15	4.04	3.55	2.51
		61	Total	0.75	0.93	0.63	0.82	0.21	0.03	2.14	3.57	0.46	0.57	3.83	16.06	4.37	7.6
	ROS	23	Partial	0.09	0.15	0.07	0.12	-0.03	0.03	0.24	0.46	0.07	0.13	0.98	1.51	1.86	2.41
		38	Full	0.12	0.12	0.08	0.1	-0.05	-1.29	0.75	0.85	0.14	0.29	17.2	21.93	8.1	-7.03
		61	Total	0.11	0.14	0.08	0.11	-0.05	-1.29	0.75	0.85	0.12	0.26	0.25	28.75	10.3	-8.22
	ROA	23	Partial	0.07	0.09	0.06	0.08	0.02	0.03	0.12	0.16	0.04	0.05	-0.55	-0.54	0.37	0.72
		38	Full	0.07	0.08	0.06	0.09	0.02	-0.27	0.18	0.19	0.05	0.09	0.73	1360	2.64	-6.19
		61	Total	0.07	0.08	0.06	0.09	0.02	-0.27	0.18	19	0.05	0.07	0.95	18.75	2.85	-7.49
	ROE	23	Partial	0.29	0.32	0.26	0.26	0.16	0.17	0.55	0.79	0.13	0.17	1.5	3.36	2.37	3.2
		38	Full	0.26	0.28	0.24	0.27	0.1	0.05	0.53	0.56	0.13	0.12	0.15	1.73	1.85	1.26
		61	Total	0.27	0.29	0.25	0.27	0.1	0.05	0.55	0.79	0.13	0.15	1.85	5.83	3.02	4.26
Operating Efficiency	Sales Efficiency	23	Partial	1.16	0.92	1.14	0.94	0.56	0.44	1.6	1.37	0.27	0.25	0.34	0.43	-0.6	-0.78
		38	Full	1.1	1.12	0.1	0.97	0.35	0.46	1.86	3.79	0.32	0.7	1.35	12.81	1.13	7.67
		61	Total	1.06	1.06	1.04	0.95	0.35	0.44	1.86	3.79	0.31	0.61	0.76	21.33	0.54	1041

		N																
	Income Efficiency	23	Partial	0.78	1.04	0.74	0.8	-0.08	0.29	2.51	3.66	0.58	0.74	4.22	8.9	3	4.85
		38	Full	0.79	1.02	57	0.92	-0.15	-14.6	5.78	16.2	0.94	3.62	29.5	21.06	11.2	-0.44
		61	Total	0.79	1.04	0.6	0.94	-0.15	-14.6	5.78	16.2	0.84	3.02	36.8	36.55	13.1	-0.66
Output	Sales	23	Partial	1.13	0.84	1.15	0.86	0.63	0.32	1.53	1.34	0.23	0.25	0.45	1.17	-0.05	-0.46
		38	Full	1.11	0.89	1.06	0.84	0.37	0.42	2.26	2.82	0.37	0.44	2.57	14.24	2.12	7.24
		61	Total	1.11	0.87	1.08	0.85	0.37	0.32	2.26	2.82	0.33	0.39	3.56	19.53	2.22	8.6
Leverage	Total Debt to Total Assets	23	Partial	0.3	0.15	0.3	0.14	0.02	0	0.38	0.36	0.1	0.11	0.75	-0.11	-0.7	1.26
		38	Full	0.23	0.23	0.18	0.21	0	0	0.97	1.27	0.23	0.26	2.94	10.37	3.57	6.23
		61	Total	0.22	0.22	0.2	0.17	0	0	0.97	1.27	0.2	0.23	5.64	13.37	4.73	7.66
	Total Debt to Total Equity	23	Partial	0.8	0.39	0.79	0.35	0.04	0.02	1.71	1.19	0.51	0.36	-0.65	0.07	0.49	1.36
		38	Full	0.74	0.25	0.21	0.07	0	0	4.28	3.59	1.14	0.6	5.37	36.06	5.6	12.81
		61	Total	0.74	0.3	0.43	0.11	0	0	4.28	3.59	0.99	0.55	8.17	40.65	6.87	13.92
Employee Level	Number of Employees	23	Partial	4653	4157	4053	3314	1158	1164	13622	13134	3171	3183	3	34	2.92	3.39
		38	Full	2744	2162	1946	1448	225	156	7482	6645	1983	1793	0	0	2	3
		61	Total	3310	2702	2840	1804	225	156	13622	13134	2523	2448	7	9	5	6

EBIT Results:

The results shown in table 1 above highlight the results of the profitability indicators, EBIT, ROS, ROA and ROE. The EBIT mean and median for the post privatization have examined an increase. However, the value of the EBIT pre privatization has shown a result ranging from 21% to 213% while the post privatization result ranges from 3% to 214%. Further, the value of the standard deviation for the EBIT is scattered which indicates that the value of the EBIT is scattered around the average value of the EBIT (Kvali, A., Pavur J., and Keeling K. B., 2006).

ROS Results:

The value of the ROS mean indicate an increasing trend post privatization for both of the privatization categories. Further, the value of the median has also changed across the privatization categories. As shown in the table of results, the minimum value of the measure is -5% and -129% for the pre-privatization period and for the post privatization period respectively. However, the maximum value of the indicator showed 24% pre privatization and 84% post privatization which indicate that the indicator has increased by 266%.

ROA Results:

The mean of the ROA showed an increase across the privatization categories. Further, the median for both privatization categories didn't indicate any change pre privatization; however, it showed an increase post privatization. In addition, the value of the indicator ranges from 0.02 % to 18% pre privatization. As for the post privatization, the indicator ranges from -27% to 19%. Therefore, this clearly indicates that the majority of the privatized companies have a negative returns on asset employed. It should be noted also, that the results of the standard deviation of the indicator shows

that the values are not scattered around the average as the post privatization value is less than the pre privatization value.

ROE Results:

The value of the mean of the indicator showed a clear change for all the privatization categories. However, the median value indicated a change for fully privatized category post privatization and no change for partially privatized companies. The standard deviation values as shown in the table of results are the same for all the privatization categories indicating a large dispersion of the values of the indicator post privatization.

The standardized skewness and standardized kurtosis Results:

The values of the standardized skewness and standardized kurtosis shown in the table indicate that the profitability indicators are not normally distributed as they are out of the range of ±2, Keeller (2003) for the pre and post privatization periods. The only exception to this is the values of the ROA of the partially privatized companies and the ROE for the fully privatized ones as they fall within the ±2 range.

Sales Efficiency Results:

The mean value for the indicator shows an increase post the fully privatization of the companies. On the contrary, the value of the indicator didn't show any increase for the partially privatized companies post the privatization transaction. Further, the median value has decreased for all the privatization categories post privatization. Also, the values of the indicator range from 35% to 186% pre the privatization taking place. Post privatization, the indicator ranges from 44% to 379%

which clearly prove a positive Sales Efficiency for the all the privatized companies. The value of the standard deviation is largely dispersed which indicate a wide scatter around the mean value.

Income Efficiency Results:

The mean and the median for the Income Efficiency indicator have shown an increase for all the privatization categories post privatization. The minimum values of the indicator ranged from -15% pre the privatization and -1464% post the privatization taking place; while the max values ranged from 251% pre privatization to 1620% post privatization. Further, the value of the standard deviation is largely dispersed which indicate a wide scatter around the mean value.

The standardized skewness and standardized kurtosis Results:

The values of the standardized skewness and standardized kurtosis shown in the table indicate that the Operating Efficiency indicators are not normally distributed as they are out of the range of ±2, Keller G. (2002) for the pre and post privatization periods. The only exception to this is the values of the Sales Efficiency of the partially privatized companies as it falls within the ±2 range.

Real Sales Results:

The mean and the median results of the indicator show a decrease for all the privatization categories pre and post the privatization. The values of the indicator range from 37% to 226% for the pre privatization period. The results also showed that the range of the indicator post privatization is 31% to 281%. Those results indicate that there is a positive result achieved by some of the privatized companies as well as poor results achieved by other privatized companies. In order to assess the significance of the change in performance, further statistical tests will be carried.

The standardized skewness and standardized kurtosis Results:

The values of the standardized skewness and standardized kurtosis shown in the table indicate that the output indicators for the fully privatized companies are not normally distributed as they are out of the range of ±2, Keeller (2002) for the pre and post privatization periods. The only exception to this is the values of the output indicator of the partially privatized companies as it falls within the ±2 range.

Total Debt to Total Assets Results:

The mean results for the Total Debt to Total Assets indicator show a decrease as a result of the privatization for the partially privatized companies. However, the post privatization results didn't show any variance for the fully privatized companies. The median results post privatization for the indicator showed a decrease for the partially privatized companies. On the contrary, the indictor has increased for the fully privatized companies post privatization

Total Debt to Total Equity Results:

The mean and the median for this leverage indicator have shown a decrease for all the privatization categories. The values of the indicator range from 10% to 428% for the pre privatization period. The results also showed that the range of the indicator post privatization is 10% to 359%.

The standardized skewness and standardized kurtosis Results:

The values of the standardized skewness and standardized kurtosis shown in the table indicate that the leverage indicators for the fully privatized companies are not normally distributed as they are out of the range of ±2, Keller G. (2003) for the pre and post privatization periods. The only

exception to this is the values of the output indicator of the partially privatized companies as it falls within the ±2 range.

Employment Indicators Results

The mean and median values of the employment indicator showed a decrease for all privatization categories. The value of the indicator ranges from a minimum of 1158 pre privatization to a maximum of 13622 for the same period. The post privatization results showed a minimum of 1051 and a maximum of 13134 which clearly indicates a decline in the number of employees as a result of the privatization. The standard deviation results showed a dispersion indicating a spread around the mean.

The standardized skewness and standardized kurtosis Results:

The values of the standardized skewness and standardized kurtosis shown in the table indicate that the leverage indicators for the partially privatized companies are not normally distributed as they are out of the range of ±2, Keeller (2003) for the pre and post privatization periods. The only exception to this is the values of the output indicator of the fully privatized companies as it falls within the ±2 range.

6.2.2   Summary of the results:

Based on the results shown above for the descriptive statistics for the performance indicators, the following can be concluded;

a) There is a clear change in the performance indicators post privatization.

b) The significance of the change and its direction, negative or positive, needs further statistical analysis.

c) Some of the indicators have standardized skewness and standardized kurtosis within the range of ±2 while others don't. This indicates the need to use different statistical tests to test the significance of the change for the normally distributed data and non-normally distributed data. Therefore, the parametric t-test will be used for a normal distributed indicators and the non-parametric Wilcoxon signed-rank test will be used for the non-normal distributed indicators

The next section will analyse the statistical results for the private match companies, the control group.

6.3   Private Companies Results:

The following table summarizes the results of the descriptive statistics of the matched private companies.

Table 13   Descriptive Statistics Results For the Private Companies

		No of Companies	Means	Medians	Minimum	Maximum	Standard deviation	Standard kurtosis	Standard Skewness
			Post	Post	Post	Post	Post	Post	Post
	Proxy								
Profitability	EBIT	61	1.8	1.26	-0.12	8.15	1.56	5.79	7.05
	ROS	61	0.15	0.12	-0.02	0.37	0.12	1.86	-0.3
	ROA	61	0.09	0.07	-0.02	0.29	0.08	3.49	1.97
	ROE	61	0.18	0.13	-0.05	0.55	0.15	1.97	-0.57
Operating Efficiency	Sales Efficiency	61	1.36	1.16	0.17	8.7	1.2	13.96	47.97
	Income Efficiency	61	1.47	1.16	-0.12	5.98	1.22	4.57	3.87
Output	Sales	61	1.64	1.27	0.17	14.4	1.93	16.89	55.28
Leverage	Total Debt to Total Assets	61	0.56	0.52	0.1	0.92	0.18	0	0.03
	Total Debt to Total Equity	61	0.44	0.19	0	2.73	0.66	6.86	7.73
Employee Level	Number of Employees	61	904	727	29	2888	755	3.28	0.1
	Log Employees	61	6.36	6.6	3.34	7.87	1.06	-2.22	0.38

The same performance indicators are used to measure the performance of the private companies. The results clearly show that the standard deviations for the performance indicators are largely dispersion. The dispersion is more evident in the Output indicator, the Employment indicator and some of the Profitability indicators, the ROS and the ROE. Further, it is also evident that the standardized skewness and standardized kurtosis for the same indicators are within the range of ± 2 and thus they are normally distributed; also as it is also shown, the other indicators falls outside the range of ± 2.

Further, the results show that the mean and median of the Profitability Indicators and the Operating Efficiency Indicators of the privatized companies are much lower than those of the private companies. Further, the results indicate that the profitability and the operating efficiency of the private companies are greater than those of the privatized companies. The standardized skewness and standardized kurtosis of most of the indicators fall outside the range of the normal distribution.

6.4   Comparing the Pre Privatization performance to the Post Privatization Performance:

The comparison between the pre privatization performance and the post privatization performance is the primary hypothesis of this chapter. The aim of this chapter is to test the hypothesis that Privatization results in improvement of performance of the privatized companies'. In order to achieve the objective of this chapter, the parametric t-test, the non-parametric Wilcoxon signed-rank test, and the proportion tests will be used, given that some of the indicators are normally distributed and others are not. Further, the proportion test is used to determine if (P) of any companies having change in any direction is greater than what is expected by chance.

As indicated earlier, this research work is based on the Megginson, W. L., Robert C., Matthias V. (1994) methodology to compare the pre privatization performance with the post privatization performance for fully or partially privatized companies in Egypt. To examine the performance of the privatized companies, the mean/median for each of the performance indicators was calculated, for the pre privatization period as well as the post privatization. The time period used to calculate the change taking place pre and post privatization covered three years pre privatization and three year post privatization. Before deciding on the test to be used, the standardized skewness and standardized kurtosis tests were applied to test the normality of the distribution of the performance indicators.

This part of the research will test the null hypothesis, that there is no change in mean/median pre privatization to post privatization. The parametric t-test will be used to test for the significant changes in mean and the non-parametric Wilcoxon signed-rank test is used to test significant change in performance using the median values. In order to cater for the different privatization categories in the sample used, and in order to avoid the bias that the partially privatized companies might still be influenced by government (D'Souza, J. and Megginson, W. L., 2000) the results are shown for each category separately.

6.4.1   The Results for the Profitability Indicators

The Megginson, W. L., Robert C., Matthias V. (1994) studied the pre and post privatization performance for 211 companies from over 46 countries. The results of the study showed significant improvements in profitability of the privatized companies. From an Agency Theory perspective, this result is somewhat expected as private management will tend to be more profit driven. The

Megginson, W. L., Robert C., Matthias V. (1994) study used four proxies to measure the change in profitability. The proxies used are:

a) The Earnings Before Interest and Tax

b) Return on Assets

c) Return on Sales

d) Return on Equity

This section of the study will analyse the results of comparing the pre privatization performance to the post privatization performance.

Table 14 Pre Privatization Comparison to Post Privatization Results (For All Companies)

In order to test Hypothesis one three tests are employed to test any significance in the performance of the fully/ partially privatized companies. The results shown in this table are for the three tests, t-test, nonparametric Wilcoxon signed-rank test and Proportion test. The t-test, nonparametric Wilcoxon signed-rank test will test for any significant change in performance measure pre and post privatization. The Proportion test will define the proportion of companies examining change in any direction which is greater than what is possible by chance. The value of mean and median is calculated for each performance indicator for three years pre privatization and three years post privatization. The results shown will cover any change in the mean or median for each performance indicators for the pre privatization and post privatization time period highlighting the t and z statistical results at each significant level. The total numbers of companies as well as the number of companies that have experienced an increase or a decrease as result of the treatment taking place are shown in the table. Further, the table of results will highlight the percent of companies that have changed as predicted with Z test and p-values.
i.e for the parametric and non-parametric tests results are listed under null hypothesis (change is equal to zero) versus the alternate hypothesis (change is not equal to zero)

	Prox	No. of Comp.		Pre Privatization		Post Privatization		Change		t-Statistic for difference in Mean	P-Value	Wilcoxon Statistic for difference in Medians	P-Value	Z-Statistic for significance of proportion	P-Value	Percentage of Companies with changes as prediction
		Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med							
Profitability	EBIT	42	19	0.74	0.63	0.92	0.82	0.17	0.27	1.51	0.14	1.74	0.081***	2.01	0.004*	73% (+)
	ROS	45	16	0.10	0.07	0.13	0.10	0.03	0.02	1.06	0.29	3.30	1.00E-03*	2.91	0.004*	76% (+)
	ROA	39	22	0.06	0.05	0.07	0.08	0.01	0.02	1.40	0.17	1.65	0.099***	1.80	0.072***	67% (+)
	ROE	37	24	0.26	0.24	0.28	0.26	0.02	0.01	0.73	0.47	0.16	0.87	0.57	0.57	64% (+)
Operating Efficiency	SalesEff	24	37	1.05	1.03	1.05	0.94	0.00	0.08	0.05	0.96	1.50	0.13	1.08	0.24	43% (+)

	IncEff	43	18	0.78	0.59	1.03	0.93	0.26	0.24	0.24	0.48	3.13	0.002*	3.00	0.003*	74% (+)
Output	Sales	16	45	1.10	1.07	0.86	0.84	0.24	0.22	4.75	0*	3.40	6.00E-04*	4.36	1.00E-05*	30% (+)
Leverage	TD/TA	26	35	0.21	0.19	0.21	0.16	0.01	0.03	0.23	0.82	0.95	0.34	2.85	0.53	57% (+)
	TD/TE	18	43	0.73	0.42	0.29	0.10	0.44	0.17	3.47	0.001*	3.71	2.00E-04*	3.89	9.00E-05*	77% (+)
Employee Level	#Emp	11	50	33.09	28.39	2,701.00	1,803.00	608.00	368.50	5.07	0*	5.04	0*	5.09	0*	84% (+)
	LogEmp	11	50	7.79	7.95	7.51	7.49	0.28	0.19	6.09	0*	5.13	0*	5.29	0*	84% (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level

Table 15 Pre Privatization Comparison to Post Privatization Results (Fully Privatized)

	Proxies	Number of Companies		Pre Privatization		Post Privatization		Change		t-Statistic for difference in Mean	P-Value	Wilcoxon Statistic for difference in Medians	P-Value	Z-Statistic for significance of proportion	P-Value	Percentage of Companies with changes as prediction
		Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med							
Profitability	EBIT	26	11	0.72	0.60	0.88	0.84	0.15	0.30	1.11	0.27	1.37	0.17	1.44	0.15	71% (+)
	ROS	24	13	0.11	0.07	0.12	0.10	0.00	0.02	0.02	0.99	1.79	0.074***	1.35	0.18	66% (+)
	ROA	21	16	0.06	0.05	0.07	0.08	0.01	0.01	0.84	0.41	0.81	0.42	1.17	0.24	57% (+)
	ROE	24	13	0.25	0.23	0.27	0.26	0.02	0.02	0.55	0.59	0.20	0.84	0.51	0.62	66% (+)
Operating Efficiency	SalEff	17	20	1.00	0.99	1.11	0.96	0.10	0.08	0.95	0.35	0.16	0.87	0.09	0.94	47% (+)
	IncEff	25	12	0.78	0.56	1.01	0.91	0.22	0.24	0.44	0.66	2.43	0.01*	2.26	0.002*	69% (+)
Output	Sales	10	27	1.10	1.05	0.88	0.83	0.22	0.25	3.58	0.0009*	2.76	0.006*	3.45	0.0005*	26% (+)
Leverage	TD/TA	19	18	0.22	0.17	0.22	0.20	0.00	0.02	0.10	0.92	0.16	0.87	0.00	1.00	47% (-)

		Number of Companies		Pre Privatization		Post Privatization		Change		t-Statistic for difference in Mean	P-Value	Wilcoxon Statistic for difference in Medians	P-Value	Z-Statistic for significance of	P-Value	Percentage of Companies with
		Inc.	Dec.	Mean	Median	Mean	Median	Mean	Median							
	TD/TE	8	29	0.71	0.20	0.24	0.06	0.47	0.13	2.68	0.0107*	3.13	0.002*	3.16	0.002*	79% (-)
Employee Level	# Emp	4	33	2743.00	1945.00	2161.00	1446.00	581.00	357.00	4.53	0*	4.70	0*	4.58	0*	89% (-)
	LogEm	4	33	7.61	7.57	7.27	7.24	0.33	0.28	5.91	0*	4.83	0*	4.69	0*	89% (-)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level

Table 16   Pre Privatization Comparison to Post Privatization Results (Partially Privatized)

		Number of Companies		Pre Privatization		Post Privatization		Change		t-Statistic for difference in Mean	P-Value	Wilcoxon Statistic for difference in Medians	P-Value	Z-Statistic for significance of	P-Value	Percentage of Companies with
	Proxies	Inc.	Dec.	Mean	Median	Mean	Median	Mean	Median							
Profitability	EBIT	16	7	0.76	0.71	0.98	0.77	0.22	0.14	0.99	0.38	0.80	0.42	1.38	0.17	67% (+)
	ROS	21	2	0.08	0.06	0.14	0.11	0.07	0.07	4.01	0.0011*	3.25	0.001*	3.23	0.001*	94% (+)
	ROA	17	6	0.06	0.05	0.08	0.06	0.02	0.02	2.40	0.029**	1.75	0.081**	2.09	0.036**	75% (+)

	ROE	12	11	0.28	0.25	0.31	0.25	0.02	0.00	0.47	0.65	0.00	1.00	0.00	1.00	50% (+)
Operating Efficiency	SalEff	4	19	1.15	1.13	0.91	0.93	0.23	0.06	2.72	0.015**	2.25	0.024**	2.51	0.012**	19% (+)
	IncEff	17	6	0.77	0.73	1.03	0.79	0.26	0.16	1.18	0.26	1.75	0.08***	1.89	0.059***	75% (+)
Output	Sales	4	19	1.12	1.73	0.83	0.85	0.29	0.16	3.30	0.004*	2.25	0.024**	2.87	0.004*	19% (+)
Leverage	TD/TA	7	16	0.20	0.20	0.14	0.13	0.06	0.03	2.11	0.05**	1.25	0.21	1.63	0.10	69% (-)
	TD/TE	6	17	0.79	0.78	0.38	0.34	0.41	0.30	3.26	0.005**	1.75	0.08***	2.46	0.014**	75% (-)
Employee Level	# Emp	7	16	4652.00	4052.00	4156.00	3313.00	495.00	470.00	1.72	0.11	1.25	0.21	1.78	0.074***	69% (-)
	LogEmp	7	16	8.23	8.15	8.10	8.10	0.13	0.12	1.80	0.09***	1.25	0.21	1.58	0.11	69% (-)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level

6.4.1.1 EBIT Results

Table 17   Hypothesis1_EBIT

	No. of Comp.		Pre Privatization		Post Privatization		Change		t-Statistic for difference in Mean [P-Value]	Wilcoxon Statistic for difference in Medians [P-Value]	Z-Statistic for significance of proportion [P-Value]	Percentage of Companies with changes as prediction
Prox	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
EBIT	42.00	19.00	0.74	0.63	0.92	0.82	0.17	0.27	1.51 [0.14]	1.74 [0.081***]	2.01 [0.004**]	73% (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level
Mn=Mean; Med=Median

The table above shows the results of comparing the EBIT pre and post privatization. As shown in the table, the mean of the EBIT for all the privatized companies has shown an increase of 18.4%, from 75% pre privatization to 93.4% post privatization. Also, the median of the EBIT has examined a similar increase of 19%, from 63.5% pre privatization to 82.5% post privatization. Around 71% of the privatized companies have examined an increase in the EBIT while 8 maintained the same median level post privatization and 14 companies showed a result lower than the median.

By testing the null hypothesis, that the change in the mean/median of the EBIT is zero, and given that the p-value is 5%; therefore, null hypothesis is rejected with a 95% confidence level. Further, the Wilcoxon signed-rank test p-value is equal to 8%, and then it is evident that with a 90% confident, there is a significant (slight) improvement in the EBIT results for the majority of the companies. The table also shows the results for each privatization category, the partially and the fully privatized. The results

indicate that both categories witnessed an increase in the EBIT level. However, it should be noted that the partially privatized companies realized higher EBIT than the fully privatized companies. In conclusion, the tests didn't indicate any significance at any given level.

The results of the EBIT as shown in above table indicates that around 73% of the privatized companies examined a significant improvement in their EBIT margins post the privatization transaction taking place.

This result is coming in line with the predicting statement in the sub hypothesis. However, the value of the improvement in the EBIT margin is low this might be explained mainly by two reasons. The first reason is time, the privatization of those companies is still new and more time is needed to start observing the changes happening and taking place evidently. Also the time factor is important to allow change management to take place and to allow the newly appointed management to affect the culture and start injecting commercial practices within the companies by changing policies and procedures. It cannot be denied that the privatization is also new to the management team. The second reason for this slight improvement is the fact that management team post privatization will be more incentivized to increase revenue as well as increase collection and reduce receivables position. This factor in itself will eventually lead to more improvement in the EBIT margin over time.

The results of the analysis are supported by the results of Megginson, W. L., Robert C., Matthias V. (1994) and Sun, Q., Jin J, and Wilson T (2003). The argument of the researchers states that the privatized companies will tend to have equivalent EBIT margins for a maximum of two years post privatization; later down the line the results of the privatized companies will way out perform that of the state owned company.

The EBIT margin analysis done on the partially privatized and the fully privatized companies indicates that the companies with higher government share had higher EBIT margins than those with less government share. By further analysing the sector in which government owned a higher share the analysis showed that this was predominantly evident in the pharmaceutical sector. This sector enjoys the protection of the government till early 2000s. This fact is also supported by literature done by DeWenter, Kathryn L., and Paul H. Malatesta (2001) who observed that the privatized companies will tend to have higher margins if they operate within a monopolistic market setup when compared to those companies operating in an open market structure.

6.4.1.2   The Change Results for the Return on Sales

Table 18   Hypothesis1_ROS

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
ROS	45	16	0.10	0.07	0.13	0.10	0.03	0.02	1.06 [0.29]	3.30 [1.00E-03*]	2.91 [0.004*]	76% (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The results table indicates that the mean of the Return on Sales indicator for the privatized companies has improved by 3%, up from 11% pre privatization to 14% post privatization. The median also has examined an increase of 3% from 8% pre privatization to 11% post privatization. 40 companies have examined this change which represents 74% of the total privatized companies. Therefore, the privatization has

directly led to the Return on Sales increase by 30 percent for 74% of the privatized companies.

By testing the null hypothesis, that the change in the mean/median of the Return on Sales is zero, and given that the p-value for the non-parametric Wilcoxon signed-rank test and proportion test are less than 1 %; therefore, null hypothesis is rejected with a 99% confidence level. Based on this fact, it is evident that there is a significant change in the Return on Sales median post privatization for the majority of the privatized companies.

By examining the results of the privatization categories, it is evident that the Return on Sales mean of the partially privatized companies increased by 7.5% from 8.5% to 15%. Also the median has increased by 4.9% from 7.3% to 12.2%. These results were achieved by 15 companies representing 94% of the partially privatized companies. Further, the fully privatized companies witnessed an improvement in the Return on Sales levels. Also, it is should be noted that by using the non-parametric Wilcoxon signed-rank test the increase in the median is considered significant with a 10% confidence.

The results of the analysis showed that ROS ratio for the privatized company examined an increase as a result of the privatization transaction for almost 76% of the companies. In addition, the post privatization performance for companies with higher government ownership showed a higher ROS ratio. This is mainly due to poor marketing and sales of activities with companies' pre privatization that resulted in high inventory levels that materialized as sales upon privatization. Also, this could be contributed to the cultural change happening within the privatized companies toward being a more competitive and market driven. All of those factors contributed directly to the overall improvement

in the ROS ratio post privatization which is in line with literature in this area Megginson, W. L., Robert C., Matthias V. (1994) and Boubakri, N. and Jean C. (1998).

6.4.1.3   The Change Results for the Return on Assets

Table 19   Hypothesis1_ROA

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
ROA	39	22	0.06	0.05	0.07	0.08	0.01	0.02	1.40 [0.17]	1.65 [0.099***]	1.80 [0.072***]	67 % (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The Return on Assets ratio is measuring how effectively a company is using its assets to generate Earning before Interest and Tax. The results shown in the table shows that the all the privatized companies has achieved an improvement in managing this returns. The mean value of the Return on Assets has increased by 1% up from 7% to 8% post privatization. Further, the median of the Return on Assets has increased also by 3%, from 6% to 9% during the same period. The results also show that the 62% of the privatized companies have examined an increase in the Return on Assets.

The non-parametric Wilcoxon signed-rank test and the proportion test results showed a significant change at the 10% level. This was achieved although the change from pre to

post privatization was 1.2% only. The null hypothesis that there was zero change in the mean/median of the Return on Assets from pre to post privatization was thus partially rejected with a 90% confidence level. Therefore, the change in Return on Assets was evident for the majority of privatized companies post privatization.

The results showed also the privatization impact on Return on Assets for each privatization category. It is shown that the fully privatized companies achieved an increase in their Return on Assets for 57% of the sample. The three tests used didn't yield any significant result at any level.

The partially privatized companies Return on Assets has increased significantly post privatization based on the results of the three statistical tests used. Therefore, the null hypothesis is rejected with a 95% confidence for the change in mean. Also, the null hypothesis for the change in median of the Return on Assets was rejected with a 90% confidence.

The ROA ratio showed an increase for the post privatized companies' performance when compared to the pre privatized performance, as shown in above table .The results indicate that 67% of the companies improved their asset utilization post privatization. This can mainly be contributed to the asset replacements or refurbishments that usually take place upon privatization to modernize the assets and machinery that result in an enhanced ROA. This fact is also supported by the views of Megginson, W. L., Robert C., Matthias V. (1994) and Laurin, C. and Yves B. (2001) who observed this fact in their research.

6.4.1.4   The Change Results for the Return on Equity

Table 20 Hypothesis1_ROE

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
ROE	37	24	0.26	0.24	0.28	0.26	0.02	0.01	0.73 [0.47]	0.16 [0.87]	0.57 [0.57]	64 % (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The results of the statistical test shows that the mean for the Return on Equity has increased from 27% to 28% post the privatization. Further, the results show also that the median as increased by 2% from 25% to 27% post privatization. 61% of the privatized companies showed an increase in Return on Equity. Also, the median has increased by 1.7% for the fully privatized companies and by 0.02% for the partially privatized ones. The p-value results for all the three tests used were greater than 10%. This clearly indicates that the change in the Return on Equity for privatized companies is not significant.

Further, by investigating the results of each privatization category, it is evident that the Return on Equity for the fully privatized companies has increased post privatization for 66% of the companies. However, this change didn't indicate any significance at any given level using the three statistical tests. The partially privatized category showed an increase in the Return on Equity also. This increase was evident in 50% of the sample;

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however, all the statistical tests didn't show any statistically significant change in the Return on Equity for the partially privatized companies.

The ROE ratio did not show any statistically significance at any level for the privatized companies post privatization, as shown in above table. This was the case also for the partially and fully privatized companies. The negligible improvement in the ROE post privatization for partially privatized companies can be interpreted by the fact that the government owns governing share in those companies and still influence the decisions to serve social goals. The access that those partially privatized companies still enjoy to the government funds might be another reason for the ROE results. Unlike the partially privatized companies, the fully privatized companies showed a relatively improved level of ROE due to the lack of government backing and contradicting objectives which is in line with the literature of D'Souza, J. and Megginson, W. L. (1999) who observed the same.

The results of the profitability ratios indicated that there is a significant improvement in performance of the privatized companies post privatization except for the ROE. Those results are in line with the literature done by Sun, Q., Jin J, and Wilson T. (2003), Dewenter, K. and Paul H. M. (2001), Boubakri, N. and Jean C. (1998), Laurin, C. and Yves B. (2001), and D'Souza, J. and Megginson, W. L. (1999). The majority of the improvement in profitability is a direct result of the objective change toward shareholder wealth maximization and thus elimination of the effect of agency cost of equity. Further, the exposure to the market competition and possible penalties is an influential motivator for management to act in an efficient way.

6.4.1.5 The Change Results for the Operating Efficiency

In order to assess the operating efficiency of any company, it is critical to ensure that the company is using the available resources to produce the maximum outcome possible. An important resource that needs to be utilized efficiently to produce the maximum output is the labour force. By controlling this input, companies will tend to have higher level of sales and higher operating income per staff member. In order to achieve the ultimate objective of any privatization programme which is to maximize profits, utilizing the available resources including the labour force in an efficient manner continues to be an obstacle. It is therefore, a presumption for the success of any privatization programme.

To this end, the research has employed two measures to assess the efficiency level of privatized companies; the Sales Efficiency which is the sales per staff member, and the Net Income Efficiency which is equal to the net Income per staff member. As per the Megginson, W. L., Robert C., Matthias V. (1994) methodology, the two ratios are calculated as an index with the year of privatization being 1 and all the other years are calculated relatively.

In order to test this hypothesis, two sub hypotheses were examined as shown below:

- The Sales Efficiency will increase post privatization
- The Income Efficiency will increase post privatization

Each of the following sections will discuss thoroughly the results of each of the sub hypothesis.

6.4.1.6 The Change Results for the Sales Efficiency

Table 21 Hypothesis1_Saleff

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
SalEff	24	37	1.05	1.03	1.05	0.94	0.00	0.08	0.05 [0.96]	1.50 [0.13]	1.08 [0.24]	43 % (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The results shown in the table indicates that the Sales Efficiency mean has increased by 0.39% points for the privatized companies post privatization. However, the median has decreased by 8.22% points for the privatized companies also post privatization. Out of the full sample, only 21 companies showed an increase in the Sales Efficiency post privatization.

The null hypothesis to be tested is that the change in the mean/median of the Sales Efficiency post privatization compared to the mean/median of the Sales Efficiency pre privatization is equal to zero. The statistical tests used indicate that the p-value for any given level is greater than 10% therefore, it is not statistically significant. At the privatization category level, the fully privatized companies have the same results. However, the partially privatized category shown that the mean of the Sales Efficiency has decreased by 23.5% points and the median has decreased also by 7% points. This was the result for 81% of the partially privatized companies with statistical significance with a 95% confidence level.

The results of the Sales Efficiency as shown in above table indicate that 43% of the privatized companies examined a decrease in their Sales Efficiency post privatization with no significant change. As for the partially privatized companies, they have examined as per the statistical results of 81% decrease in this efficiency ratio. Further, the results of the partially privatized companies also showed drop in the Sales Efficiency post privatization. The privatization core concepts of operating on commercial and profit driven basis is not still injected within the company. The time factor might be an issue in truly implementing business practices within the companies. The literature also support this approach as highlighted in the work done by Boubakri, N. and Jean C. (1998)

6.4.1.7   The Change Results for the Income Efficiency

Table 22   Hypothesis1_Incomeff

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
IncEff	43	18	0.78	0.59	1.03	0.93	0.26	0.24	0.24 [0.48]	3.13 [0.002*]	3.00 [0.003*]	74 % (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The Income Efficiency is calculated as the income per staff member. The results of this proxy show that the mean for the privatized companies has increased post privatization by 25% points. Also, the median has increased for the privatized companies by 34% points post privatization. Those results were achieved for 71% of the privatized

companies. The null hypothesis tested in the section is that the change in the mean/median of the Income Efficiency post privatization to pre privatization is equal to zero. The p-value results for the proportion test and the Wilcoxon signed-rank test is less than 1%; therefore, the null hypothesis is rejected with a 95% confidence level.

By investigating the results for each of the privatization categories, the statistical test, proportion test and the Wilcoxon signed rank test for the fully privatized companies indicates a p-value of less than 1%; therefore, the null hypothesis is rejected with a 95% confidence level.

On the other hand, the partially privatized companies' results show a significant increase in the median of the Income Efficiency with a 90% confidence level. However, the p-value for the parametric t-test gave a result of more than 10%; therefore the change in the mean of the Income Efficiency is not significant at any level.

Results of the Income efficiency on the contrary to the Sales Efficiency measures showed a significant change post privatization, as per above table. This is clearly indicating that the new management within the privatized companies tended to reduce costs. This is normal in such situations as management of newly privatized companies is always under the impression that there are efficiency gains that can be easily achieved by reducing expenses. This is unlike the fact that the increase in sales needs more marketing and sales tools to be implemented to gain more market share. Also, in Egypt they tend to perceive the product and services offered by the government companies to be of less quality. This taboo needs more time to change as a perception. Nevertheless, this is not inline though with the literature which indicates that all the Operating Efficiency Performance Measures will improve due to privatization Boardman, A. E., Claude L., and Aidan R. (2003).

6.4.2 The Change Results for the Output

In order to implement a successful privatization programme, there are more dimensions to be explored in addition to the profitability and efficiency. The output is one of those important dimensions. In this study, the output is measured using the sales data of the privatized companies. This proxy is also based on the Megginson, W. L., Robert C., Matthias V. (1994) methodology, where the proxy is calculated as an index with the year of privatization being 1 and all the other years are calculated relatively. The research is expecting that the output will tend to increase post privatization due to the market forces. The following section will shed light on the results of testing the change in output pre privatization and post privatization using Sales as a proxy.

For this hypothesis, this study examined a sub-hypothesis as shown below:

- The Sales will increase post privatization

The following section will discuss thoroughly the results of the sub hypothesis.

6.4.2.1 The Change Results for the Sales

Table 23 Hypothesis1_Sales

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
Sales	16	45	1.10	1.07	0.86	0.84	0.24	0.22	4.75 [0*]	3.40 [6.00E-04*]	4.36 [1.00E-05*]	30% (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The results shown in the table indicate that the mean for the Sales decreased by 24% points and also, the median of the Sales has decreased by 23% points post privatization. As shown in the results table, 265 of the privatized companies had increased their sales as a result of privatization, while all the remaining companies have decreased their as a result of privatization.

The null hypothesis to be tested in this study is that the change in mean/median of the Sales of privatized companies post privatization compared to pre privatization is equal to zero. The three statistical tests were used to test the change in Sales. The results of the test as highlighted in the table showed that there is a statistically significant change with 99% confidence. This indicates that the privatization transaction has an adverse impact on the output of the privatized companies post privatization. The results showed that 80% of the privatized companies suffered a decrease in Sales of 23.8%.

A more detailed approach is adopted by looking into the privatization categories test results. The results shows that the mean of the partially privatized companies declined by 29% post privatization. Also, the median has declined for the same privatization category by 52% post privatization. Those results are examined for 82% of the partially privatized companies. The statistical tests, parametric t-test, and proportion test show that the decrease in Sales is significant with 99% confidence level. While the p-value of the Wilcoxon signed rank test is less than the 5% level; therefore, this indicates that with a 95% confidence level there is significant change in Sales post privatization. The fully privatized companies test results indicates that the Sales has increased for 27% of the companies; While, 73% of the fully privatized companies have examined a decrease in Sales due to privatization. The results of the three tests showed a significant change with a 95% confidence interval.

The results of the analysis showed that the Sales of the privatized companies post privatization have fallen as shown in above table. This drop in the sales is explainable due to the fact that the implementation of privatization will affect how management reacts, in absence of any influence from government to increase output in an inefficient manner. As per the literature, Boycko, M., Ahleifer. A, and Vishny, R. (1996) and Boubakri, N. and Jean C (1998), this is a normal effect; the new management will try to optimize Sales to an effective level. This decline in Sales also had a direct effect on the Sale Efficiency measure as shown above.

6.4.3 The Change Results for the Leverage

The gearing level of any company is used to assess the financial risk associated with this business. The purpose of assessing the leverage of the privatized companies in this study is to investigate the movement of the debt financing from the state owned companies to the privatized companies and to spot any change in the capital structure of those companies as a result of the privatization. Also, the risk associated with the fund raising in the presence of the government backing the fund raising for the State Owed Companies. Therefore, the cost of borrowing for both companies might differ. Nevertheless, the private companies will be in a better position to approach the equity markets (Bradley, M. J. and Kim, H., 1984). Therefore, there is a high tendency that the debt ratio will decrease post privatization.

This study will test the null hypothesis that the change of the mean/median of the Leverage post privatization to the pre privatization is zero. Therefore, to test the hypothesis two proxies will be used, the Total Debt to Total Assets and the Total Debt to Total Equity. The next section will shed light on the results of the tests used.

In order to test this hypothesis, two sub hypotheses were examined as shown below:

- The Leverage Ratio (Total Debt to Total Assets) will decrease post privatization

- The Leverage Ratio (Total Debt to Total Equity) will decrease post privatization

Each of the following sections will discuss thoroughly the results of each of the sub hypothesis.

6.4.3.1 The Change Results for the Total Debt to Total Assets

Table 24 Hypothesis1_TDTA

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
TD/TA	26	35	0.21	0.19	0.21	0.16	0.01	0.03	0.23 [0.82]	0.95 [0.34]	2.85 [0.53]	57 % (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The results table shows that the mean of the Total Debt to Total Assets declined post the privatization by 0.01%, while the median has also declined by 3%. Those results are evident in 58% of the companies privatized. The parametric t-test, Wilcoxon signed rank test, and proportion test indicated that there is an insignificant decrease in the mean and median values at all given levels.

The results of each privatization category showed that the mean of the Total Debt to Total Assets for the fully privatized companies improved by 2.5%. However, the results for the median showed a decline of 1.8% for the same privatization category post privatization. The p-value for the three statistical tests is greater than 10% indicating a

statistically insignificant change at all levels and thus accepts the null hypothesis for this privatization category. The partially privatized companies' results showed a decrease of 5.9% post privatization for 70% of the partially privatized companies. Further, the median showed a decrease of 8% for 70% of the partially privatized companies. The p-value for the parametric t-test showed a result of 5% and therefore, the null hypothesis is rejected with 95% confidence. The p-value of the Wilcoxon signed rank test is greater than the 10%; this indicates an insignificant change in median of the Total Debt to Total Assets for the partially privatized companies.

The results of the Total Debt to Total Assets ratio showed that 57% of the companies had examined significant drop.

6.4.3.2   The Change Results for the Total Debt to Total Equity

Table 25   Hypothesis1_TDTE

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
TD/TE	18	43	0.73	0.42	0.29	0.10	0.44	0.17	3.47 [0.001*]	3.71 [2.00E-04*]	3.89 [9.00E-05*]	77 % (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The table of results shows that the median of the Total Debt to Total Equity for the privatized companies declined post privatization by 45%. Also the median has decreased by 33% due to the privatization. The decline of the mean and median is for

79% of the sample studied. The p-value for the three statistical tests showed a value of 1%; therefore, the null hypothesis is rejected with a 99% confidence.

By investigating the results of the different privatization categories, the results show that the Total Debt to Total Equity for the partially privatized companies has declined by 30.8% and the median has decreased also by 31%. The p-value for the parametric t-test for the partially privatized companies is 1%; therefore the change in mean is significant with 99% level of confidence. Also the p-value of the Wilcoxon signed rank test and proportion tests are 10%, and 5%; therefore, the change in median is significant with 90% confidence level. The results of the p-value for the three statistical tests showed a value of 1%; therefore, the null hypothesis is rejected with a 99% confidence for the fully privatized companies.

As for the Total Debt to Total Equity ratio, 77% of the companies performed in the same manner, as per above table. The results as shown above highlighted that the declining pattern was evident in both data sets, the partially and the fully privatized companies. This result is expected as privatized companies are no more in a position to get funds that are backed by the government as a guarantor. Further, the privatization has given those companies the chance to raise funds through equity markets for the first time. All of these factors along with the new management in place will for sure affect how the decision are taken to structure funds to the company and to assess any associated risks in a better way to avoid defaulting. Even for the partially privatized companies, all of the above argument hold true also, as the government as a governing shareholder for those companies will tend to change the capital structure to increase the value of those companies for possible future selling opportunity. The research work

done by D'Souza, J. and Megginson, W. L. (1998), Sun, Q., Jin J, and Wilson T (2003), Laurin, C. and Yves B. (2001) and Omran (2001) articulate the same results.

6.4.4 The Change Results for the Employment Level

The final proxy as per the Megginson, W. L., Robert C., Matthias V. (1994) methodology is the Employment Level. The Employment Level plays an important role in the success of any privatization programme. The inefficiency and the over staffing of the State Owned Enterprises is one of the obstacles in achieving the desired outcomes of privatization due to the social dimension of any layoffs. Therefore, achieving efficiency in any of the privatized companies will require a certain reduction of employment levels. Most of the studies done on the employment level change due to the privatization programmes didn't conclude with nay solid conclusion on the relation between privatization and level of employment (Megginson, W. L., Robert C., Matthias V., 1994). The ambiguity in reaching a conclusion is due to the fact that both decisions might be taken simultaneously, to layoff employee and to expand the business later on. The research study will calculate the average level of employment pre and post privatization to test the null hypothesis that the change in the mean/median of employment post privatization to pre privatization is zero. The next section will show the results of the comparison.

For this hypothesis, this study examined a sub-hypothesis as shown below:

- The number of Staff will decrease post privatization

The following section will discuss thoroughly the results of the sub hypothesis.

6.4.4.1 The Change Results for the Employment Level

Table 26 Hypothesis1_Staff

Proxies	No. of Comp.		Pre		Post		Change		t-Statistic (Mean) [P-Value]	Wilcox (Medians)[P-Value]	Z-Statistic [P-Value]	% Companies with changes as prediction
	Inc.	Dec.	Mn	Med	Mn	Med	Mn	Med				
# Empl	11	50	33.09	28.39	2,701.00	1,803.00	608.00	368.50	5.07 [0*]	5.04 [0*]	5.09 [0*]	84% (+)
LogEmpl	11	50	7.79	7.95	7.51	7.49	0.28	0.19	6.09 [0*]	5.13 [0*]	5.29 [0*]	84% (+)

* 1% Significance Level ** 5% Significance Level ***10% Significance Level.
Mn=Mean; Med=Median

The table of results shows that the mean of the Level of Employment for the privatized companies has decreased by 608 employees; also, the median of the Level of Employment has declined by 369 employees post privatization. Those results are shown for 85% of the privatized companies. The p-value for the three statistical tests was less than 1%; therefore with a 99% confidence the null hypothesis is rejected.

The detailed analysis of each privatization category shows that the parametric t-test and the Wilcoxon signed ranked test showed an insignificant mean/median decline of the employment level for the partially privatized companies.

There might not be a direct relationship between employment level and privatization in other countries; however, in Egypt and based on the results shown above that with 99% confidence there is a significant change in mean/median of the employment level pre and post privatization for around 85% of the sample.

Examining the staff number for the privatized companies as shown in above table, indicates that 84% of the privatized companies examined a significant decrease in the number of staff for both partially and fully privatized companies. This usually happens as a direct output of the privatization programmes as newly privatized companies tend to undergo a restructuring to enhance efficiency. Further, in some of the cases this downsizing and restructuring is accompanied by early retirement plans offered by the government to help absorb some of the redundant workers. The literature on done by LaPorta, R. and Lopez-de-Silanes, F. (1999), D'Souza, J. and Megginson, W. L. (1999), Sun, Q., Jin J, and Wilson T (2003), Laurin, C. and Yves B. (2001) and Omran (2001) showed the same results.

6.5   Summary:

This chapter has shed light on the performance of the Egyptian privatized companies post privatization against the pre privatization performance. The chapter tested the hypothesis 1 "Privatization of Egyptian companies through IPO will result in the improvement of the performance of those companies following privatization". The methodology used to test the hypothesis was the Megginson, W. L., Robert C., Matthias V. (1994) methodology.

The chapter has covered two major parts of the thesis, part one addressed the Descriptive Statistics for the Privatized companies as well as the private matched companies. The data set used in this chapter covered the Egyptian IPO privatized companies and their matched private companies over the period from 1994 to 2010 when the privatization programme of Egypt was put on hold.

The results of the descriptive statistics of the privatized companies indicated that the all the financial indicators have changed post the privatization taking place. Further, the descriptive analysis covered the standardized skewness and a standardized kurtosis for all the indicators to check for the normality of distribution if within the range of ± 2. However, the mean of most of the variables fall outside the range of ± 2; therefore they were not normally distributed (Keller G., 2003). Therefore, the research study used the non-parametric Wilcoxon signed-rank test to test the significance of the changes in the median for all the indicators for the period pre privatization and post privatization as well. Further, in order to test the significance of change between the privatized companies and the matched private company, the Mann-Whitney test will be used to test the significance of the difference.

The outcome of the chapter indicates that the Egyptian privatization programme affects positively the performance of the privatized companies in different key areas. The summary of the results are as follows:

a) The profitability indicators have improved a lot except for the Return on Equity.

b) The Income Efficiency showed a statistically significant increase.

c) On the other hand, the change in the Sales Efficiency didn't show any statistical significance.

d) The Operating Efficiency has shown a statistically significant change.

e) The Employment level has shown statistically significant decrease.

The concluding question that can be raised at this point is whether or not privatization programme is a success. The analysis done till this point in the research will not provide the results that can support any of the two answers. Therefore, it is crucial at this stage to investigate the reason behind the change of the performance of the privatized

companies. It is not factually correct at this stage to contribute all the changes that took place post privatization to the privatization transaction itself. Therefore, further analysis will be done in the next chapter to assist in answering this question by, comparing the relative performance of the privatized companies' to that of private companies.

Chapter 7: Privatized and Private Companies

7.1 Introduction:

In the last chapter the study tested the first hypothesis "Privatization of Egyptian companies through IPO will result in the improvement of the performance of those companies following privatization". The methodology used was similar to the Megginson, W. L., Robert C., Matthias V. (1994) methodology. Three statistical tests, non-parametric Wilcoxon signed, the parametric t-test and the proportion test were used to assess the changes that took place due to the privatization. The results of the tests were positive and indicated that the privatization programme of Egypt has improved the performance of the privatized companies. However, it is not yet clear if the positive changes that took place can be attributed only to the privatization transaction or not. This chapter will shed more light on the privatization performance by testing the second hypothesis of this research work.

As a first step, a matching was done between the private companies and the privatized companies (61 companies) based on the size of the asset base. After matching the companies based on the size of asset base, it was taken into consideration the timeframe over which the private company had been operating as a listed company. Therefore, two requirements were needed to match the privatized companies to the private companies:

1. The size of the Asset base to be between 70% to 130% (Barber, B. and Lyon, J., 1998).

2. The private company should have historic data as a listed company during the same period the pre and post privatization.

In case the best match was not listed at the timeframe of the privatized company, the second best match is considered. After performing the matching process, the DID methodology was used to test the following Hypothesis and sub hypotheses:

Hypothesis 2

Privatization results in improvement of performance relative to private companies' performance

To test this hypothesis, the following hypotheses will be examined:

2. **The Profitability Ratios of Privatized and Private companies are not significantly different.**

This will be examined by testing:
4.1. The EBIT of privatized and private companies are not significantly different
4.2. The ROS of privatized and private companies are not significantly different
4.3. The ROA of privatized and private companies are not significantly different
4.4. The ROE of privatized and private companies are not significantly different

5. **The Operating Efficiency of Privatized and Private companies are not significantly different.**

This will be examined by testing:
5.1. The Sales Efficiency of privatized and private companies are not significantly different
5.2. The Income Efficiency of privatized and private companies are not significantly different

6. **The Output of Privatized and Private companies are not significantly different.**

This will be examined by testing:
6.1. The Sales of privatized and private companies are not significantly different

7. **The Leverage Ratios of Privatized and Private companies are not significantly different.**

This will be examined by testing:

7.1. The Leverage Ratio (Total Debt to Total Assets) of privatized and private companies are not significantly different

7.2. The Leverage Ratio (Total Debt to Total Equity) of privatized and private companies are not significantly different

8. <u>The numbers of Staff in Privatized and Private companies are not significantly different.</u>

This will be examined by testing:

8.1. The number of Staff of privatized and private companies are not significantly different

The following section will present the results of the DID model used and as highlight

in chapter 5 on the methodology.

7.2   The Profitability Models

7.2.1 Model 1 LogEBIT

Table 27   Model_EBIT

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	174	357
Treated:	183	180	363
	366	354	

R-square: 0.35442

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	1.207	0.291	4.15	0
logsize	0.907	0.087	10.477	0
tdta	0.402	0.043	9.403	0

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
logebit	4.58	3.262	-1.318	5.276	4.368	-0.907	0.41
Std. Error	0.49	0.5	0.148	0.466	0.478	0.15	0.208
t	9.34	1.94	-8.93	6.07	4.82	1.42	1.98
P>|t|	0	0	0.000***	0	0	0.000***	0.049**

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The above results show a reasonable fit for a DID model given a 35% R-squared. The Gov-ownership variable is moreover positive and significant suggesting that market power plays a role in generating superior returns; the impact of size is positive and significant (either market power or economies of scale in play), and the impact of TDTA (total debt/total assets) is positive and significant on the performance variable, LogEBIT. This last could relate to the financial engineering aspects of leverage in raising the return on equity. But we shall have more to say on this later.

These results are interesting. However, the key feature we are testing in this analysis is the treatment impact of privatization. In this model, the coefficient on Difference in Differences (beta3) is positive and significant at 5%. Thus privatization appears to have brought about a rise in EBIT that would not have occurred in its absence. In the log model, the impact is interpretable as a % change or increase in this case; so the privatization treatment is clearly raising the EBIT by about 41%. So not only are the effects on profitability statistically significant; they are also quantitatively important.

This indicates that the cost efficiency has started gaining within the operations of the company that resulted directly in the improvement in the EBIT. This might be a direct result of the enhanced competition within the markets that has forced the cost efficiency to take place or enhanced revenues.

The Sales analysis of Hypothesis 1 shows that there is a dip in sales in the initial years post privatization in line with literature done by Boycko, M., Ahleifer. A, and Vishny, R. (1996) and Boubakri, N. and Jean C. (1998). Which is a normal effect for any change that will initially lower the overall sales as a result of the privatization and then the sales will pick up overtime. This will be achieved internally by enhancing the management

and product/services to the level required by the market and offered by private competitors.

7.2.2 Model 2 ROS

Table 28 Model_ROS

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.10175		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|	
govown	-0.053	0.079	-0.667	0.505	
logsize	-0.021	0.024	-0.876	0.381	
tdta	0.079	0.012	6.778	0.000	|

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW UP			DIFF-IN-DIFF
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	
ROS	0.401	0.275	-0.126	0.406	0.296	-0.110	0.016
Std. Error	0.134	0.137	0.040	0.127	0.131	0.041	0.056
t	3.000	-0.520	-3.130	0.440	0.400	0.260	0.280
P>|t|	0.003	0.044	0.002***	0.001	0.024	0.007***	0.779

* Means and Standard Errors are estimated by linear regression

**Inference: *** $p<0.01$; ** $p<0.05$; * $p<0.1$

The model has a reasonable fit with 10.2% R-squared, though only about one third of that for EBIT. The impact on ROS of Gov-ownership is now negative but not significant; the impact of size is negative but not significant, and the impact of more indebtedness per asset base is positive and significant.

While there are significant differences between the control group (private) and treated group (privatized) as between the initial and the baseline periods, the treatment effect of the privatization on ROS is not estimated to be significant.

The result of the government ownership impact is in line with the studies that highlighted a negative impact of government ownership on the ROS post privatization (Grigorian, D. (2000); Kwoka, J. (2002); Kocenda, E. and Jan S. (2003); and Boubakri, N. And; Jean C.; and Omrane G. (2005).

This clearly indicates that the majority shareholding of the government even after partial privatization has a negative impact on the efficiency that can be implemented within privatized companies. This might be due to the reason that government still has its own social agenda that is passed through those companies unlike the fully private companies where the shareholders will place more pressures and demand to achieve shareholder value maximization.

7.2.3 Model 3 ROE

Table 29 Model_ROE

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.01866		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	-0.119	0.203	-0.588	0.557
logsize	-0.037	0.061	-0.6	0.549
tdta	-0.035	0.065	-0.546	0.585

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW-UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
ROE	0.548	0.624	0.075	0.484	0.806	0.322	0.247
Std. Error	0.346	0.352	0.106	0.328	0.337	0.104	0.147
t	1.590	0.760	0.710	0.35	1.29	2.45	1.68
P>|t|	0.113	0.077	0.476	0.141	0.017	0.002***	0.092*

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The model is showing a low fit. The Gov-ownership variable is now negative but not significant; the impact of size is negative but not significant, and the impact of more indebtedness per asset base is negative but not significant on the dependent variable, ROE. This shows clearly that the rise in EBIT is not due to financial engineering as we should have found a significant effect of tdta on ROE.

The treatment impact of privatization is only significant at the 10% level, but indicates ROE rises by 0.247%-points as a result of privatization. The tax implication might be another reason for the change in gearing for the privatized companies which is a limitation in this study.

7.2.4 Model 4 ROA

Table 30 Model_ROA

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.41681		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	0.111	0.095	1.169	0.243
logsize	-0.055	0.028	-1.957	0.051
tdta	0.235	0.014	16.820	0.000

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
ROA	0.623	0.208	-0.415	0.686	0.303	-0.383	0.032
Std. Error	0.160	0.164	0.048	0.152	0.156	0.049	0.068
t	3.880	-1.910	-8.580	1.040	0.470	0.230	0.470
P>|t|	0.000	0.203	0.000***	0.000	0.053	0.000***	0.641

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The model is showing a reasonably good fit for DID of 42%. The Gov-ownership variable is now positive but not significant; the impact of size is negative and significant, and the impact of more indebtedness per asset base is positive and significant on the dependent variable, ROA.

The treatment effect of privatization is not significant, while there are significant differences between the treated and the control groups in the baseline and follow up periods.

7.3 Operating Efficiency Models

In order to test this hypothesis, the Operating Efficiency of Privatized and Private Companies are not significantly different; the following sub hypotheses will be examined:

1.   The Sales Efficiency of privatized and private companies are not significantly different

2.   The Income Efficiency of privatized and private companies are not significantly different,

Each of the following sections will discuss thoroughly the results of each of the sub hypothesis.

7.3.1 Model 5: Saleff (sales efficiency)

Table 31   Model_Saleff

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	174	173	347
Treated:	180	177	357
	354	350	
R-square:	0.21117		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	-0.234	0.340	-0.689	0.491
logsize	-0.020	0.100	-0.197	0.844
tdta	0.532	0.049	10.793	0.000

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW-UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
Saleff	2.023	1.202	-0.822	1.825	1.171	-0.653	0.168
Std. Error	0.572	0.582	0.173	0.541	0.554	0.173	0.242
t	3.540	0.610	-4.760	1.660	1.310	0.150	0.700
P>|t|	0.000	0.039	0.000***	0.001	0.035	0.000***	0.487

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The model is showing a reasonably good fit for DID of 21%. The results of the model as shown in above table indicate that the Gov-ownership variable is negative but not significant; the impact of size is negative but not significant, and the impact of more indebtedness per asset base is positive and significant on the dependent variable, Saleff.

These results are in line with the results of the Jones and Mygind (2002) indicating that the output of privatized companies tends to improve overtime.

The treatment effect of privatization is not significant, while there are significant differences between the treated and the control groups in the baseline and follow up periods.

The result indicate that the government ownership still plays a vital role in addressing efficiency as they might be unable or unwilling due to social/political aspects to lay off unproductive staff members to enhance efficiency. The time factor also will eventually lead to the enhancement of staff skills and competency that will have a positive impact on the efficiency of privatized companies compared to the private.

7.3.2 Model 6 Net Income Efficiency

Table 32   Model_NIeff

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.21117		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	-0.515	0.43	-1.198	0.231
logsize	0.153	0.128	1.195	0.233
tdta	0.060	0.063	0.942	0.347

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW-UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
NIeff	1.534	0.650	-0.884	0.823	0.905	0.082	0.965
Std. Error	0.728	0.742	0.219	0.691	0.71	0.221	0.307
t	2.110	0.340	-4.030	0.51	1.3	3.49	3.14
P>|t|	0.035	0.381	0.000***	0.234	0.203	0.712	0.002***

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The results of the model as shown in above table indicate that the Gov-ownership variable is negative but not significant; the impact of size is positive but not significant, and the impact of more indebtedness per asset base is positive and but not significant on the dependent variable, NIeff. The negative impact of the government ownership is mainly because of the role that the government continue to play in privatized companies to serve political agendas rather than profit maximization, which is in line with the results of the study done by Boubakri, N. And; Jean C.; and Omrane G. (2005).

The treatment effect of privatization is now significant, while there are significant differences between the treated and the control groups in the baseline but not the follow up periods. The interpretation is that net income per employee has increased by 0.965 EGP as a direct result of privatisation.

7.4 Leverage Model

In order to test this hypothesis, the Output of Privatized and Private companies are not significantly different; the following sub hypothesis will be examined:

1.   The Leverage Ratios (Total Debt to Total Assets) of privatized and private companies are not significantly different

2.   The Leverage Ratios (Total Debt to Total Equity) of privatized and private companies are not significantly different

Each of the following sections will discuss thoroughly the results of each of the sub hypothesis.

7.4.1 Model 7 Total Debt/Total Assets

Table 33   Model_TDTA

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.0487		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	-0.777	0.251	-3.1	0.002
logsize	0.166	0.075	2.209	0.028

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW-UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
TDTA	0.592	0.1	-0.492	0.117	-0.334	-0.451	0.041
Std. Error	0.427	0.436	0.127	0.406	0.417	0.129	0.18
t	1.390	-0.54	-3.86	-0.58	-0.28	-0.17	0.23
P>|t|	0.166	0.819	0.000***	0.772	0.423	0.000***	0.821

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The model is showing a low fit for DID of 4.9%. The Gov-ownership variable is now negative and significant; the impact of size is positive and significant, and the impact of more indebtedness was dropped as this could be correlated with the dependent variable, which is a similar measure of indebtedness.

The treatment effect of privatization is not significant, while there are significant differences between he treated and the control groups in the baseline and the follow up periods.

The results of the model as shown above table indicate that the Gov-ownership variable is now negative and significant; the impact of size is positive and significant, and the impact of more indebtedness was dropped as this could be correlated with the dependent variable, which is a similar measure of indebtedness.

The treatment effect of privatization is not significant, while there are significant differences between he treated and the control groups in the baseline and the follow up periods.

As mentioned above, the impact of taxation is not considered here which might affect the TD/TA results. However, the results indicate that the shift in mind set didn't take place yet as the management of the newly privatized entities, might be still reluctant to borrow, or even not being able to borrow due to the economic reasons.

7.4.2 Model 8 Total Debt / Total Equity

Table 34   Model_TDTE

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.0817		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	0.176	0.117	1.509	0.132
logsize	0.066	0.035	1.888	0.059

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW-UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
TDTE	-0.283	0.071	0.355	-0.235	-0.136	0.099	-0.255
Std. Error	0.199	0.203	0.059	0.189	0.194	0.06	0.084
t	-1.42	1.46	5.97	-0.03	-1.19	-3.91	-3.04
P>|t|	0.155	0.726	0.000***	0.215	0.485	0.098*	0.002***

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The results of the model as shown in above table indicate that the Gov-ownership variable is now positive and not significant; the impact of size is positive and significant, and the impact of more indebtedness was dropped as this could be correlated with the dependent variable, which is a similar measure of indebtedness.

The treatment effect of privatization is now significant, while there are significant differences between the treated and the control groups in the baseline and the follow up periods. The interpretation is that privatization lowers debt to equity ratios thus making the privatized firms less financially risky. This is an interesting result and probably follows from the fact that flotation enables the firm to raise new equity and/or to substitute equity for debt. Also, this might be due to the backing of the government in the mixed ownership companies that enable those companies to borrow at lower rate.

7.5 Model 9 log employment

In order to test this hypothesis, the numbers of Staff in Privatized and Private Companies are not significantly different; the following sub hypothesis will be examined:

1.   The numbers of Staff in Privatized and Private Companies are not significantly different.

The following section will discuss thoroughly the results of the sub hypothesis.

Table 35   Model_LogEmpp

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.9072		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	0.724	0.154	4.7	0
logsize	0.38	0.046	8.25	0
tdta	0.054	0.023	2.377	0.018

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW-UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
logEmpl	0.429	5.074	4.644	0.848	5.279	4.431	-0.214
Std. Error	0.261	0.266	0.079	0.248	0.254	0.079	0.11
t	1.65	17.9	59.11	2.12	4.65	1.94	-1.94
P>|t|	0.1	0	0.000***	0.001	0	0.000***	0.053*

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The model is showing a very high fit for DID (or indeed any model) of 91%. The Gov-ownership variable is now positive and significant; the impact of size is positive and significant, and the impact of more indebtedness is positive and significant. Thus government ownership raises employment in the years subsequent to privatization. Bigger firms employ more people after privatization than smaller ones, and greater financial risk is associated with taking on more staff.

However, privatization lowers employment (for given government ownership etc), by a massive 21%, a finding consistent with the idea that there are barriers to reducing staff in government-owned industry. There are also significant differences between the treated and the control groups in the baseline and the follow up periods.

The results of the model as shown in above table indicate that the Gov-ownership variable is positive and significant; the impact of size is positive and significant, and the impact of more indebtedness is positive and significant. Thus government ownership raises employment in the years subsequent to privatization. Bigger firms employ more people after privatization than smaller ones, and greater financial risk is associated with taking on more staff.

However, privatization lowers employment (for given government ownership etc.), by a massive 21%, a finding consistent with the idea that there are barriers to reducing staff in government-owned industry. This contradicts with the results of the studies done by Ramamurti, R. (1997), Bos, D., and Nett L., (1991), La Porta, R., Florencio L., Andrei S., and Robert V. (1999), and Megginson, W. L., Robert C., Matthias V. (1994), that indicates the there is no change in staff number as a result of privatization. This might be a result related to this part of the world where lying off is not an easy affair.

There are also significant differences between the treated and the control groups in the baseline and the follow up periods.

7.6 Output Model

In order to test this hypothesis, the Output of Privatized and Private companies are not significantly different; the following sub hypothesis will be examined:

1.   The Sales of privatized and private companies are not significantly different

 The following section will discuss thoroughly the results of the sub hypothesis.

7.6.1 Model 10 sales

Table 36   Model_Sales

DIFFERENCE-IN-DIFFERENCES WITH COVARIATES

Number of observations in the DIFF-IN-DIFF: 720

	Baseline	Follow-up	
Control:	183	180	363
Treated:	183	180	363
	366	360	
R-square:	0.1165		

Covariates and coefficients:

Variable(s)	Coeff.	Std. Err.	t	P>|t|
govown	4766.010	1773.424	2.687	0.007
logsize	2733.261	529.872	5.158	0.000
tdta	1444.223	261.809	5.516	0.000

DIFFERENCE IN DIFFERENCES ESTIMATION

Outcome Variable DIFF-IN-DIFF	BASE LINE			FOLLOW-UP			
	Control	Treated	Diff(BL)	Control	Treated	Diff(FU)	DIFF-IN-DIFF
Sales	-1.5e+04|	-1.60E+04	-1.10E+03	-1.0e+04|	-1.40E+04	-3.60E+03	-2.50E+03
Std. Error	3003.184|	3061.069	904.563	2851.100|	2928.201	910.686	1266.72
t	-4.85	-1.50E+04	-1.19	-1.5e+04|	-1.10E+04	-1083.47	-1.98
P>|t|	0.000	0.000	0.233	0.000	0.000	0.000***	0.048**

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The results of the model as shown in above table indicate that the Gov-ownership variable is now positive and significant; the impact of size is positive and significant, and the impact of more indebtedness is positive and significant.

The treatment effect of privatization is now significant, while there are significant differences between the treated and the control groups in the follow up period. The interpretation is that privatization lowers sales, and is consistent with growing monopoly power in the privatized industries. So eventually those privatized companies will tend to be more efficient and innovative offering new services and products that will capture more of the market share and enhance the overall sales.

7.7 Summary:

All the empirical studies done on privatization will tend to compare the privatized companies performance with the performance of the State Owned Enterprises to justify the privatization transaction. However, this study to compare the privatized companies' performance with that of private companies. This study will give more insight on the benefits of privatization and the possible short comes. It will also help in showing the real attributes of privatization and not the one caused by the economic environment.

This chapter of the research work studied the relative performance of the privatized companies with the performance of a private matched group of companies from the similar industry and size. This chapter helped in studying the second hypothesis of this thesis" Privatization results in improvement of performance relative to private companies' performance". Based on the results shown and discussed in the chapter, the privatization has resulted in improving the performance of the privatized companies.

Chapter 8: Conclusion

8.1 Conclusion:

This study covered the privatization programme implemented in Egypt for a period over 17 years to assess the impact of the privatization transaction on the overall performance of the companies. An extensive literature review was done to cover all the studies done on the impact of privatization on privatized companies. Further, the dataset collected was used to test the two hypotheses under consideration to achieve the objective of the study. The assessment was done on the privatized companies themselves to assess the impact of the privatization transaction o the overall change in performance over a period of 6 years, 3 years pre and 3 years post privatization. In addition, by testing the second hypothesis, the study examined the real impact of privatization by studying the performance of the privatized companies relative to a matched set of private companies. Therefore, this research work studied the impact of privatization programme as an economic reform tool using the dataset of Egypt where limited research work was done to study the Egyptian experience in privatization.

As highlighted earlier, most of the studies that were done in this area were focusing on the impact of privatization on the State Owned Enterprises per say; however, this study will offer another dimension of assessment by relating the change in performance to fully private companies. This will further define the impact of privatization on privatized companies.

This study in its 8 chapters offered an extensive review of the Egyptian experience in privatization and restructuring the economy. The first three chapters of this study covered the privatization transaction from its different angles as a modern tool of

economic reform. The different methods of privatization were also studied as well as the advantages and disadvantages of privatization Also, the three chapters offered a thorough analysis of the Egyptian economy overtime and it captured all the different phases the economy went through and many of the reform programmes that were done at that time. This all was then concluded by the literature review chapter which covered empirical studies done on privatization overtime. The literature review covered a wide range of studies from different developed and developing countries over the last 30 years showing vast experiences. All the studies studied the impact of privatization on privatized companies concluding that privatization has a significant impact on the performance of privatized companies.

The following three chapters covered the methodology used to test the two hypotheses of this study and the empirical results of applying the statistical methods. The first empirical chapter assessed the impact of the privatization on privatized companies' pre and post privatization for a set of 61 IPO privatized companies. The results of this chapter showed that the privatized companies examined a significant positive change in profitability, and operating efficiency. On the other hand, the leverage and employment level were negatively impacted with no effect on the output of the privatized companies. The results reached in this chapter are in line with the all the results of empirical results done in other studies except for the employment levels and the output.

In order to assess further the impact of privatization on the privatized companies' performance, a model was developed to relate the performance of the privatized companies to private matched companies. This model will be able to relate the changes in performance to the privatization transaction by assess the impact in the change in

ownership, gearing and size. A DID model was developed to examine the hypothesis of this chapter. The results of this chapter indicated that the privatization brought in a significant increase in EBIT and ROE while not having significance for ROS, and ROA for the profitability measures. Further, privatization treatment was not significant for Sales Efficiency and significant for the Income Efficiency; While the results of the leverage measures indicated that the privatization treatment TD/TA to be not significant and to the contrary to the results of the TD/TE. The results of the Employment measures and Sales were significant. The comparison relative to the private gave interesting results where the DID coefficient was significant for the EBIT, ROS, ROE, ROA.   In addition, the DID model results for the Sales Efficiency and the Income Efficiency were also significant in baseline and follow-up periods. The leverage, employment and sales results showed also significant differences between treated and controlled groups.

8.2 Policy Recommendation

Based on the outcomes of this study, there are a number of policy recommendations that can be used to shape the Egyptian government future privatization transaction and those recommendations can also work as lessons learned for other countries in the process of privatizing their State Owned Enterprises. The privatization programme in Egypt is currently put on hold post the revolution in 2011. All the government officials are not currently in a position restart the programme due to political pressures. However, the deteriorating economic conditions ,that Egypt is suffering from for the last 3 years, is calling for an urgent economic policy reform taking into consideration the huge potential privatization can play. However, there are certain outcomes of this study that indicate the need for a cautious restart of the programme and also some changes in the implementation approach.

On the top of those priorities that should be done before restarting the programme is the issues of workers. The result of the study showed that the employment level is decreasing post privatization. In a country like Egypt where the unemployment level is double digits with a low GDP per capita reaching the level of 1566 USD in 2014, the creation of additional job opportunities should be the outcome of any privatization programme. However, given that the companies to be privatized are over staffed, then laying off workers might be unavoidable Nevertheless, creating a fund that will take care of those workers should be a priority. Also, there should be a comprehensive plan to retrain those workers to meet the change in the labour market and also to assist them to find other jobs. In a country like Egypt, this should not be left to market forces; a government support in this regard will help in solving the structural unemployment issue that might result from the privatization of some of the companies.

8.3   Possible Future Work

This study investigated the impact of privatization on IPO privatized companies in Egypt and also interpreted the change in performance by comparing it to private matched companies. This study can further be extended to examine the organizational level of those companies to offer a better understating of what is happening within the companies that can enable or halt the efforts to improve the performance as a result of privatization. This can be done by employing the agency theory to assess the employees and management as key enablers for such a change. Also, this study can be extended to examine other methods of privatization and comparing and contrasting it with private companies as well as the IPO privatized companies.

Moving to more regional level this study can be extended to compare the outcomes with regional experiences of other countries and especially with the Gulf countries where minimal of research was done.

There is also another possibility of extending the work by assessing other variables and specifically the ones related to investment, dividends and the overall direct investments to Egypt as tool to improve the overall economic performance and to enhance job creation.

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