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Aim & Scope

Aims to enhance the level of published articles by improving integrity, morals and keeping papers in high professional standards to spread the good knowledge to all up-coming researches, scholars and scientists. So, the main objective of MECS is to advance the professionalism level of existed research, and to enhance the focus on new emerging trends.

Arabic text images watermarking: a survey of current techniques

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Abstract

Digital media has many challenges today such as the violation of copy and paste, illegal use, and weak copyrights protection. Digital watermarking comes to solve these problems by making authority information hidden in digital media. This survey presents a discussion of watermarking for text image especially Arabic text images. This survey talks about Arabic text digital watermarking techniques: Discrete Wavelets Transform (DWT), Discrete Cosine Transform (DCT), Singular Value Decomposition (SVD), Spatial domain watermarking and Frequency domain watermarking.

Keywords—*watermarking*; *Arabic text*; style; *authority security*; *watermarking technique*

I.   INTRODUCTION

Digital multimedia technologies are rapidly upward, and throw this growing it bringing significant attraction to the security discipline [4]. There are three security mechanisms used widely in literature; these mechanisms are cryptography, steganography and watermarking. The last two mechanisms are a little bit hard to apply since they are interrelated and interconnected with other concepts and can mix with different disciplines [7].

Watermarking is the process of adding an authority signature inside variety of media such as audio, video, image and text. Watermarking first inserts a watermark object in the embedding phase, next the detection of this object occurs in the extraction phase. Figure 1 shows watermarking phases across variety of media [17].
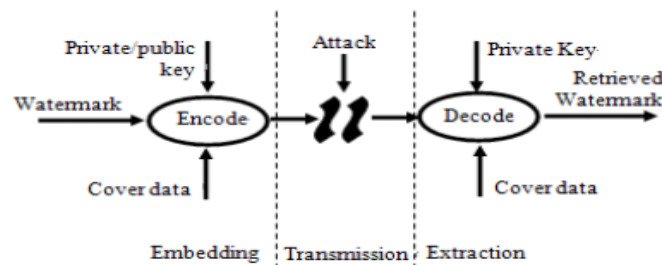
Figure 1: Watermarking phases

Several watermarking categories are realized in regard of digital media watermarking including image watermarking, video watermarking, audio watermarking, text watermarking, and graphic watermarking [2].

Multimedia copyright protection by watermarking techniques is widely deployed to protect copyrights of specific media and to identify any illegal copy or use. Watermarking category including image watermarking inserts data "bits" into images' pixels to protect authors' copyrights and intellectual properties. Video watermarking and audio watermarking add the identify signal to audio and video frames, whereas, text watermarking adds data inside character shape contained in the image to prove authority [4].

Generally, watermarking goes through two phases, insertion (encoding) and extraction (decoding), that comprise of three main components [17]:

- The watermark (data object)
- The embedding algorithm that inserts the watermark into the object
- The decoder that verifies, detects, and extracts the watermark.

In this research, we provide an explanation of different types and methods used in watermarking. This research focuses on the review of watermarking in digital images containing Arabic texts by examining detailed surveys on watermarking media tools. This section will provide a review analysis of several researches in literature containing current used watermarking and cluster them into sub categories according to methods and domains. Thus, this section will review some proposed methods by prior studies for watermarking in text image.

II. ARABIC TEXT IMAGE WATERMARKING

Securing digital content becomes a challenge task specially those published and transmitted over internet. Storing and transferring digital media are major challenges in data security and protection. Securing text on the internet becomes the dominant requirements over our communications, so it needs to be securely stored and transferred [3]. The main use of image watermarking is to protect intellectual property, copyright, original copy, purchasing identity, digital signature, and author information from illegal use [17].

Text image watermarking approaches have presented a set of adopted techniques, including character coding, line shift, and word shift. Text image watermark uses grayscale image for digital watermarking by utilizing most significant bits in the original image pixels such as LSB. Grayscale image and binary image are used as watermarking media to embed it with watermarked data [1].

Previous work on digital text watermarking has been categorized into different approaches: image-based approach, syntactic approach, and semantic approach. Several digital text watermarking techniques have been proposed in the past, including acronym based, synonym based, noun-verb based, word-sentence based, presupposition-based, and text watermarking using text image. Some examples of text watermarking using image-based approach have been proposed to embed data into text images by inserting it between words spaces and lines.

Digital watermarking methods dedicated to text images are very limited, compared to many previous proposed methods in digital watermarking for texts, images, audios, and videos. The main reason that the binary representation of images texts has rich white spaces and any change of the grey areas can be observed by human vision [13]. The type of text image watermarking is concerned with embedding data into images to protect authors' copyrights. Image watermarking can be extended to video watermarking that requires strong compression techniques; this technique can be valuable to manage applications containing videos. The hot issues of the music property on the internet can be resolved by the audio watermarking that applies great standards [2].

Arabic texts are extensively used, so they need to appropriate methods to preserve privacy and enforce security. Most text watermarking methods are easy to implemented with the highest rate of robustness and capacity. Certainly, in Arabic digital text appearance such as Holly Quran, the demonstration is so important in today digital texts. Additionally, the Unicode methods presenting watermarking with high imperceptibility are still only limited to digital texts [5].

Arabic text difficulties regarding recognition and segmentation features are:

- The variety of shapes of Arabic characters, depending on the character position within a word. An Arabic character can appear stand alone, at the beginning of the word, in the middle, or at the end of the word.

- The way of writing is completely different from one writer to other according to various conditions, using different Arabic characters.

- Many characters have unique shapes, while others have very similar shapes making them difficult to recognize whether they represented in external objects or non-character.

- The contextual information effects on the handwritten Arabic characters, depending on the classification of characters and their position in a word or sentence.

The requirements of watermarking techniques are different based on the data types and the used application of watermarking. Mainly, they should include "robustness", "security", "Imperceptibility" and "capacity". The robustness requirement denotes to have the ability of avoiding all kinds of modification and distortion that can effect hatefully such activity of data files or discard its quality. Additionally, it applies the watermark to discover any data theft. The security feature can be got by applying "cryptographic" key to keep data hidden from illegal discovery. However, the capacity is much hard to be attained since it tries to Unicode enough amount of information as bits in a reasonable amount of time using hiding techniques. Imperceptibility requirement should not destroy the original text after watermarking it under hidden cover text, meaning that the original text can be retrieved in a short amount of time and with small changes [5].

III. ARABIC TEXT IMAGES WATERMARKING

Digital media protection from unauthorized access or use has become much required necessity with the rapid increasing of technologies and applications on the internet. For this purpose, Arabic text watermarking can be used to strengthen the security of Arabic text files that consist of different Unicode of shapes and types of letters. From literature, there are different approaches of Arabic text watermarking have been discussed and compared in terms of robustness, Imperceptibility, capacity, and their advantages and disadvantages [5].

Variety criteria are measured when classifying watermarking techniques such as robustness, which assurances that watermark can care the popular operations of image processing. According to ability to watermark to resist attack, digital watermarking types are Fragile watermarking and Semi-fragile watermarking [11]. However, the strength of watermarking technique can be further classified into other groups such as "fragile, semi-fragile, and robust" [2].

In this manner, we investigate some popular watermarking types of Arabic text images including Kashida-based watermarking, spatial domain watermarking, frequency domain watermarking and many others. We will discuss and evaluate each individual type or technique during the following sections in order to state our conclusion.

A. Kashida-based watermarking

Kashida is an extending character that can be utilized in all characters that can be extended to be appropriate to insert bits inside words.

The authors of [18] have purposed a method to review and evaluate the existing watermarking applications to identify their properties according to Arabic text documents and other Semitic languages. The paper has evaluated different approaches of embedding digital watermark, but it mainly explored Kashida-based watermarking, that cover digital texts such as copyright protection, content authenticity, and tamper detection. Moreover, it investigated the impact of using two watermarking parameters: the number of embedded bits in each group and the group size or word group. The proposed method examined different applications of cover text to address the effects of these two parameters on watermarking capacity and imperceptibility properties. The findings of the paper have clarified that Arabic texts are likely to be

considered the optimal to accomplish an adequate level of imperceptibility and to achieve the required capacity of the application by counting these two variant parameters in Arabic text watermarking [18].

In the work of [3], a proposed technique of Kashida watermarking was introduced. Kashida omits zero bits and place a bit for ones, where the watermarking key is predefined. The invisible technique of this work utilized Kashida to fully embed the entire key by inserting Kashidas before a specified list of characters in the text. The proposed method has developed two variations of characters' properties based on their frequency recurrence. The main advantage of using frequency recurrence in this method was the dynamic enabling of the target application robustness and imperceptibility. The main goal of the proposed method was to improve the perceptual similarity and robustness in order to protect the documents authenticity. The new method proposed in this work purposed to enhance authentication, verification, and document copyright protection. At the same time, it intended to reduce security attacks vulnerabilities of Arabic text watermarking.

The proposed method in [12] has utilized all characters that can be extended to be appropriate for bits illustration of words. Kashida based method uses the extension of Arabic letters with dots to hide 1 bit and uses Arabic letters without dots to hide 0 bit, added before or after the letter without affecting the original content. The method included traditional cryptography to choose the secret key in order to insert bits of Arabic e-texts using "Kashida" character. The results of this paper proved that the proposed method when it compared with other previous methods. Additionally, the proposed method can be applied for authentication to protect other watermarking methods in order to notice any adjustment alter the file.

B. *Digital watermarking techniques*

Recently, there are many presented digital watermarking techniques; these techniques are based on Discrete Fourier Transforms (DFT), Discrete Wavelets transform (DWT), and, Discrete Cosine Transform (DCT). DCT and DWT are mostly used by the domain transformation watermarking techniques [20]. Digital watermarking techniques are commonly applied in the transform domain larger than spatial domain.
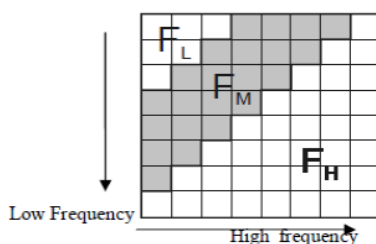
DWT technique works by dividing the image into four areas based on coefficient value of non-overlapping area as shown in figure 2.

(a) Host Image   b) DWT Transform
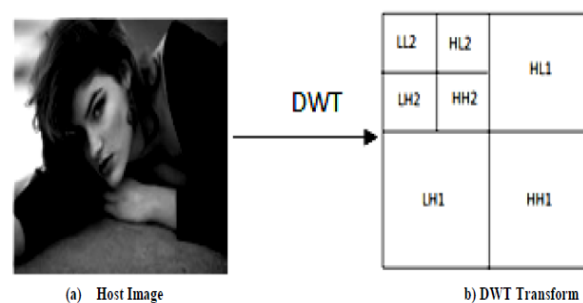
Figure 2: DWT technique

In contrast, DCT divides the image into three pieces: low, middle and height frequency as show in figure

3.

Figure 3: DCT technique

Another discrete transform called singular Value Decomposition (SVD) is a powerful numeric analysis technique that is mostly used in several watermarking techniques. The use of SVD is frequent in many useful statistical and signal processing as one of mathematical techniques that analyse complex matrices using linear algebra. Moreover, it can be seen as a data reduction method due to the transformations of different correlations between variables inside a matrix [20].

The proposed watermarking algorithm in [20] was designed to utilize Singular Value Decomposition (SVD) in digital watermarking techniques. It consists of two procedures; the first is for embedding and the second for extraction. In general, the robustness of digital watermarking techniques is highly obtained in images watermarking especially in copyright protection [20].

According to the domain of watermark insertion, digital watermarking types are "Spatial domain" watermarking techniques and "Transform frequency domain" technologies [11].

C. Spatial domain watermarking techniques

There were many proposed algorithms of image watermarking to protect copyright. The spatial domain watermarking directly embed a watermark into the digital images by modifying pixels. However, recently, the main focus of researches is on spectrum domain watermarking, transforming the digital image to spectrum domain by modifying the spectrum of coefficients in order to embed a watermark [4].

Spatial watermarking applies the algorithm on color bands by separating them visibly which is hard to be detected regularly. After the colors separated, the mark appears immediately. The main use of spatial watermarking is in commercial journals, in order to embed digital images with a specific marking data [10]. Spatial domain watermarking alters images' pixels by changing their bits' order, but it this technique is not reliable for lossy compression and filtering. Frequency domain techniques use invisible image watermarking; these techniques have frequency factor which might neglected by compression [2].

The three invisible text-watermarking techniques proposed in [18] have presented newest watermarking encoding methods to involve them in Arabic text. There were some considered fixed values in the paper: using 48 bits watermark key, inserting the watermark at least once, testing large size documents, dividing based on a set of words, considering the number of words to indicate the size, and embedding texts according to circular or spatial methods [18]. Typically, high "imperceptibility" indicates of low "capacity", but according to the results of this paper, the number of words in each group (the number of embedded bits) has produced high "capacity" as well as high "imperceptibility". Certain level of embedded bits of all

methods investigated in the paper made them proper to be used in a wide range of copyright and other applications [18].

In terms of spatial domain, a new way for medical images watermarking has been proposed in the study. This type of watermarking has been employed for medical images to swap between pixel values of image's gray level watermark. The new proposed image watermarking can hide data based on the image size, while the difference between watermarked and the original image is trivial and cannot be noticed. Moreover, this method can transfer information content by combining different watermarked documents and images. The advantage of this way is the inability to access watermarked documents and their decryption key, so it is difficult to modify the original image content. The watermarking technique used for patients' images efficiently utilizes memory, cost, and time required for data transmission. Therefore, by encryption of watermarked information, this way protects the privacy of patients. At present, the focus is moving to work on visible watermarks to enhance image watermarking and covering.

D. Frequency domain watermarking techniques

Watermarking techniques provided in the frequency domain also called Spread spectrum are more beneficial considering invisible embedded watermark [2]. The basic principle in frequency domain is the modification of DCT coefficient value to embed watermarking. [8]. Frequency domain (transform domain) applies on frequencies values such as Fast Fourier (FFT) that modifies the chosen frequencies by altering their original values. When the watermarking is hidden and destroyed into the host, then it can be called fragile watermarking [10]. Spread spectrum communication technique is commonly used by most frequency domain algorithms. They use larger bandwidth for total power signal transmission [15].

In the work of [19], in each level of decomposition in frequency domain, the image is divided into four segments; Horizontal Level (HL), Vertical Level (VL), Diagonal (HH), and Approximation (LL). The input signal of DWT decomposition should be multiplied by 2n. Where n is the number of current level. Watermark is embedded into these four regions, providing sufficient information, less computational time, and increase robustness. DCT transforms the signals from spatial domain to frequency domain, according to its high robustness compared to spatial domain techniques. However, we need to 2D version of DCT to analyze 2D dimensional of signals [19].

E. Visible and invisible watermarks

Watermarking process can be done visibly or invisibly. According to the visibility, digital watermarking types are visible watermark and invisible watermark [11]. The main difference between visible and invisible watermark refers to the ability of user to perceptually notice the embedded watermark.

The method of [12], as a type of visible watermarking, hides a secure data of Arabic digital text in web applications. This work has explored several planned text watermarking techniques that cannot be generalized to Arabic language but they are good only for English. The main goal was the special cases of Arabic language including distinctive characteristics and features of Arabic e-text watermarking. These characteristics have been taken in consideration in using "Kashida" Character comprehensive to enhance Arabic e-text watermarking methods.

F. Blind and non-blind watermark

According to watermark detection and extraction Digital watermarking types are Blind watermarking techniques that require the original image to extract watermark and Non-blind watermarking technique that does not require the original image [11].

According to the data required to extract, digital watermarking can be partitioned into two kind of watermarking: private watermarking and blind watermarking. Private or informed watermarking requires the original un-watermarked cover to extract watermarking. While blind or public watermarking does not require the original un-watermarked cover to extract watermarking [10]. The best examples of the digital watermark applications (visible watermark) are enhancing copyright protection and indicating the ownership of original copies. While the detecting misappropriated images is an application of invisible digital watermark. Lastly, invisible-fragile watermarking can be used to trust worth the origin of images captured by digital cameras by embedding capturing time [17].

One of blind text watermarking methods has been presented in [9] using the common characteristics of Persian language letters. The type of blind text watermarking used in this method exploits the majority of Farsi words containing sloping letters by changing their slope to hide information into text (as shown in figure). This method can be applied on Arabic and Urdu texts due to the noticed similarities over them. Compared with line shifting and word shifting, this method has been proved by experiments showing the highest capacity and imperceptibility obtained. Moreover, the ability to apply in several applications also can be obtained by using this method to authenticate users, protect copyright etc.
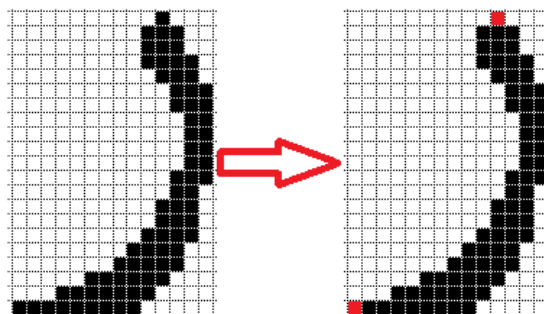
Figure 4: data hiding in the sloping of letters

IV. ANALYSIS AND DISCUSSION

The most effective solution to achieve artificial intelligence and protect information is the use of digital image watermarking. The methods of watermark have large problems if they destroy the original watermarked file even they are simple to implement. Digital image watermarking is also robust against several types of attacks according to the strong resistant and the quality of digital watermarking [20].

The vulnerabilities in literature of Kashida approaches including security attacks have been considered the highest rates of encoding and embedding of watermarking applications. The results also showed that this method was fast, simple, and can be manually implemented since it does not need to big working out it increases the difficult of hacking tasks. Moreover, it can secretly hide digital texts data application with more security, increasing the protection and demonstrating of copyrights, ownership and knowledgeable properties. Whenever the attacker wants to remove the inserted "Kashida" from the file after watermarking

it, it will be much solider to return the generated random values of secret key of the original "Kashidas" to repaire the text. Accordingly, the attacker will not be able to fraud of ownership to change the normal ownership watermark [12].

On the other hand, Spatial domain is simple, no need to frequency transform, and has low computing complexity to change the intensity of the gray image pixels. Spatial domain cannot be easily attacked by image processing and noise, so it makes a tradeoff between robustness and invisibility. Popular spatial domain techniques such as Least Significant Bit (LSB) and Texture Block Coding (TBC) have a significant drawback which is the limitless of its robustness. Frequency domain has complicated and sophisticated approaches [15]. Spatial domain applications can be done easily with minimal computational power requirements. Spatial domain methods work on direct modification of pixel values by modifying colors and brightness values based on simple, efficient, and computational modifications [6]. The approaches operating in spatial domain directly work on the image pixels, while other approaches operating in frequency domain perform transformations on the image. The watermarking algorithms operating in frequency domain overcome the robustness problems existed in the watermarking algorithms that represent low resistance, and limited robustness against attacks. On the other hand, the algorithms of spatial domain are more suitable for real-time applications, requiring less computation and complexity [14]. In spatial domain, the most used approach is to replace the least significant bits of the original image with watermarks bits. However, this approach cannot hide large number of bits in an image, and thus it can alter the quality of an image caused by the lack of pixel dependency in most efficient watermarking techniques. Frequency domain techniques have dealt this issue, depending on the Human Visual System (HVS) characteristics that can be captured better by frequency domain. The signal is divided into two sets; high frequency and low frequency in the case of one-dimensional signal. High frequency set remains unchanged, but low frequency set so therefore divided into other subsets until the desired level [16].

In DWT, the watermark embedded is not robust against JPEG attacks if it embedded into high frequency region. While if it embedded into low frequency regions, it will destroy the entire image [8]. Frequency domain should be applied to lower frequencies or in the most important frequencies that carry useful information in order to avoid frequency loss during scaling or compression. Signal transmission can be recovered even though after losing several bands. Spread spectrum communications are used in digital spread spectrum watermarking schemes to embed watermarks in the whole host image [15]. The most used techniques in transform domain is DCT, while DWT is also a popular spatial based technique. DCT can be applied in international standards of compression techniques such as MPEG and JPEG. DCT should balance between the precision and the speed of operation of feature vector extraction [21]. The multiple advantages of SVD make it the mostly used by digital watermarking techniques. For instance, the non-fixed size of SVD transmission memory can be represented in a square or a rectangular which decrease the size of required memory and increase the accuracy. SVD has the algebraic properties that minimize the affection of the singular values of digital images in general image watermarking [20].

Lastly, we add last point regarding our comparison between spatial and frequency domain. Frequency domain gains more attention due its high robustness and common usability in image compression. In frequency domain, the image is partitioned into 8x8 blocks, and they are selected based on Gaussian network classifier decision. After that, the frequency coefficient values are altered by DCT [15].

V. CONCLUSION AND FUTURE WORK

Some approaches involve text watermarking algorithms that rely on the language so their applicability is limited. Thus, some documents with different types and sizes have sensitive nature of text image in a way cannot be transformed due to a robust protection. However, the best approach should be flexible to the structure of text content such as the spelling, grammar rules, and acronyms of sentence structure that include letters, spaces, shapes, and white spaces. Therefore, good approaches exploit these text images components to insert and embed data into objects without affecting the size and quality of the text image. In conclusion, watermarking techniques presented by this research are not absolute; they suffer from some issues need to resolve. In future, we intend to develop one of the investigated watermarking techniques in order to enhance their performance in the regard of data protection from illegal use. For example, we can optimize Arabic letters contained in text images to insert watermark that can protect the authority of the producers or owners.

Acknowledgment

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Poverty in the Kingdom of Saudi Arabia and its statistics

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VI. ABSTRACT

The report provides the statistical information about the poverty in the Kingdom of Saudi Arabia from December 2007 to October 2008. It is the largest survey in the country which provides the statistics information of various fields such as money and banking statistics, investment fund, public finance, foreign trade, national account, share market, government specialized credit institutions, prices and cost of living index, balance of payment and international investment position and oil statistics. The appropriate data analysis tool is chosen and it is named as SPSS. The balance sheets of the Saudi Arabian Monetary Agency (SAMA) provided the statement of revenues and expenses. These records are audited. The given data are examined and conclusion can be driven from obtained outputs from the graphs, bar charts, pie charts and histograms.

Keywords: Poverty, Kingdom of Saudi Arabia, public finance.

1. INTRODUCTION

The main aim of this project work is to provide a statistical information regarding the poverty in the Kingdom of Saudi Arabia. The analysis process will be taken from December 2007 to October 2008. As it is the largest survey in the country, the data will be analyzed from various fields. The research information provides the statistics information from the fields of money and banking statistics, investment fund, public finance, foreign trade, national account, share market, government specialized credit institutions, prices and cost of living index, balance of payment and international investment position and oil statistics. An appropriate data analysis tool will be chosen for this project. The tool name is SPSS. It represents an efficient statistical software. It will provide a solution for the problems of research and business. This tool will be applied for various purposes such as hypothesis analysis, testing, and reporting and ad-hoc analysis. To manipulate and analyze the high level complex data, SPSS is the most suitable statistical software package. It is the very powerful statistical package because, using this SPSS tool, several statistical procedures can be easily performed such as IQRs, means, averages, medians, standard deviations and correlations. As the SPSS is a data collection tool, the data entry screen is similar to other software such as spreadsheet. The tasks of the statistical analysis and various data management operations can be performed by using the SPSS efficiently (SPSS survival manual: a step by step guide to data analysis using IBM SPSS, 2013). The data management process consists of following operations.

- Selecting the cases
- Reshaping the file
- Derived data creation

The base package consists of descriptive statistics, prediction of numerical outcomes, bivariate statistics and prediction of identifying groups. It can be operated as a cross-disciplinary software package, because it has the advantage of add on modules and ease of use.

1.1 Objective

- The main objective is to analyze the given data about Poverty in the Kingdom of Saudi Arabia and its statistics using SPSS and to understand the working of SPSS software.
- According to the data types, appropriate statistical tests can be applied. Throughout the statistical analysis, the output can be interpreted.
- To estimate the given data, appropriate variables, labels and tables will be segregated.
- The SAMA (Saudi Arabian Monetary Agency) will provide the expenses and revenue statement in the balance sheets. These records will be audited.

- The second part will be the Literature Review and in this section the research methodology and software used in previous work will be provided.

- In third part, there are two main parts such as descriptive data analysis and test analysis.

- The given data will be examined and conclusion can be driven from the obtained outputs from the graphs, bar charts, pie charts and histograms.

2. LITERATURE REVIEW

In 2016, the poverty eradication campaign in Saudi Arabia had analyzed. The rules and laws are observed according to the gender disparities. In the building and development process, the each and every community has been included. All individual citizens and society could work with the government should work together to overcome the problem of poverty eradication. These problems could be analyzed by using various data analysis tools. So that the department of economy could increase the social work by effective planning, economic incentives, building community and thinking with more flexible. Saudi government has conducted many poverty alleviation programs for restructuring the problems that are previously happened. In this paper, the new strategy was discussed to prevent the people from death rates and sufferings (Poverty Eradication campaign in Saudi Arabia, 2016).

In 2015, the authors Ahmad AI-Asfour and Sami A.Khan presented a paper about the workforce localization, in Saudi Arabia. In this paper, the issues and challenges are observed. The localization of Human resources is called as Saudization. It was started in the private and public sectors of the Saudi. The workforce efficiency and the skill development was analyzed. To eliminate the poverty in Saudi Arabia, an efficient framework was designed. So that the number of employees increased. Thus throughout this paper, the present scenario of Saudization against the poverty was discussed. The long term problem of Saudi Arabia is increased labor cost and decreased productivity (Poverty Eradication campaign in Saudi Arabia, 2016).

In 2012, the author Shakir Ahmed Alsaleh presented a paper on Gender Inequality in Saudi Arabia. In this paper, the research and discussions based on the reliable collective information that are gathered from the statistics. Various research methodologies were applied for data collection and data analysis process. The research mainly focused on the status of the gender inequality in health, employment, and poverty and education system in Saudi Arabia. The survey said that the responsibility of the government is that providing solution against the poverty and educating women. Because it is a key social function. The statistical data was analyzed by using various data analysis tools (Al-Asfour and Khan, 2013).

3. SAMPLING PROTOCOL

3.1 Research Methodology

The research methodology is 'statics'. For the complex analysis process, this methodology provides the approximate solution. Because it is the most useful tool rather than others. Generally, statistics can be a practice of using the empirical data in the quantitative form and it is the branch of applied mathematics. This methodology consists of three important steps which are given below (Utwente.nl, 2017).

- Data collection
- Data Summarization
- Analyzing of data

The analysis process can be done by the 'Quantitative Observation' (Zhang, Fang and Hu, 2014). The data collection is done by using the systematic observation. The given data are analyzed with some questionaries' of "How" and "Why". When comparting to other methodologies, it is a very quiet and simple way for data collection. The given data are experimented by three different techniques such as laboratory experiments, natural experiments and field experiments.

3.1.1 Data Collection

Data Collection is the process of collecting the statistical data that has to be used for data analysis. There are four methods of data collection

- Census
- Sample Survey
- Experiment
- Observational Study

Census

Census is a type of data collection that involves the study which gets data from everyone. It's a cost and time consuming process, so probably it is not practical in most case. Census data can be either accurate or approximate as it's a long term process.

Sample Survey

Sample Survey is like a case that gets data from the particular set of a field not in all sets, to evaluate the attributes used for the survey.

Experiment

An experiment is said to be a study which has some of the limitations. In this case, Researcher tries to recognize the major factor and future impact relationship. Experimental study is always done in practical in most of the studies. It also gives accurate results as it is done practically.

Observational study

Observational study is similar to Experimental study in which Researcher recognizes the factor and impact but the researcher cannot control or give limits that how subjects are assigned and which should be used to rectify it.

3.1.2 Variables

- Identification of relationship between variables
- Comparison of variables
- Identification of difference between variables

Identification of relationship between variables

Variables are the parameters which are used to do data analysis. First and foremost thing of data analysis is to find the relation between two variables that are being used for data analysis. Related variables are known as dependent variables and variables that are not related are called as independent variables (Leatham, 2012).

Comparison of variables

Comparison of variables is done to produce the feasible research report for the statistical data. Comparison results shows whether the variables are dependent or independent.

Identification of difference between variables

If any difference exists between the variables then the variables are said to be independent. Independent variables do not associate with each other.

Dependent Variables

Dependent Variables are the variables which has relationship with one another. Dependent variables are associated to one another (Deshmukh, 2015).

In this report, in the Share Market statistics analysis two variables namely Number of shares traded and value of shares traded are used. These are called dependent variables because when the value of share gets increased, no of shares will get increased. Shareholders used to buy the shares if its values get high.

Independent Variables

Independent Variables are the variables which has no relation between one another. Independent variables have no association.

In this report, in the cost of living index Clothing & footwear and Food & Non-alcoholic beverages have no relation. As the cost of one increase, the cost of other will not get increased. So these are called independent variables (Roscoe, Schlichenmeyer and Dube, 2015).

3.1.3 Statistical Methods

Descriptive statistics provides basic geography of the data that is being collected from an experimental case study in various ways (Gillespie, 2015).

Quantitative Data can be summarized in many ways. Some of the ways are as follows

- Tables
- Graphical Representation

Tables

Tables involve frequency distributions, cross tabulations, stem and leaf plots. Frequency distribution is the commonly used method which provides relative frequency and relative frequency distribution tables. A frequency distribution is the way to summarize the data in the form of tables consists of some ranges of the data, and the frequency of that data falls in that particular specified range.

Graphical Representation

Graphical Representation is the representation of data in the form of histogram, pie-charts, bar-charts and dot plot. Histogram is the chart that is vertical where there is two things one parameter in

horizontal and another one in vertical. Bar charts has vertical bars that represents the flow of data from x-axis to y-axis for the specified parameters. Pie-charts are circular in shape, which uses various colors or shades to represent the data.

3.2 Software Requirement

The SSPS represents the Statistical Package for the Social Science (Bc.edu, 2017). It is a highly comprehensive system which is used to analyze the data. The complex data analysis can be performed easily by using the SSPS. Because it has an efficient data analysis and manipulation along with the simple instructions. Both non-interactive and interactive data can be easily manipulated using SSPS package. Any type of data can be read though files and the related graphs, plots and charts can be generated according to the descriptive statistics, distribution and trends and complex statistical analysis. The major advantages over other data analysis tool are given below.

- High score of statistical procedures
- High score of both statistical and mathematical functions
- More flexibility
- High level data handling capability

It can support any type of data format such as alphanumeric, numeric, date, time, dollar and binary.

4. RESULTS AND FINDINGS

4.1 Descriptive Data Analysis & Test Analysis

4.1.1 Money Banking Statistics and Insurance

Data about Money banking statistics and Insurance details of Saudi Arabia has been analysed under the basis of various things like monitory base, money supply, circulation of currency and circulation of coins, private sector, public sector, Income velocity, money multiplier, and currency of banks, ATM statistics, syndicated loans, consumer and credit card loans.

Statistics

		Endofperiod	Currency	CashInVault	Depositofbanks	Deposits with SAMA	Reserve	Total
N	Valid	21	21	21	21	21	21	21
	Missing	5	5	5	5	5	5	5

Mean	2004.00	74660.33	9418.89	31887.52	5654.67	121621.41	37542.19
Std. Deviation	6.205	35012.235	7568.718	26963.058	2644.424	70858.449	28525.646
Range	20	110739	24981	84278	10267	225611	90270
Minimum	1994	43038	2134	8280	1760	57313	11762
Maximum	2014	153777	27115	92558	12027	282924	102032

Table 1 Monetory Base
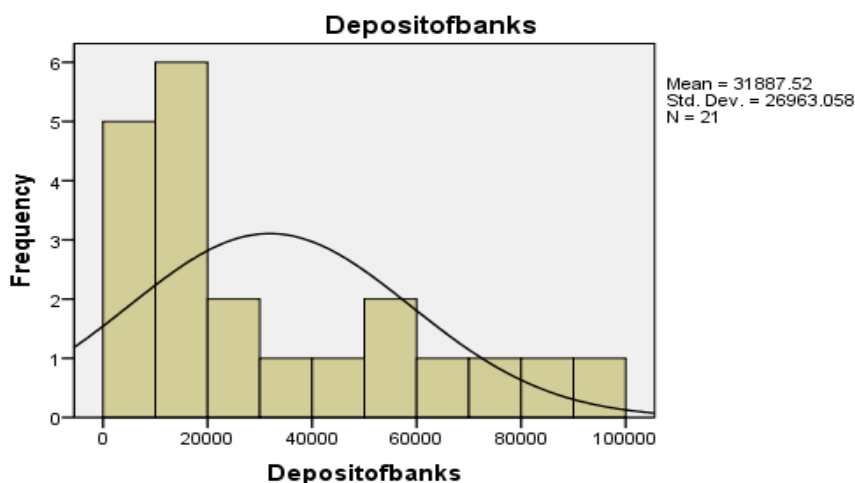
Figure 5 Monetory Base

Result

As comparing the results in the Monetory Base, deposit of banks, deposits with SAMA, currency outside banks has been tested and graphic format is shown in the *Figure 1*. When deposit of banks is tested, it is clear that 20000 had been deposited in high rate. So Monetory Base is good in economy.
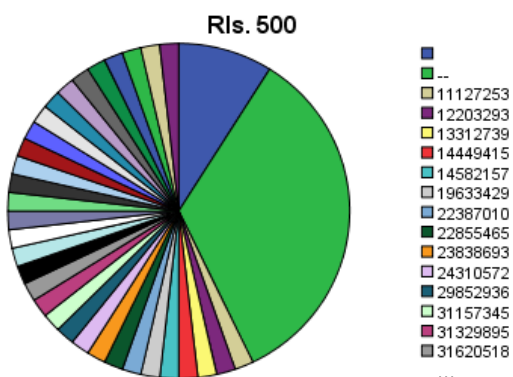
Figure 6 circulation of notes 500Rls
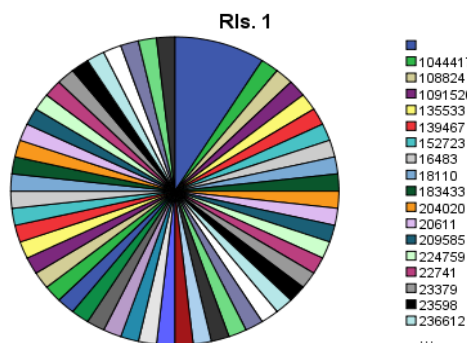
Figure 7 circulation of notes 1Rls

Result

When comparing circulation of notes from 1984-2014 the above results has been produced. So compared to 1984 usage & 2014 usage No of 500Rls are increased rather than No of 1Rls. It shows that the country has improved economically.
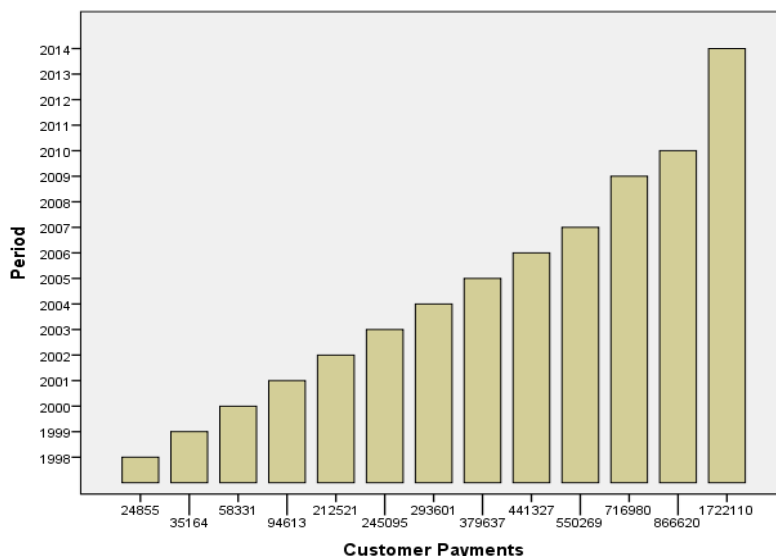
Figure 8 Value of Transactions through Saudi Arabia

On analyzing the results of value of transactions through the country as compared from 1998-2014,

in the 16 years "Customer Payment Values" has been increased drastically. This improvement shows that poverty rate is less in the country.

Customer Payments values are increased from 24,855Rls to 17, 22,110 Rls. This shows the growth in Economic Activity.

4.1.2   Share Market Analysis

Share Market Analysis of the country is based on the values and Data of the share market

indicators, no of shares traded by the sectors, value of shares traded by the sector, market value of shares, total no of transactions by the sectors, Transactions and purchase of sold shares, transaction through Internet are analysed and testing results are in the graphic format as below.
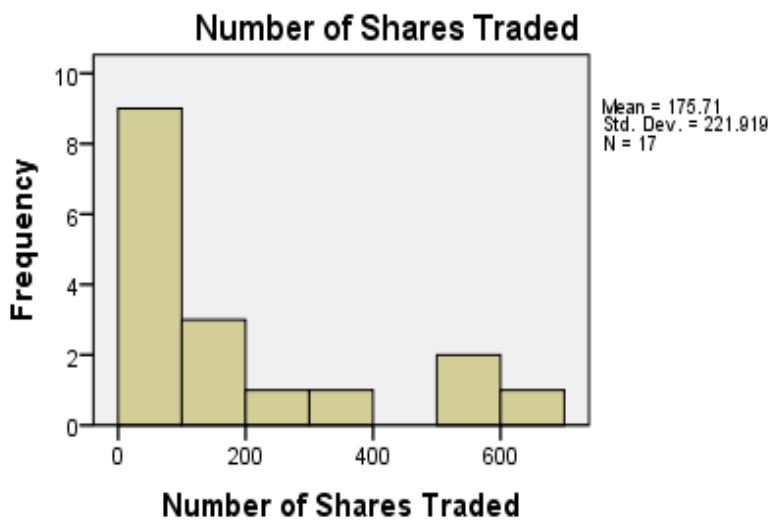
Figure 9 ShareMarketIndicators-No of shares traded
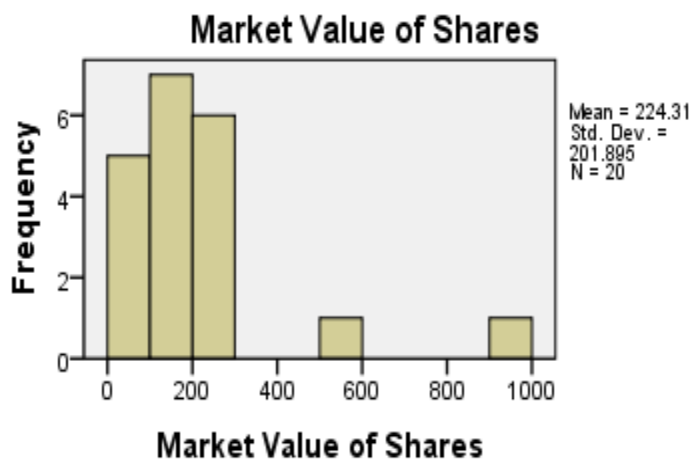
Figure 10 ShareMarketIndicators-MarketValue of Shares
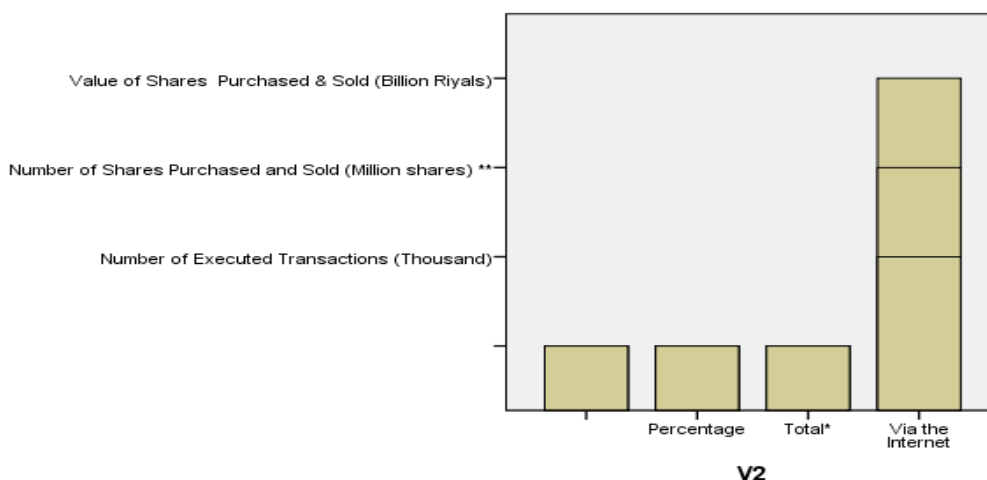
Figure 11 ShareMarketIndicators-shares purchased and sold

V2 represents the Total No of shares purchased and shared through Internet

Number of executed transactions in the share market, No of Shares purchased, Value of share purchased and sold are the compared variables. No of executions is lesser than the no of shares purchased, value of share purchased and sold. Mean value of the no of shares traded is lesser than the value of the shares traded. So No of shares bought may be low but the value of the shares being bought has the higher value. It indicates that even less number of shares bought but the amount that has been spent is high. So poverty rate is not much as then compared to Share Market Analysis with Money and Bank Analysis.

4.1.3   Investment Fund Statistics

Investment fund statistics data has been analysed from 1991-2014. Domestic and foreign investments are being analysed. No of operating funds had been increased from 52-252. Domestic and foreign funds have drastically risen. It has been shown graphically in the below figure.
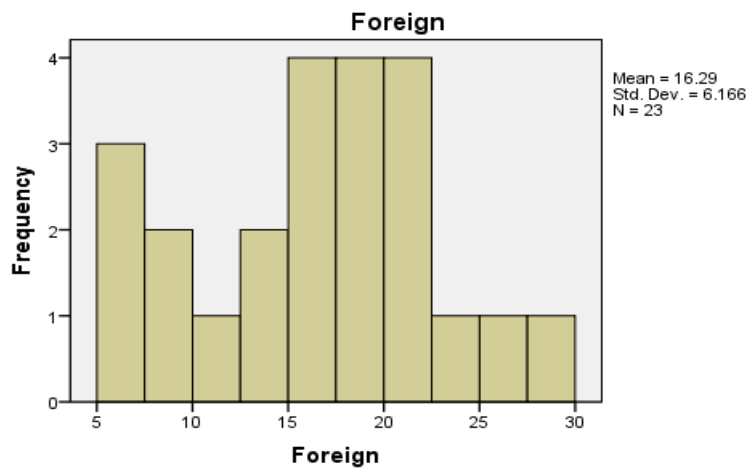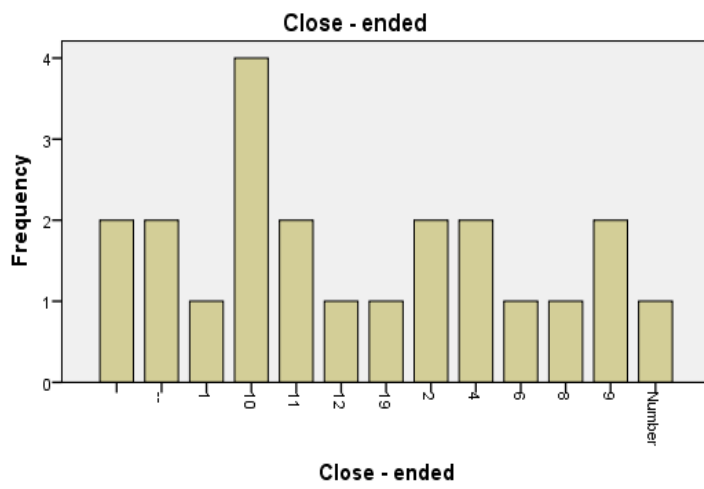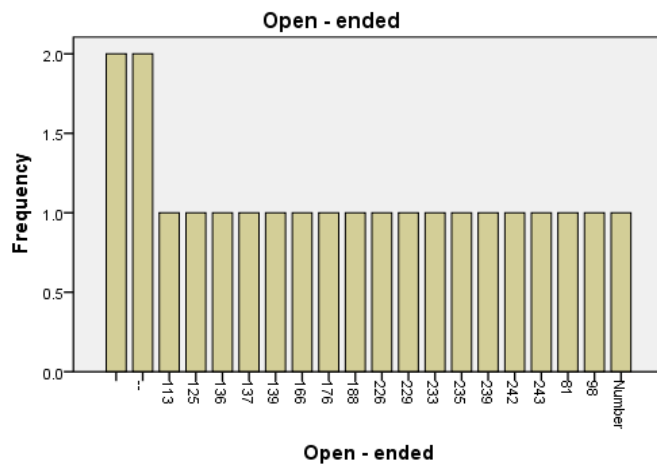
Figure 12 Foreign Investment
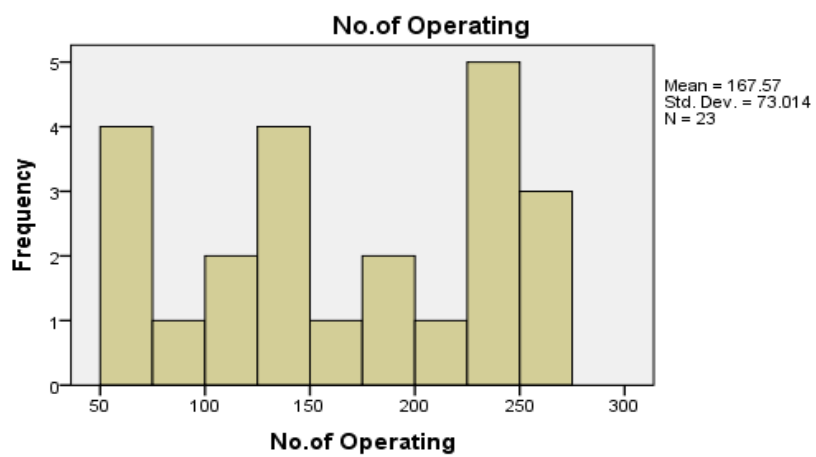
Figure 13 No of operating investment
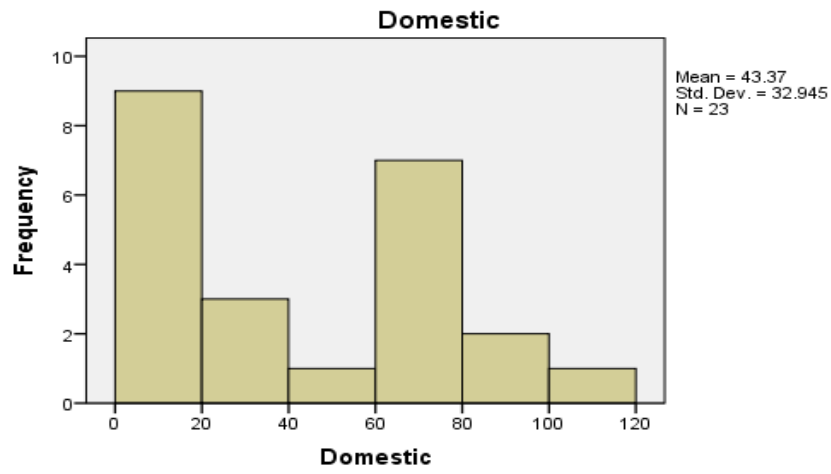
Figure 14 Domestic Funds

Open ended and closed ended Investment funds has also been analysed and test results are graphically presented below. Open Ended Assets and Closed Ended Assets are used as parameters. Data from 1996 to 2014 has been tested and test results are produced in Bar Chart below.

4.1.4   *Government Specialized Credit Institutions*

Government Specialized Credit Institutions has the data about consolidated balance sheets of Government Specialized Credits in the form of assets and liabilities, Government specialized credit disbursements, Loan repayments, Net lending.

Consolidated Balance Sheets of Government specialized credits in the form of Assets and liabilities has been tested and the testing results are graphical represented in the below figure. Credit disbursements, Loan Repayments, Net Lending are some of the main parameters of Government Specialized Credit Institutions.
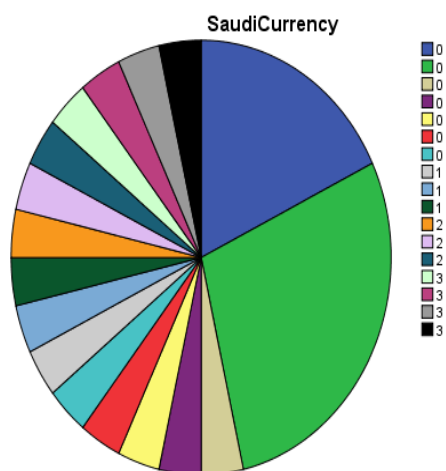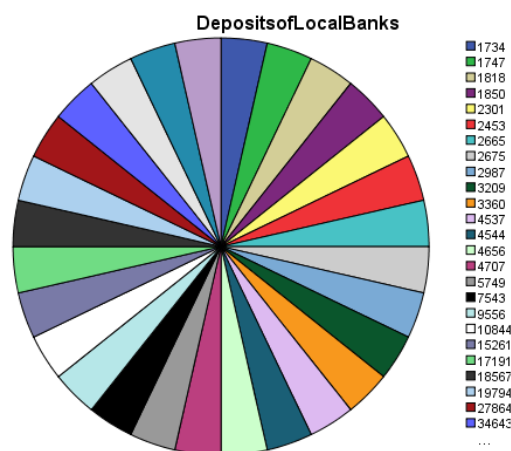

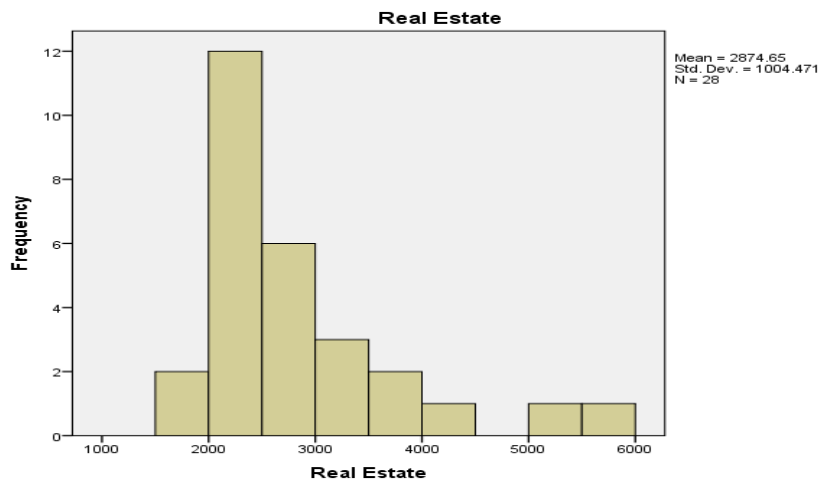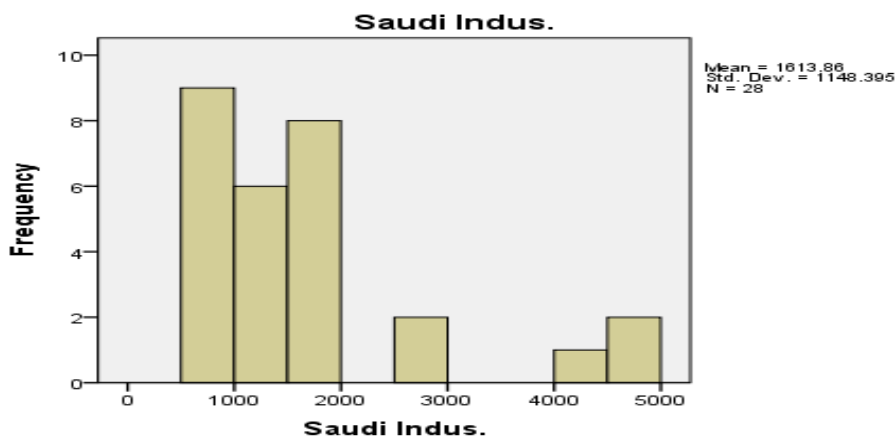
Figure 15 Saudi Currency

Figure 16 Deposits of Local Bank

Figure 17 Real Estate

Figure 18 Saudi Indus

In the Government Specialized Credit Institute Loan Repayments, two parameters namely Saudi

Indus and Real Estate Data has been tested to evaluate the economic level of the country. As per the result

shown in figure 13 and 14, the mean value of real estate is ahead than the Real Estate.

4.1.5   *Public Finance Statistics*

Public Finance Statistics has been tested and graphed in the basis of State Annual Budget

Projection, Annual Government revenues and Expenditures, Budget Appropriations for public Institutions

and Public DEBT. Following figures tells about the results of the test analysis.
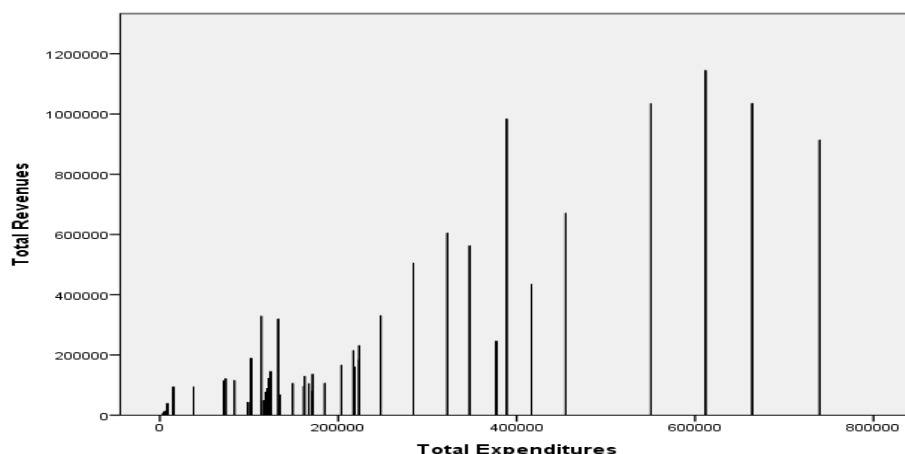
Figure 19 Public Revenue and expenditure statistics

Total revenue of the country and total Expenditure of the country has been cross checked and the results are being presented in the form of Graph. Total revenue of the country is lesser than the total Expenditure so it clearly shows that the country has been using expenditures for the welfare of the needy. So country has to be developed much more in Public Statistics.
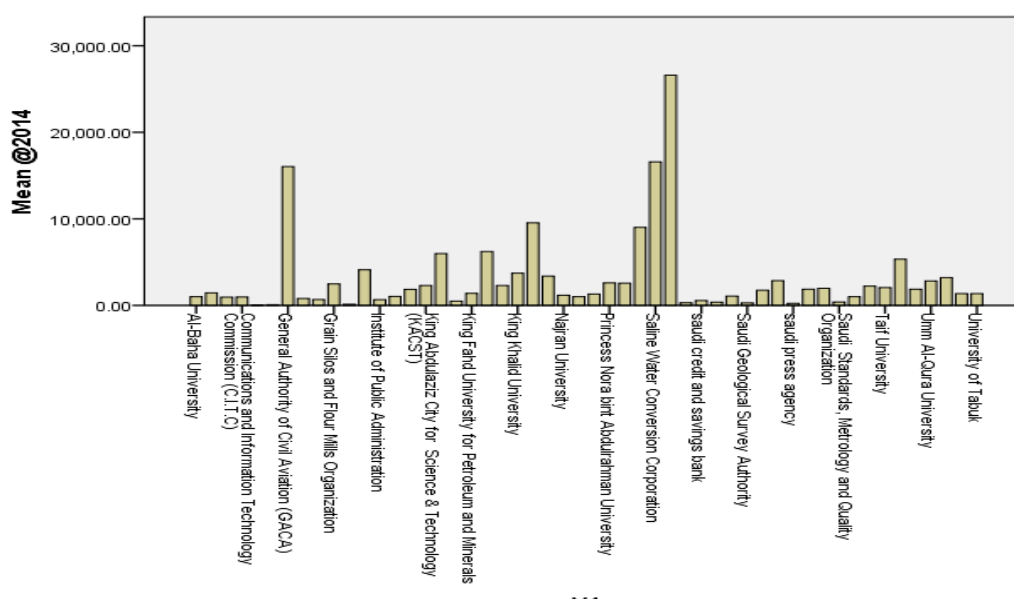
Figure 20 Expenditure for public Institutions

The above mentioned figure 16 is the Expenditure & Budget appropriated for public Institutions in the country in the year 2014. The Expenditure spent has been specified according to the Institutions.
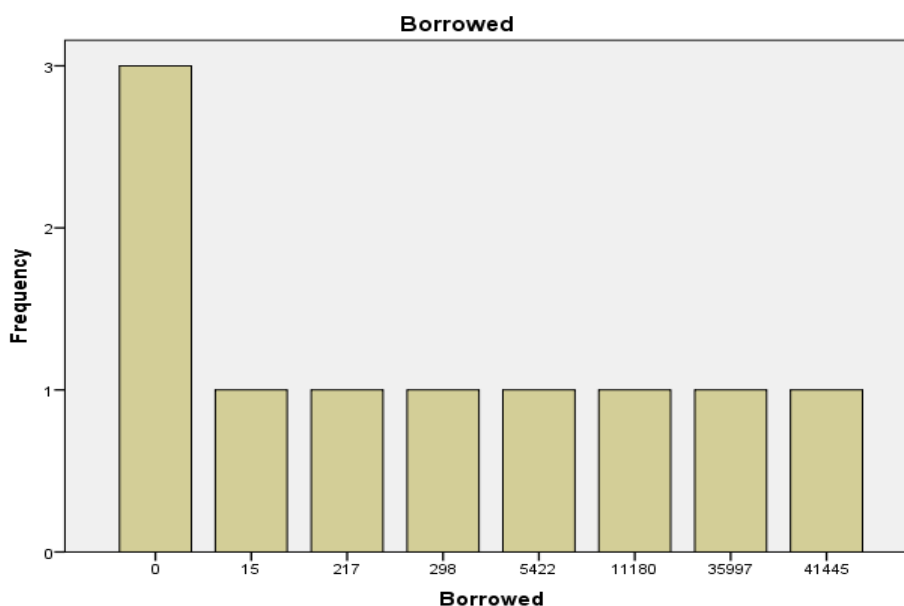
Figure 21 Public DEBT

The above mentioned figure is the public DEBT borrowed from the public DEBT.

4.1.6 *Prices and Cost of Living Index*

Prices and Cost of Living Index of Saudi Arabia has some of the parameters such as Cost of Living indeces by divisions, Average cost of living index by City, Average cost of living index by Groups and Subgroups, Wholesale Price Index and Cost of living index for all Cities. All the data provided in Prices and Cost of Living Index are tested and test results are produced below in the form of graphical representation.
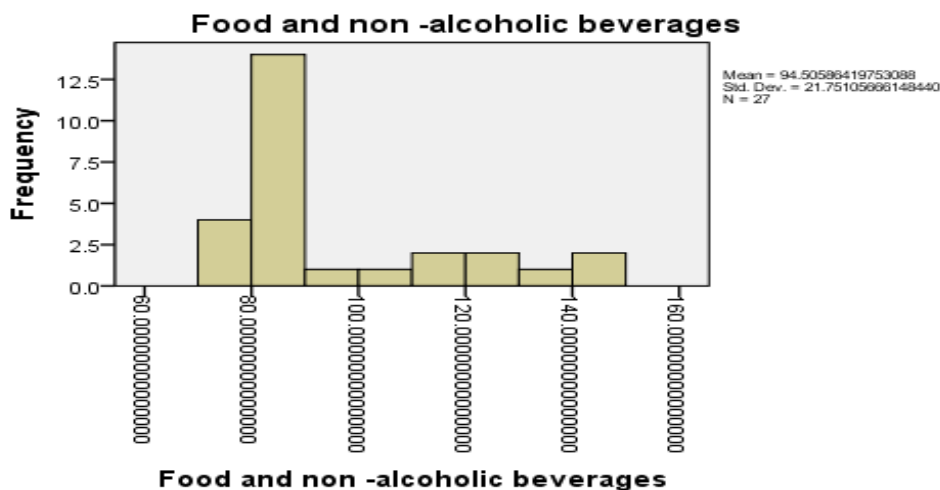
Figure 22 Cost of living indices by division (Food-non-alcoholic)
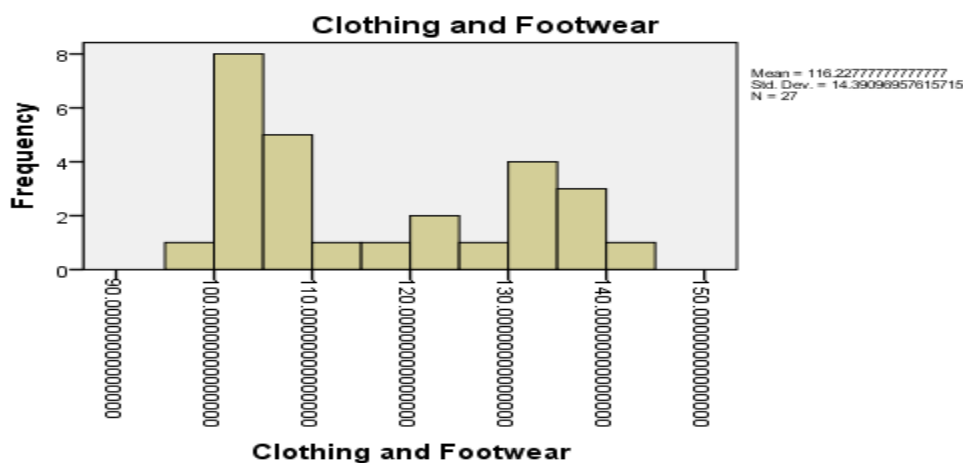
Figure 23 Cost of living Index (Clothing & Footwear)
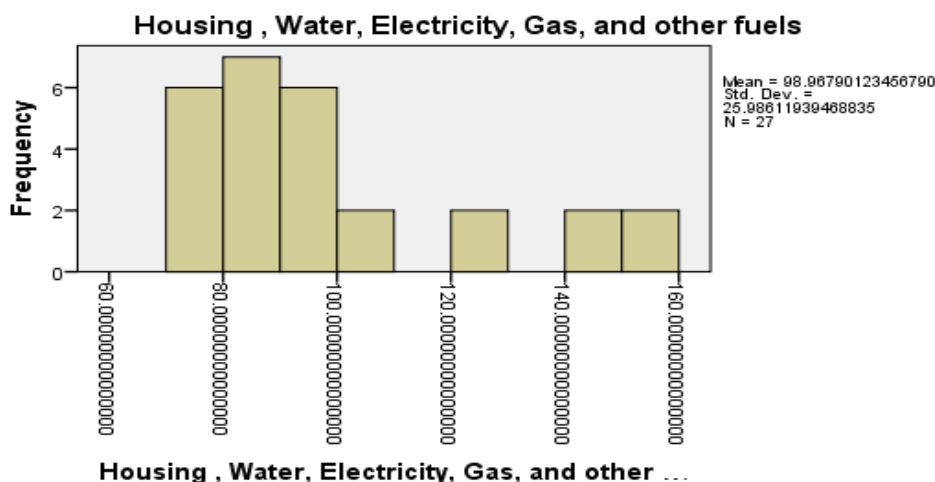
Figure 24 Cost of Living indices(Housing, water, Electricity, Gas and other)

Cost of living indices in Saudi Arabia has been tested on owing to their Basic needs like Clothing & footwear, Food & Non-alcoholic beverages, Housing, Water, Electricity, Gas and other fuels and the test results are produced in the above figures. Other than Footwear and Clothes Basic needs like Housing, Water, Electricity has only less mean and standard deviation.

Finally in Prices and cost of living index, we tested the Average Cost of living index by cities. Test results has been produced in the form graph keeping name of the Cities as X-axis and Inflation rate Annually for the corresponding cities has been set in the Y-axis. So the results are produced graphically in the figure below.
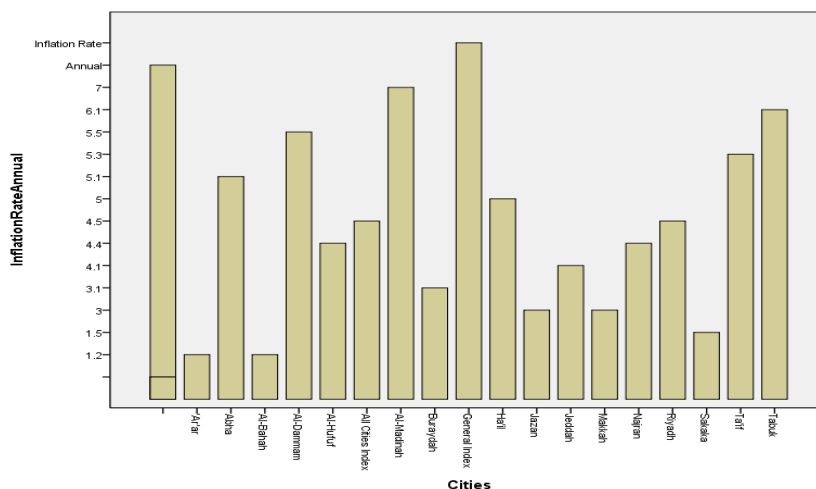
Figure 25 Cities Vs Inflation Rate Annual

4.1.7 *Foreign Trade Statistics*

Data for the Foreign Trade of the country has been produced in the form of Imports, Exports and Percentage Change in it, Merchandise Exports, Source of Imports, Direction of Exports, Volume of imports and exports handled, Finance & Guarantee of Saudi Arabia.

In the Foreign trade, Imports in the particular year and percentage in it then the Exports of the corresponding year & Percentage Change in it are all the parameters tested and the results are figured below in the form of graph. Graph has the period (year) as X-axis and the Exports has been produced in the Y-axis.
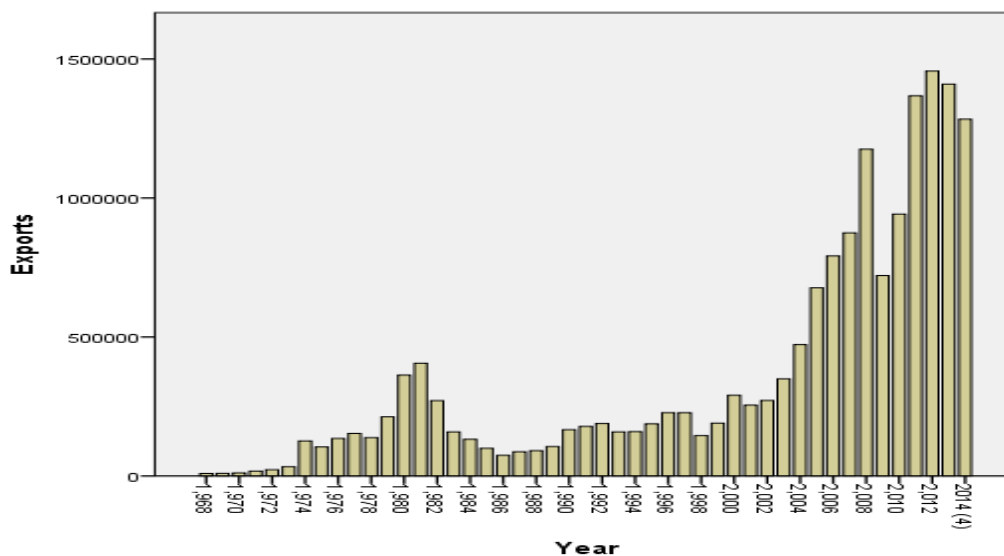
Figure 26 Foreign Trade-Exports

In the Foreign trade, Imports in the particular year and percentage in it then the Exports of the corresponding year & Percentage Change in it are all the parameters tested and the results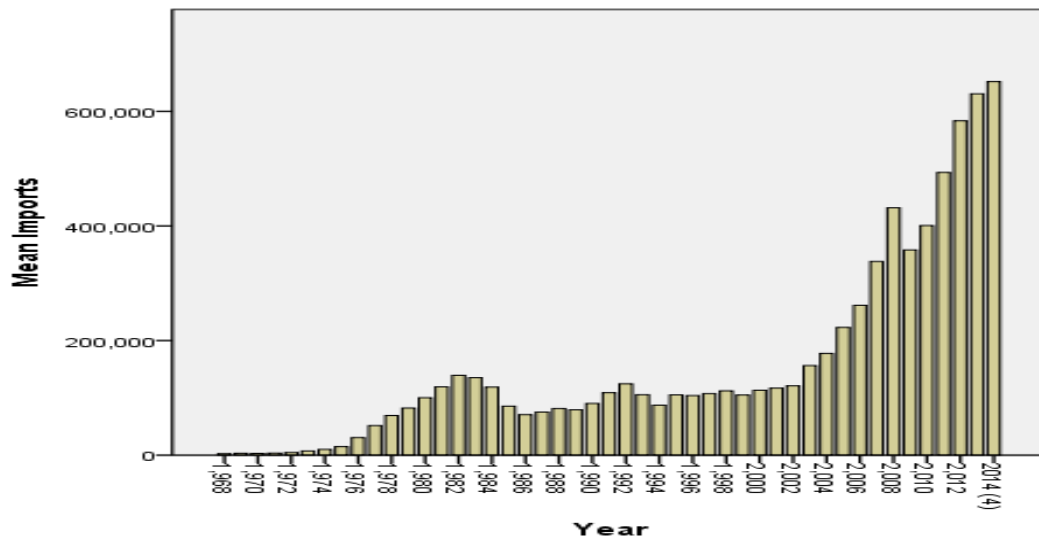 are figured below in the form of graph. Graph has the period (year) as X-axis and the Imports has been produced in the Y-axis.

Figure 27 Imports

In the Foreign Trade, Merchandise Exports like oil exports, Crude oil, refined products, Petrochemicals, Construction Materials, Agricultural and food products, other goods, Non-Oil Exports are included in it. Including all parameters as overview called Total Exports and the corresponding years, test result has been produced below.
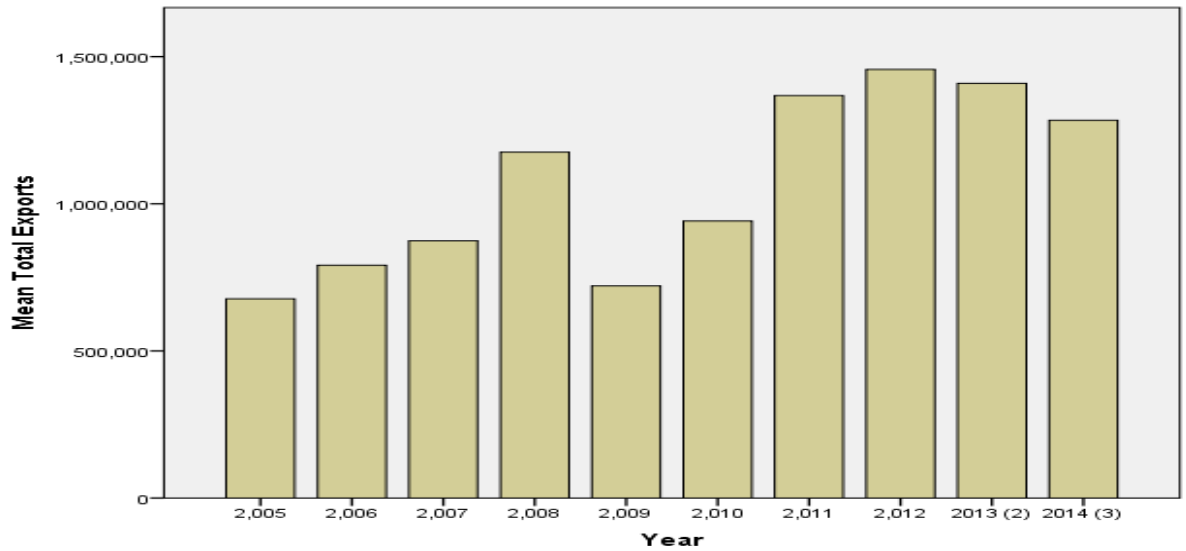
Figure 28 Merchandise Exports

Saudi Arabian Kingdom's Non-Oil Trade with GCC countries like UAE, Bahrain, Kuwait, Qatar, Oman are tested and test results are produced in the figure below. UAE and Bahrain leads and Oman serves less in Non-Oil trade.
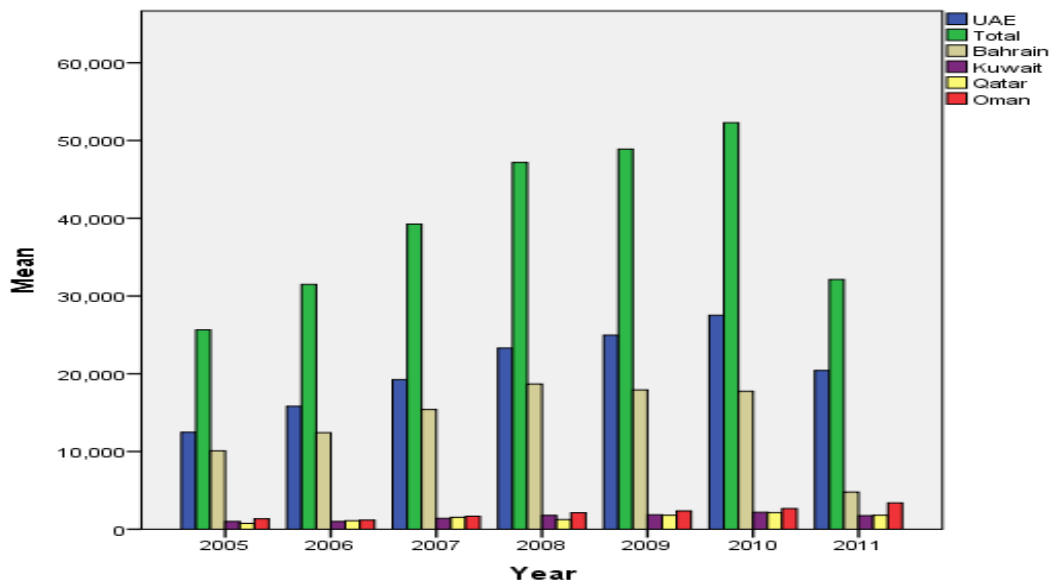
Figure 29 Non-Oil trade with GCC countries

Saudi Arabia has also Non-Oil trade with Prominent Partners of Arab Countries. Data for Arab Countries trade has also been tested and shown graphically below.
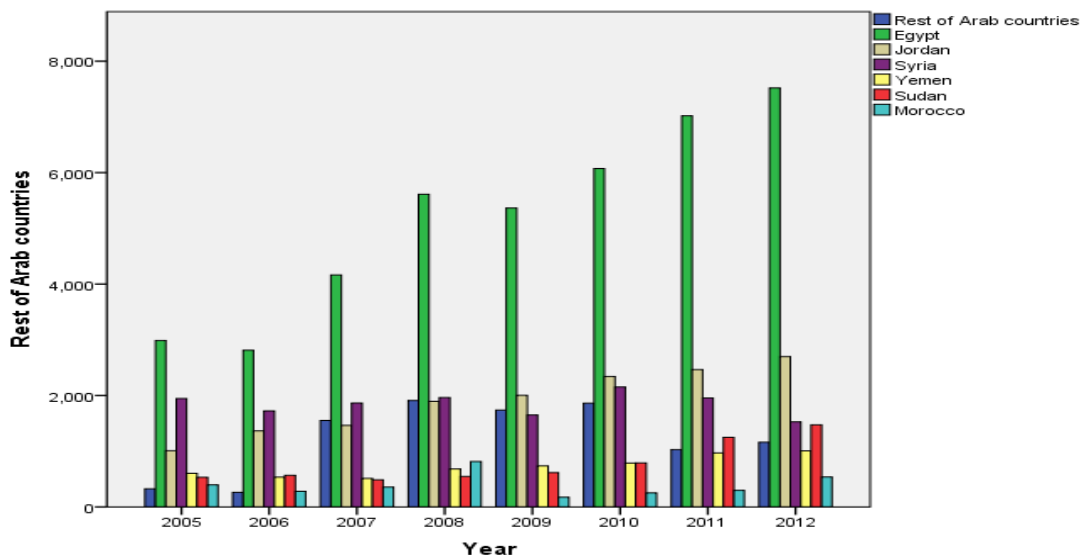
Figure 30Non-Oil Trade with Arab Countries

4.1.8 *Balance of Payment Statistics and International Investment Position*

Balance of payment statistics and International Investment Position has been tested in the form of Balance Payments Summary from 1961-2004, Kingdom Foreign Aid and International Investment Position.
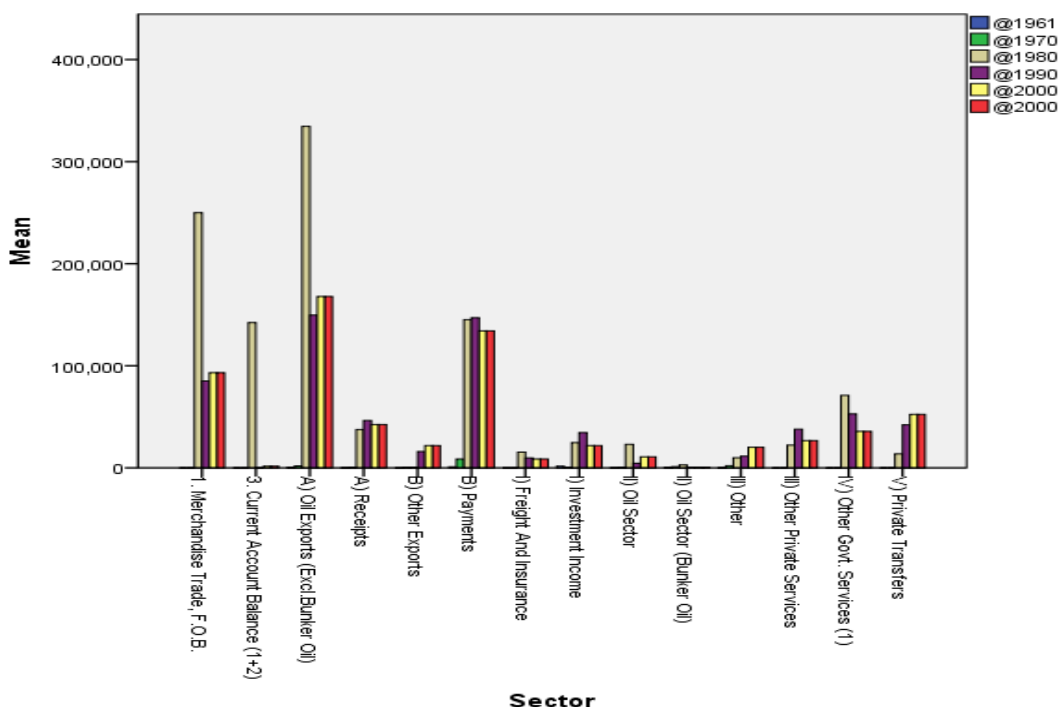
Figure 31Balance of Payment Summary from 1961-2004

Balance of payments Summary, data has been tested in the basis of Sector that are provided and analysis has been done in the form of decades like 1961, 1970,1980,1990,2000 and 2004. Sector names has been plotted in X-axis and Year has been plotted in Y-axis.
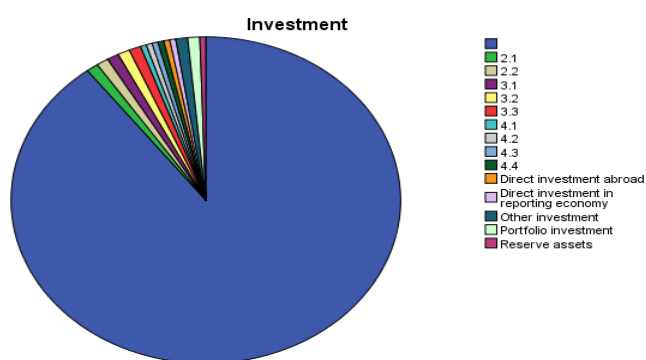
Figure 32International Investment Position

International Investment Position has been tested and the result is produced in the form of pie chart in the above figure. Direct Investment, Portfolio Investment, Reserve Assets. 2.1 and 2.2 are the subdivisions in Portfolio Investment, 3.1, 3.2 and 3.3 are Direct investments 4.1, 4.2 referred to other investments.

Kingdom's Foreign Aid has been tested in the form of Loans and distributions, Multilateral Aid, Contributions to Organisations and grand total of all and the result is produced in the form of Pie-Chart.
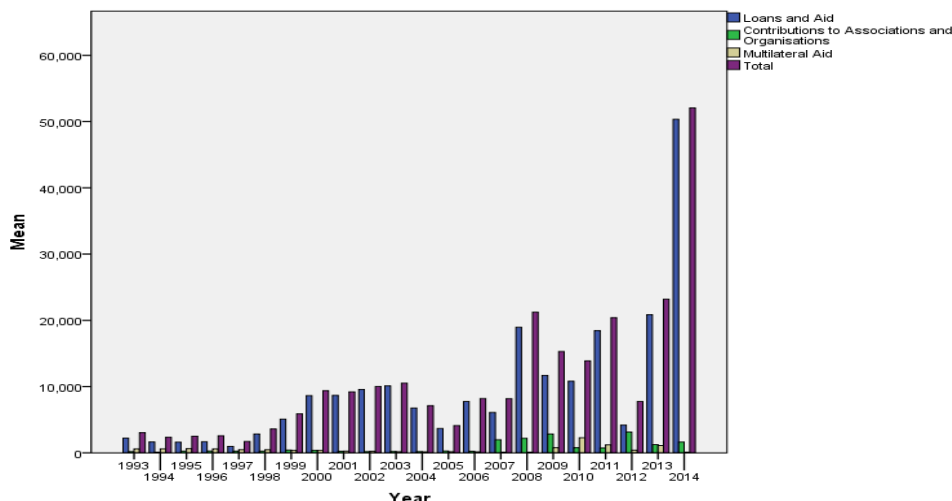
Figure 33Kingdom Foreign Aid

4.1.9 National Account Statistics

In the National Account Statistics Gross Domestic Product and Expenditure of the corresponding activities, Allocation of GDP, Gross fixed Capital Formation, Annual Changes in GDP, GDP per capita and Government Consumption Expenditure are discussed. These are the parameters tested and results are graphically presented below.
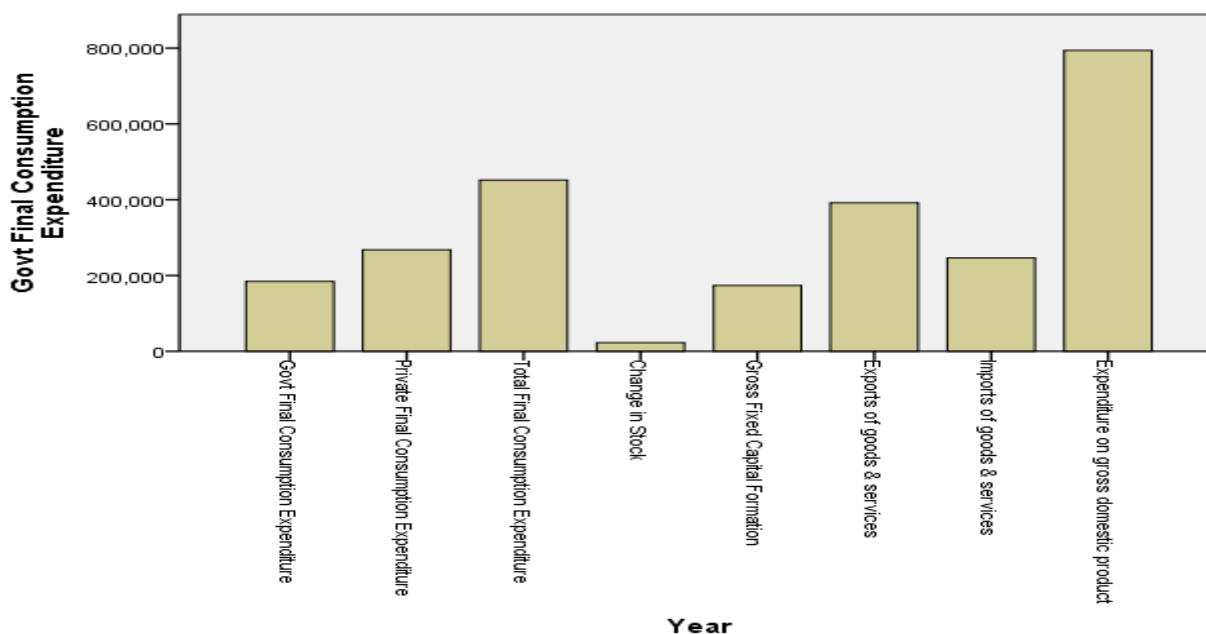
Figure 34 GDP & Expenditure at Purchaser Price

In the above figure GDP and Expenditure at Purchaser Price has been tested and test results are in the form of graph. Exports on gross domestic product has reached its peak and also Private Expenditure is higher than the Government Expenditure.

Allocation of GDP by sectors is defined by Oil Sector, Non-oil Sector (Govt), Non-oil Sector(Private), GDP excluding Import duties, Import Duties, GDP including Import duties, Growth Rate are included and results are presented below in the form of graph.
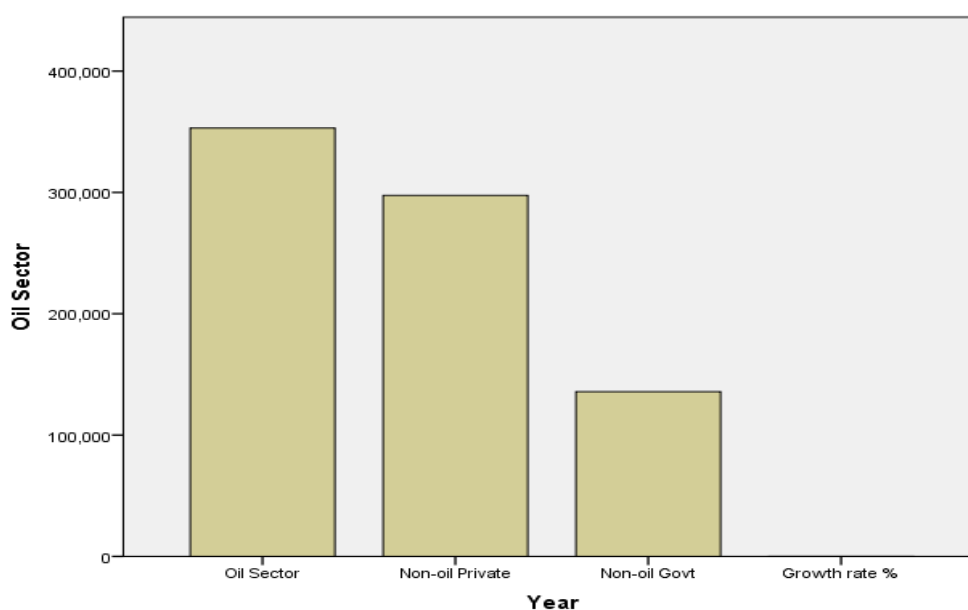
Figure 35 Allocation of GDP by Institutional Sectors

Annual Changes in GDP by Sectors are tested and graphically represented using Oil Sector, Non-oil sector both in private and Govt. GDP leads and Govt Non-oil is in the last position.
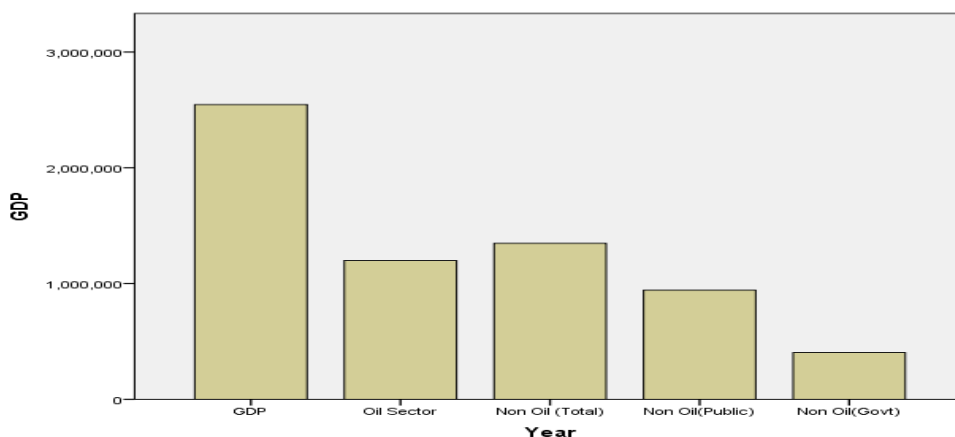
Figure 36 Allocation of GDP by Oil and Non-Oil Sector

4.1.10   Oil Statistics

Total sales of Crude Oil and Natural Oil

The below figure shows that the total sales of crude oil and Natural oil from 1962 to 2013. The sales for both oil are gradually increased at each year. From the year 1989 to 1995, the sales remained the same there was no growth in the sale of Crude oil and Natural Gas.
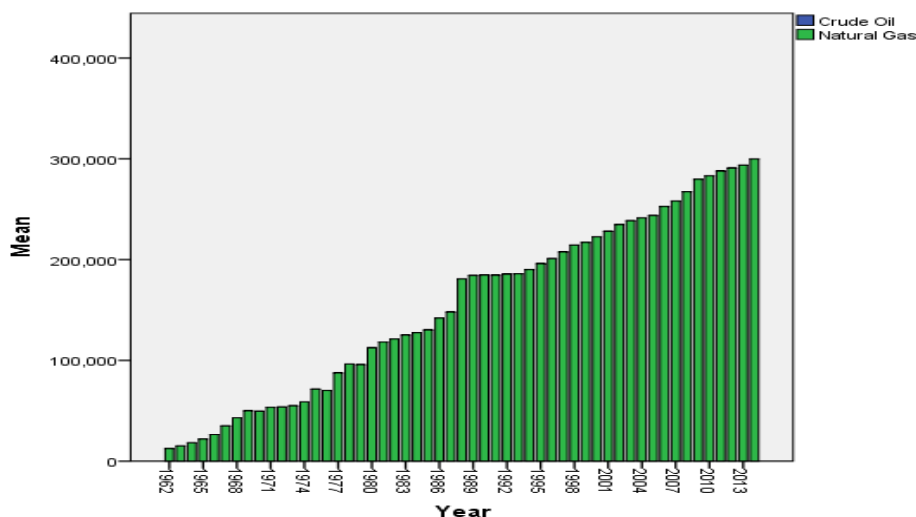
Figure 37 Total sales of Crude Oil and Natural Oil

Saudi Crude Oil Production

The below figure shows that the oil production in Saudi. There was a little bit change in each year. The highest oil production in Saudi was on 1966.
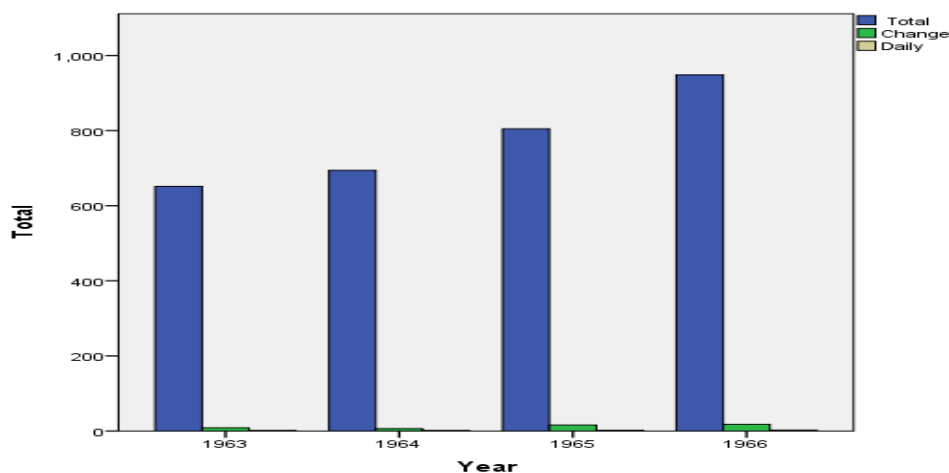
Figure 38 Saudi Crude Oil Production

Saudi Crude oil Exports by destination

The Exports of Crude oil in Saudi are calculated based on the destination from the year of 1985 to 2014. The highest volume of Crude oil was exported in the year of 2012. In Asia and its region, the crude oil sale was grown.
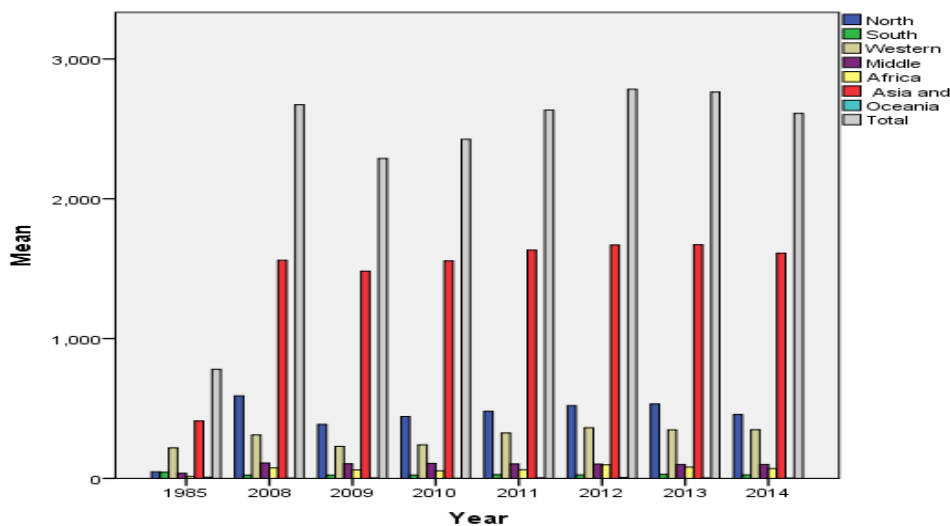
Figure 39 Saudi Crude oil Exports by destination

Saudi Exports of Refined Products By Destination

The production of refined products are analysed through the graph which is given below. In Ocean Asia, the highest refined products are produced. But in other countries productions of the refined products are lesser when comparing to others.
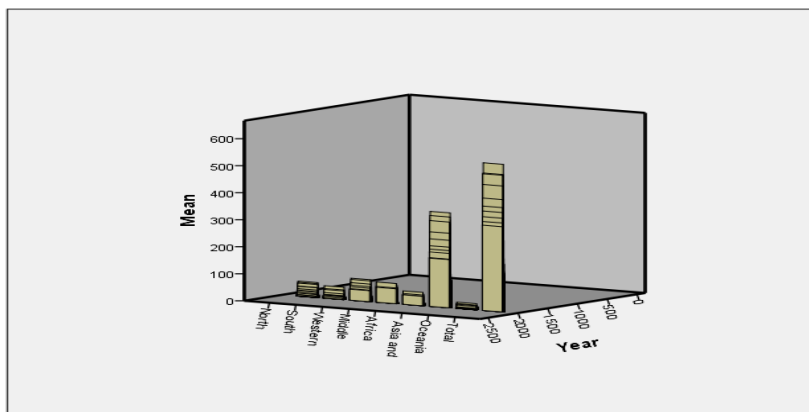
Figure 40 Saudi Exports of Refined Products By Destination

Domestic Consumption of Refined Products, Crude Oil and Natural Gas

The below graph shows that the survey of production of refined products in 2014. The Production
of fuel, diesel, and gasoline, Naphtha, LPG, Kerosene, Asphalt and Coke are calculated. Among them the
highest production was done for diesel and the lowest production was LPG.
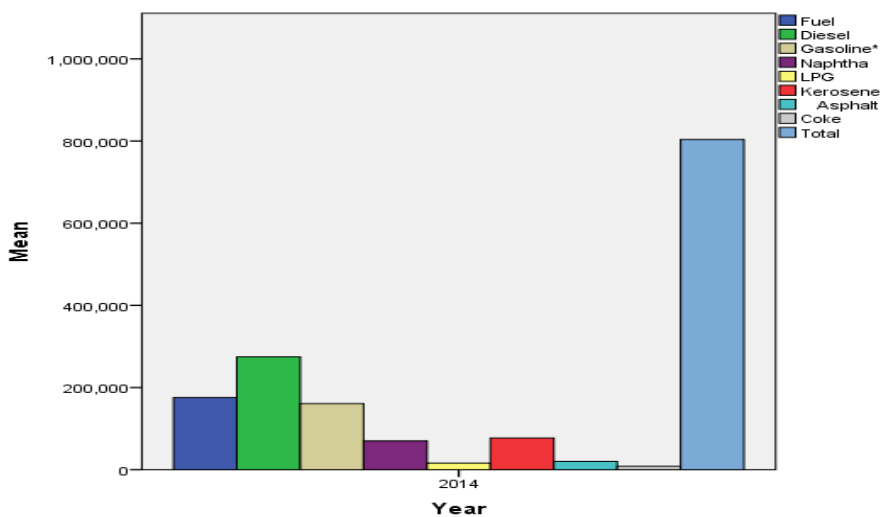
Figure 41 Production of Refined Products

Domestic Consumption of Refined Products, Crude Oil and Natural Gas

The below graph shows that the consumption of LPG by public and Oil Industry. The sub total
consumption is also analysed. The highest LPG consumption was done on 2012.
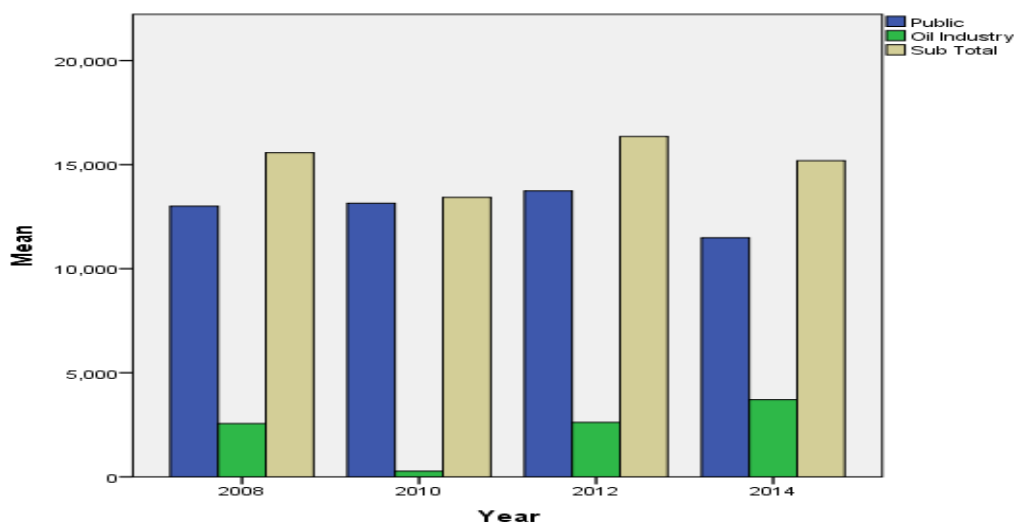
Figure 42 Consumption of LPG

The below graph shows that the consumption of Natural by public and Oil Industry. The sub total consumption is also analysed. The highest natural gas consumption was on 2012.
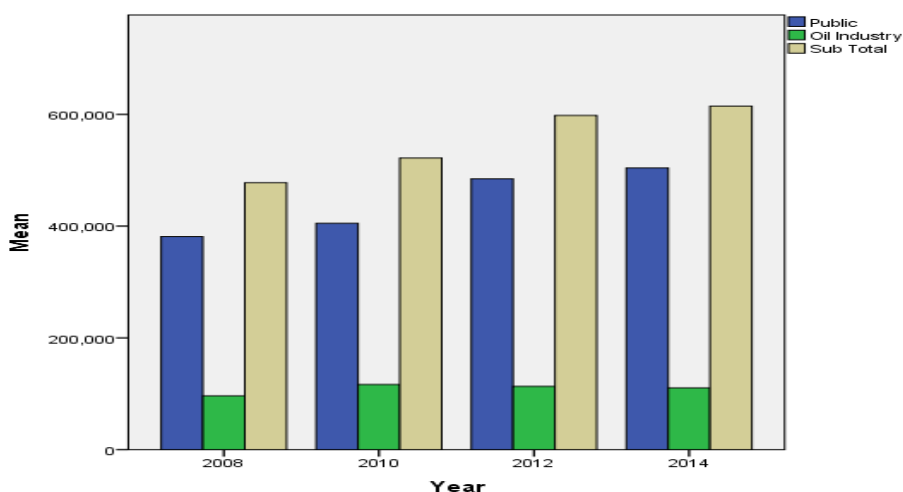
Figure 43 Consumption of Natural Gas

The below graph shows that the consumption of other refined products. The Sub total, Grand Total and change percentage are analyzed. The sub total consumption is also analysed. The highest consumption was on 2012 and the highest range of product consumption is 1,400,000.
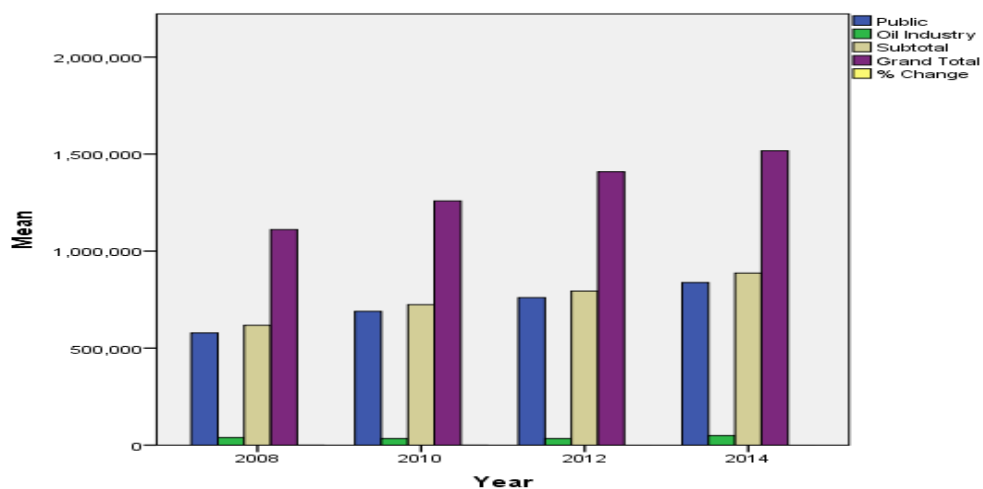
Figure 44 Consumption of Other Refined Products

Saudi Aramco Production of Natural Gas Liquids

The below graph shows that the Saudi Aramco production of the natural gas liquids. The annual production, change percentage and Average Daily production was analysed. At the end of 2013, the annual production was increased to 455.90 and the average productivity is 1.25%.
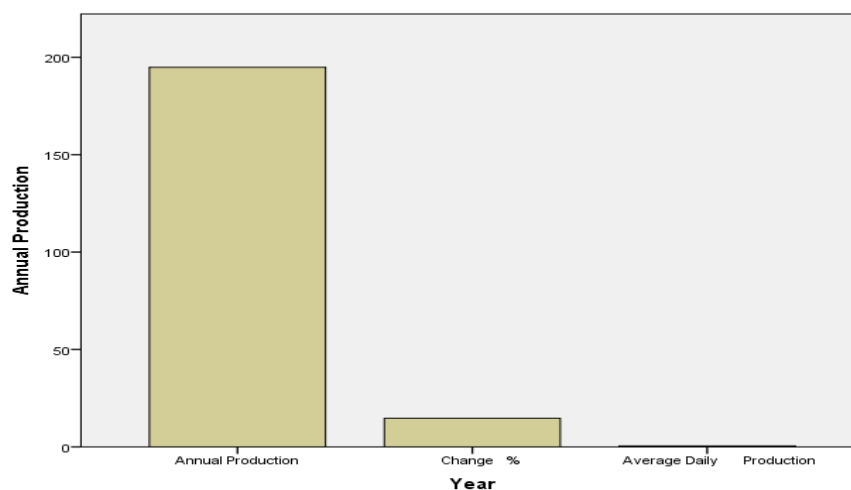
Figure 45 Saudi Aramco Production of Natural Gas Liquids

Spot Prices of Saudi Crude Oils

The below graph shows that the spot prices of Saudi Crude Oils When comparing to Arabian light, Arabian Medium and Arabian heavy, the price of the Arabian light products are increased to above 40%.
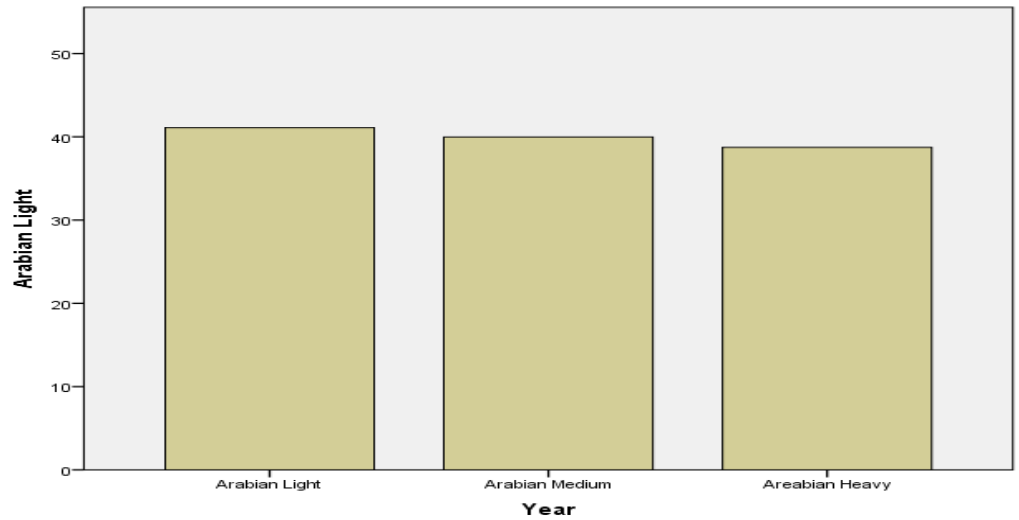
Figure 46 Spot Prices of Saudi Crude Oils

4.1.11   Other Miscellaneous Statistics

1.   General Education-Number of Students

The below graph shows that the number of student studying in primary schools. In 1414, the highest count of the primary school students are between 1100000 and 1200000.
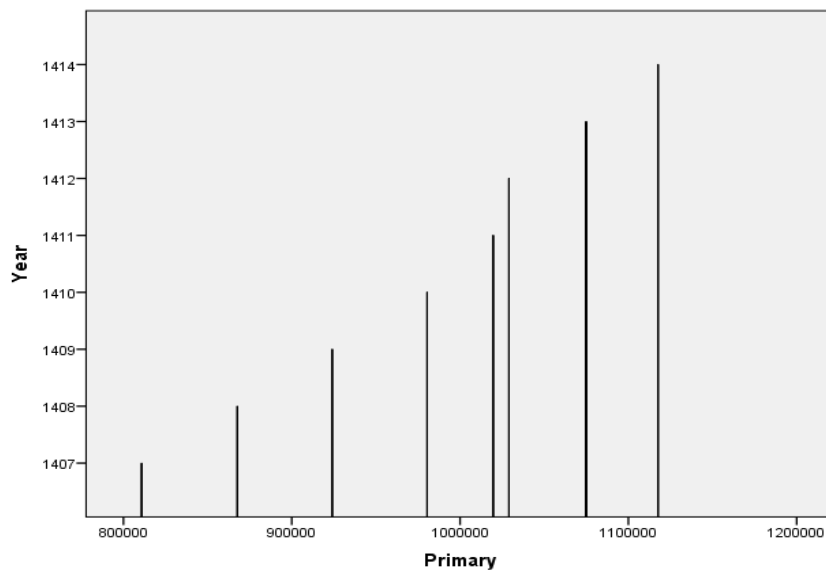
Figure 47 General Education - Number of students in Primary

The below graph shows that the number of students in Intermediate. When analyzing the given data, the highest count of intermediate schools between 400000 and 450000. The number of students is increased gradually.
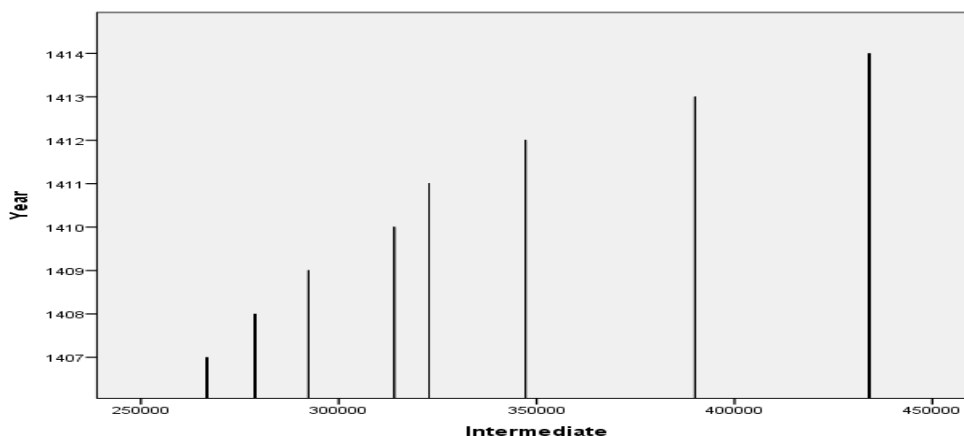
Figure 48 General Education - Number of students in Intermediate

The below graph shows that the number of student studying in secondary school. When analyzing the given data, the highest count of secondary schools between 200000 and 220000. The number of students is increased gradually.
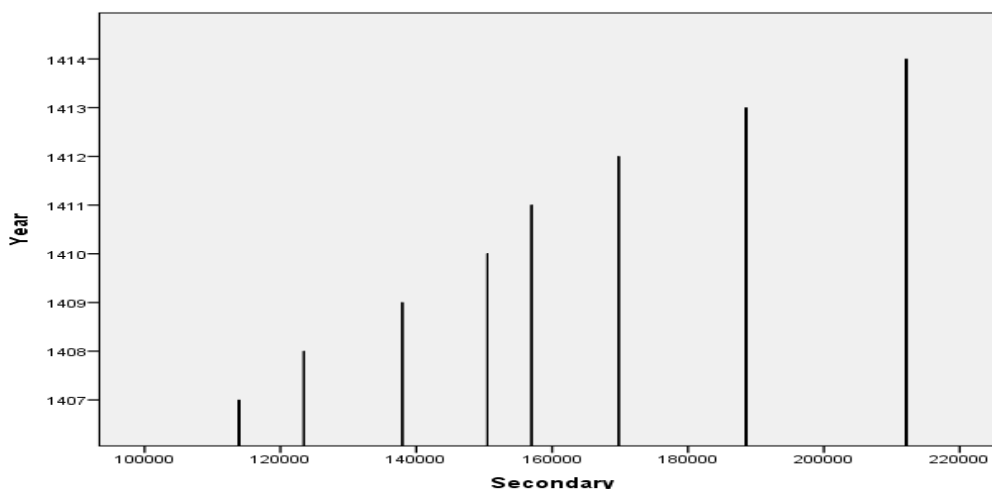
Figure 49 General Education - Number of students in Secondary

The below graph shows that the total number of teachers working in Primary schools. More than 3250000 teachers are working in primary schools according to the year of 1414.

Total:
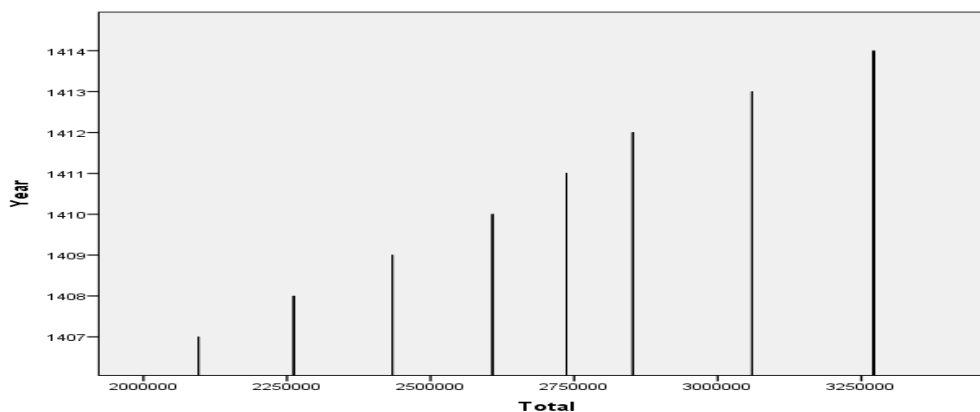
Figure 50 General Education - Number of Teachers in Primary

2. **General Education-Number of Teachers**

The below graph shows that the male and female teachers of the primary schools. When comparing

to Male teaching staffs, the count of the female teaching staffs is low. The total number of teachers are also

calculated as 150000.
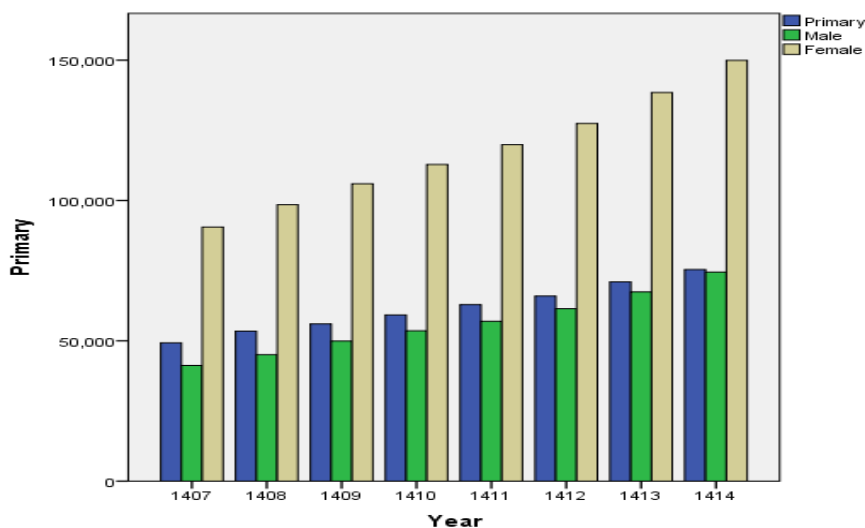
Figure 51 General Education - Number of Teachers in Primary

The below graph shows that the male and female teachers of the intermediate schools. When

comparing to Male teaching staffs, the count of the female teaching staffs is too high. From the year of

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1407 to 1414, the count of the male and female teachers are increased from 10000 to 30000 and from 30,000 to 60000 respectively.
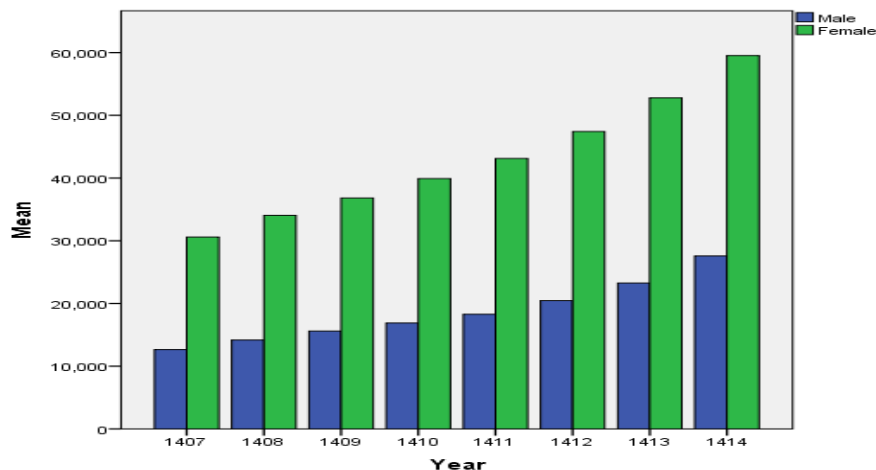
Figure 52 General Education - Number of Teachers in Intermediate

The below graph shows that the male and female teachers of the secondary schools. When comparing to Male teaching staffs, the count of the female teaching staffs is too high. From the year of 1407 to 1414, the count of the male and female teachers are increased from 5000 to 15000 and from 10,000 to 30000 respectively.
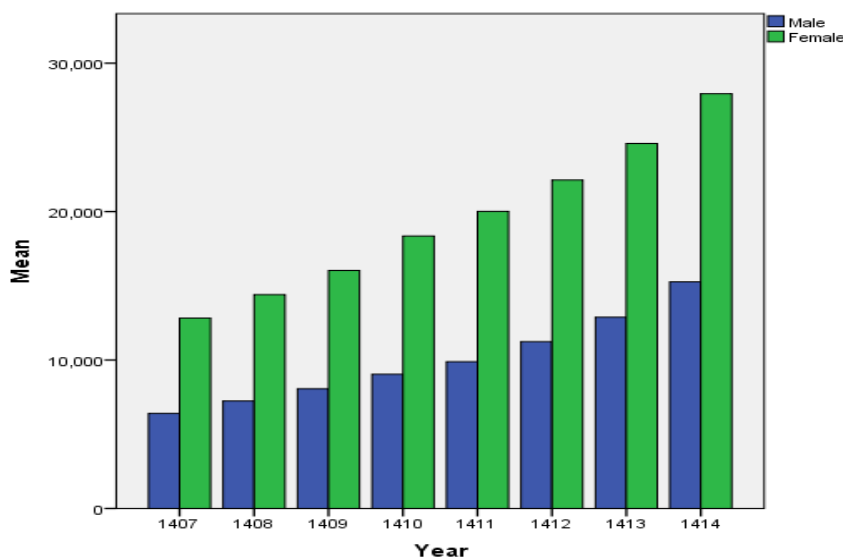
Figure 53 General Education - Number of Teachers in Secondary

3. **General Education - Number of Primary Schools**

The below graph shows that the total **number** of primary schools. In 1407, the count of the primary schools is 8,012. Then it is increased into 10711 in 1414.
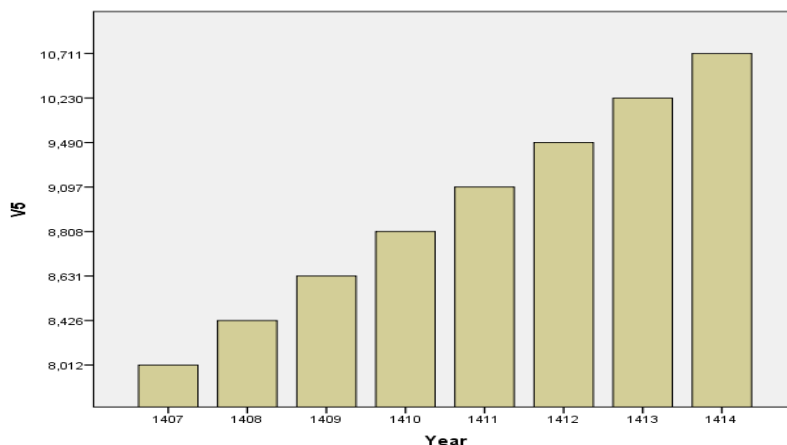
Figure 54 Total number of Primary schools

The below graph shows that the total number of intermediate schools. In 1407, the count of the intermediate schools is 2,456. Then it is increased into 4,431 in 1414.
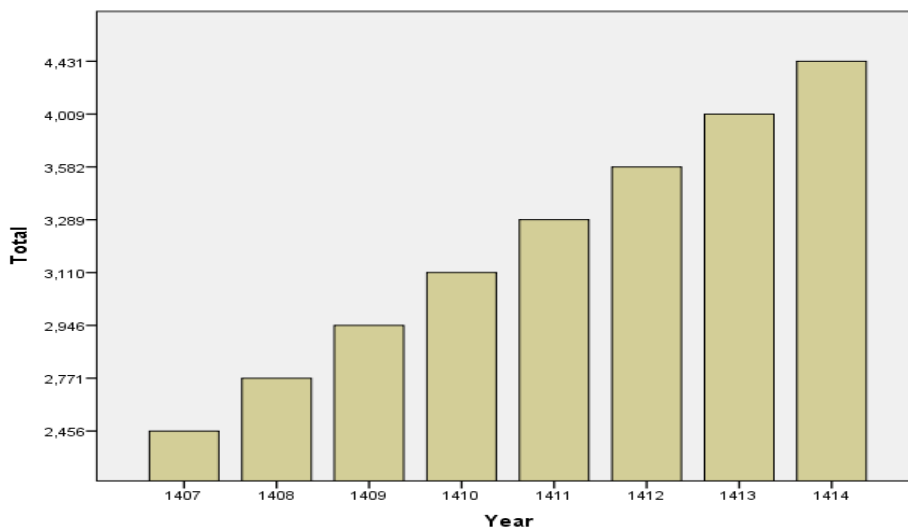
Figure 55 Number of Intermediate Schools

The below graph shows that the total number of secondary schools. In 1407, the count of the primary schools is 990. Then it is increased into 1915 in 1414.
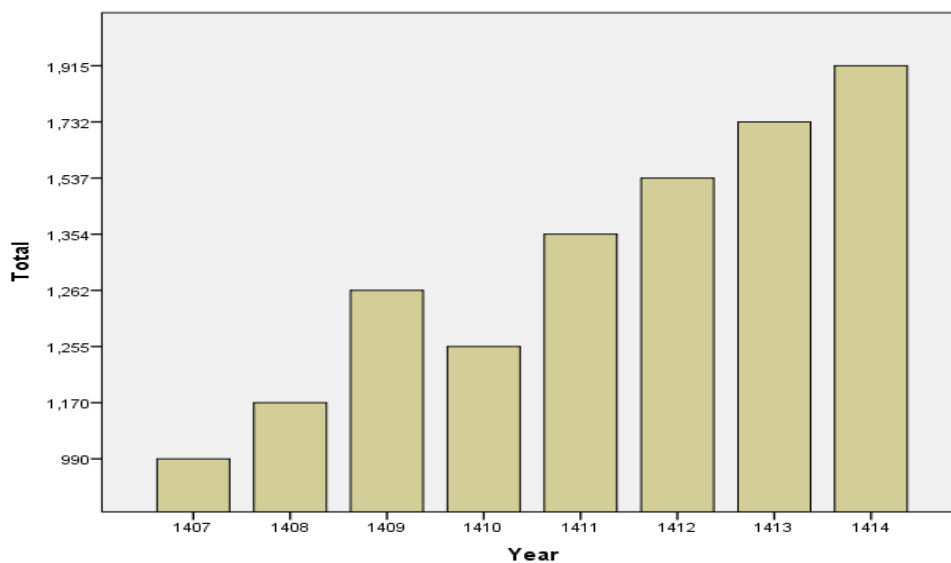
Figure 56 Number of Secondary Schools

The below graph shows that the total number of schools in Saudi. In 1407, the count of the schools is more than 10000. Then it is increased into more than 15,000 in 1414.
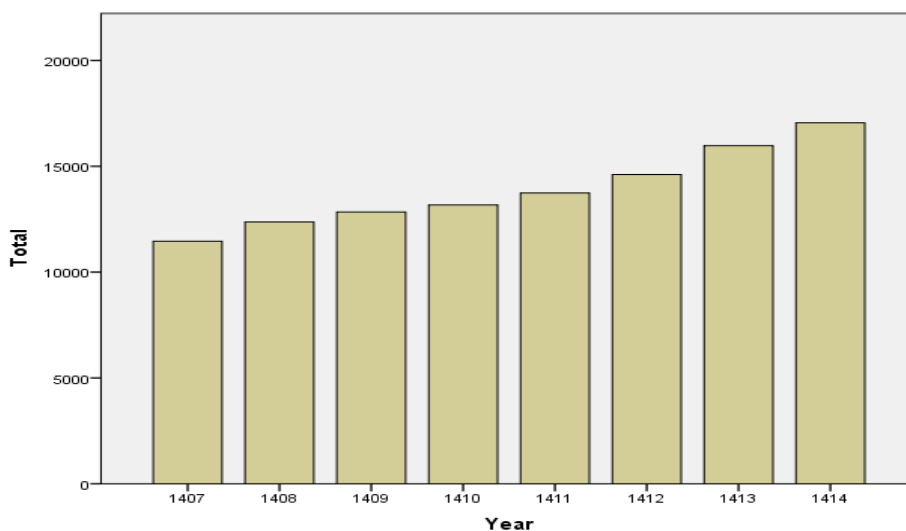
Figure 57 Total number of Schools

Total number of students, staffs by administrative regions

The below graph shows that the total number of students in Saudi. The mean value is 748801.64, the standard deviation is 1314244.376 and the value of N is 56.
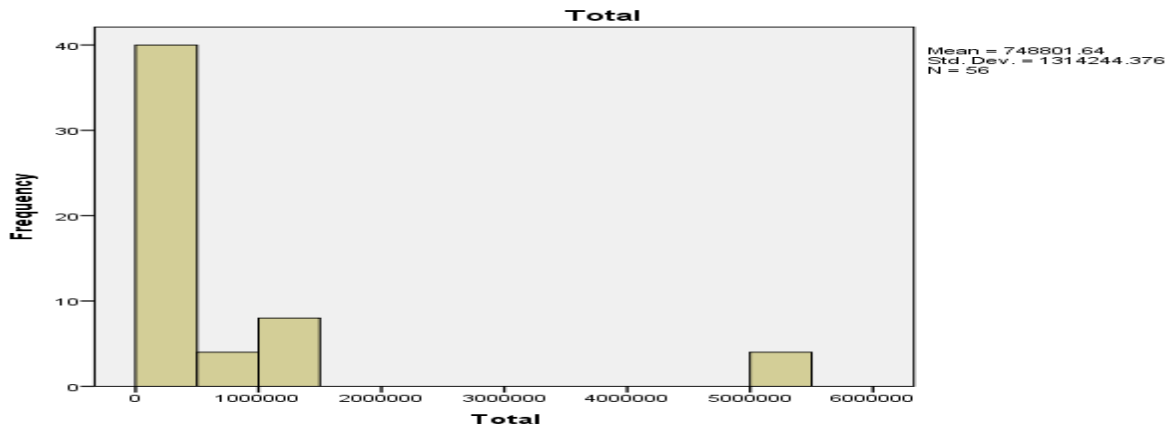
Figure 58 Total number of students

The below graph shows that the total number of male students in Saudi. The mean value is 376237.25, the standard deviation is 659639.908 and the value of N is 56.
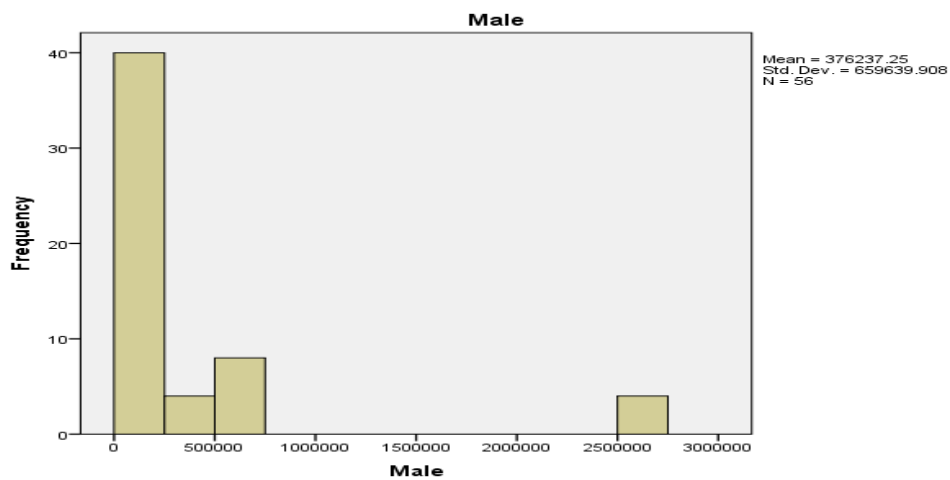
Figure 59 Total number of Male Students

The below graph shows that the total number of female students in Saudi. The mean value is 372564.39, the standard deviation is 654699.567 and the value of N is 56.
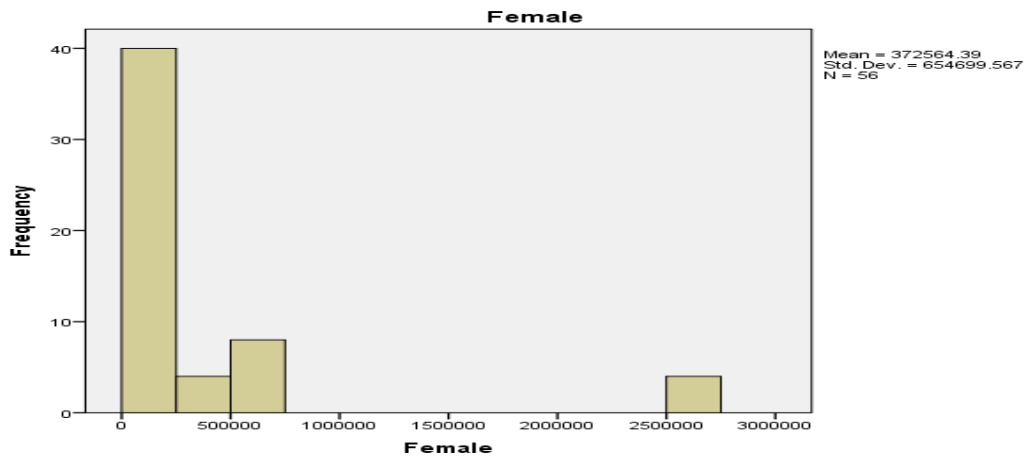
Figure 60 Total number of Female Students

The below graph shows that the total number of schools for male students in Saudi. The mean value is 2216.21, the standard deviation is 3829.278 and the value of N is 56.
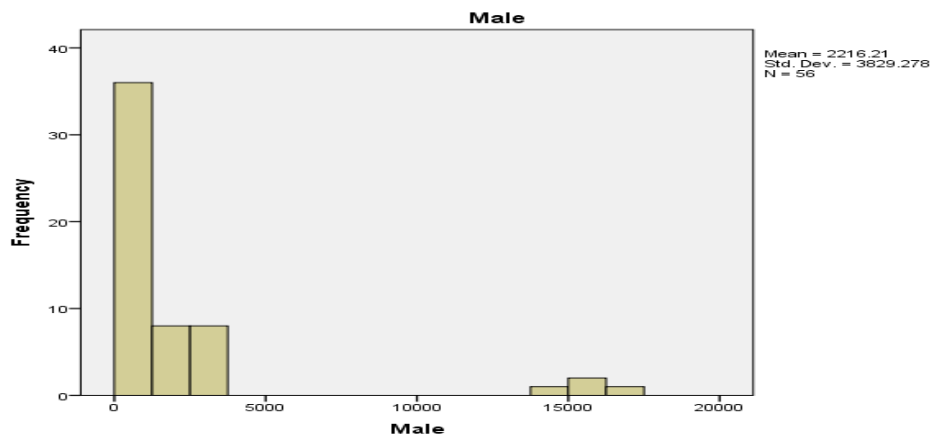
Figure 61 Total number of Schools for Male

The below graph shows that the total number of schools for female students in Saudi. The mean value is 2216.21, the standard deviation is 3829.278 and the value of N is 56.
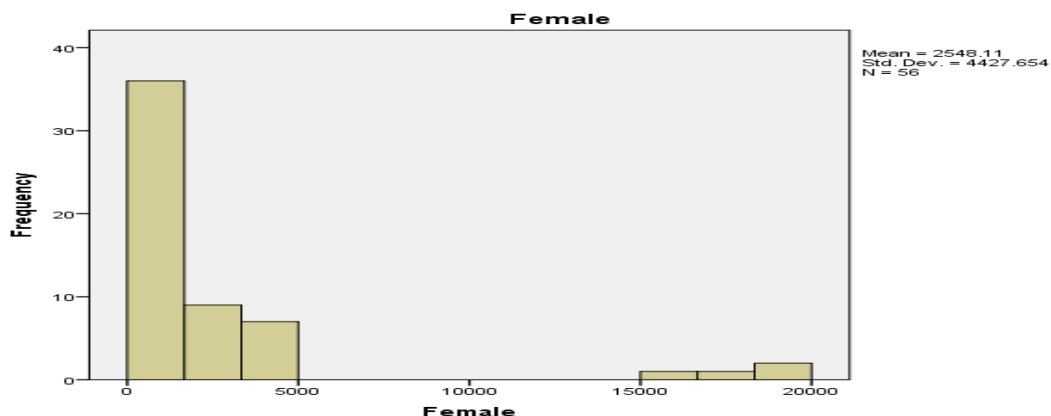
Figure 62 Total number of Schools for Female

The below graph shows that the total number of schools in Saudi. The mean value is 4764.32, the standard deviation is 8255.761 and the value of N is 56.
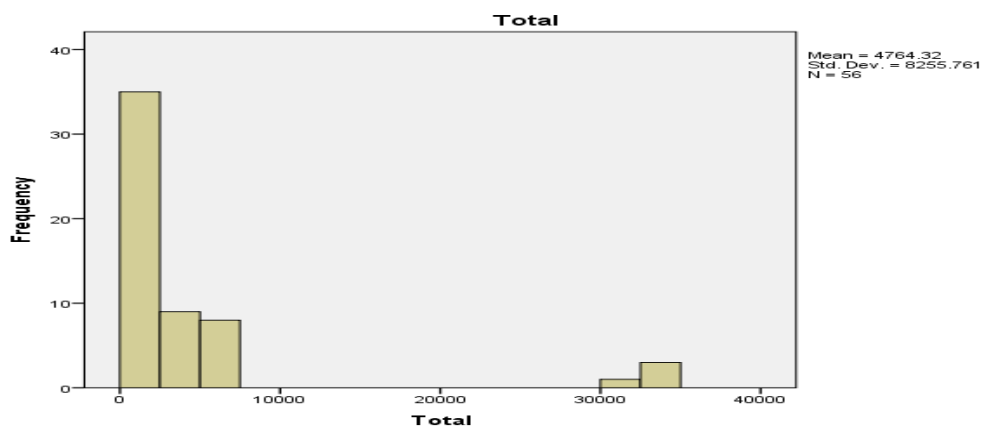
Figure 63 Total number of Schools

The below graph shows that the total number of male teachers in Saudi. The mean value is 33782.43, the standard deviation is 58873.824 and the value of N is 56.
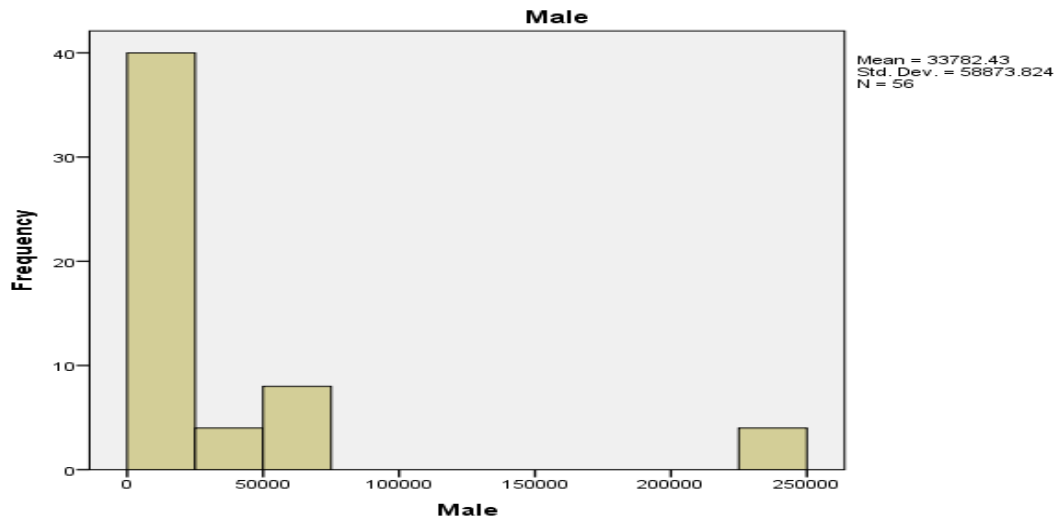
Figure 64 Total number of Male Teachers

The below graph shows that the total number of female teachers in Saudi. The mean value is 38937.14, the standard deviation is 68139.129 and the value of N is 56.
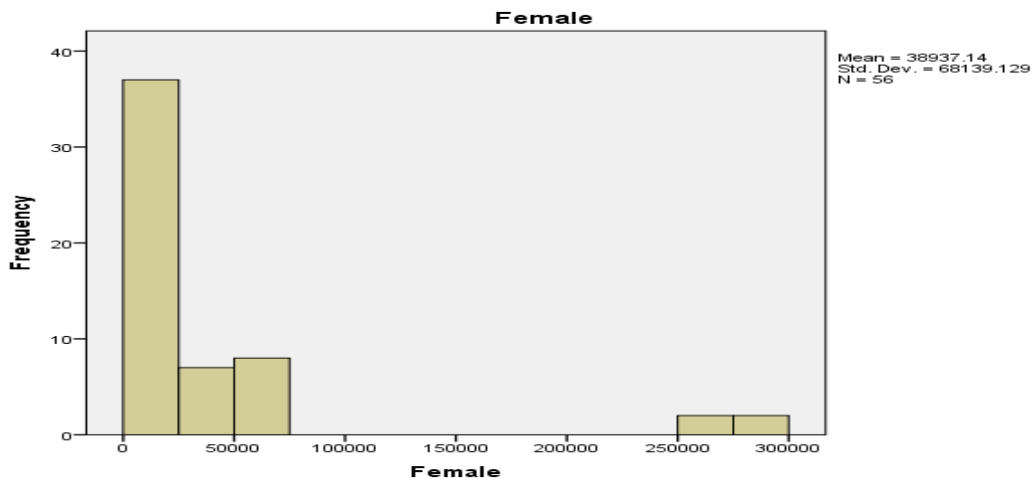
Figure 65 Total number of Female Teachers
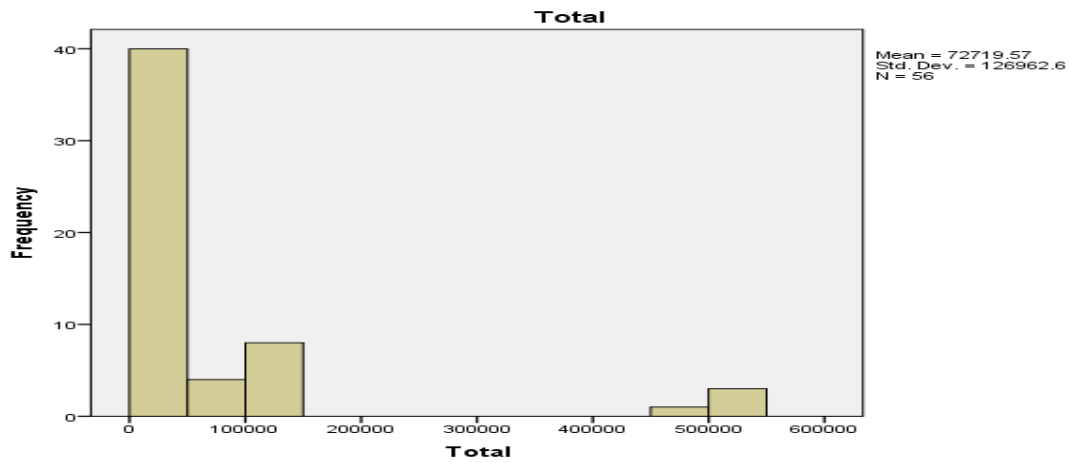
Figure 66 Total number of Teachers

Higher Education - Number of New Students

The below graph shows that the count of Ph.D. male and female from the academic year of 1434/1435 to 1416/1417.
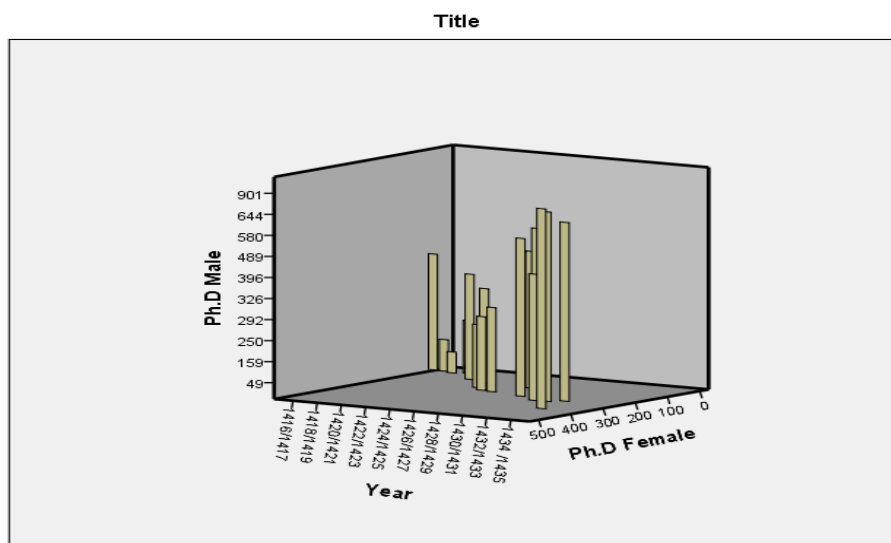
Figure 67 Number of New Ph.D Students

The below graph shows that the count of fellowship degree holder male and female from the academic year of 1433/1434 to 1418/1419.
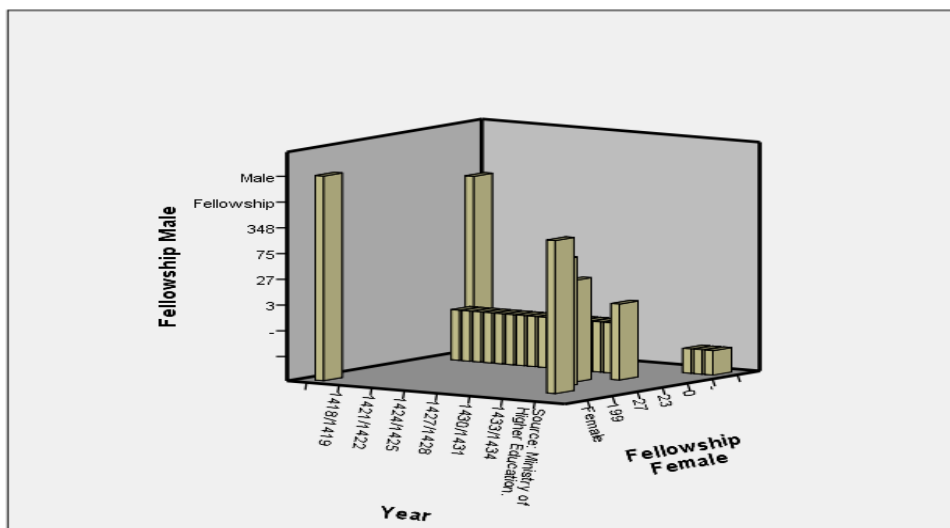
Figure 68 New Fellowship students

The below graph shows that the count of Higher Diploma degree holder male and female from the academic year of 1434/1435 to 1416/1417.
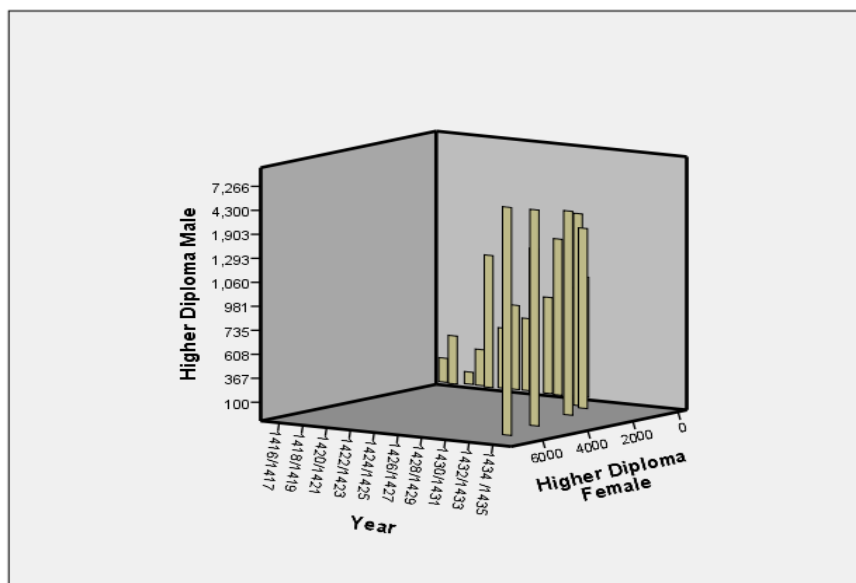
Figure 69 New students in Higher Diploma Male

The below graph shows that the count of Bachelor degree holder male and female from the academic year of 1434/1435 to 1416/1417.
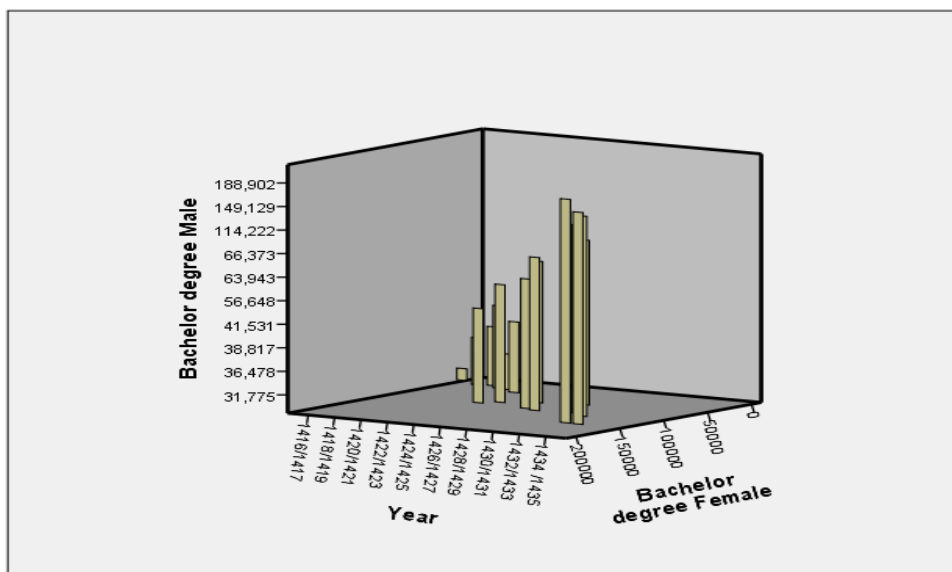
Figure 70 New Students in Bachelor Degree

The below graph shows that the count of Master degree holder male and female from the academic year of 1434/1435 to 1416/1417.
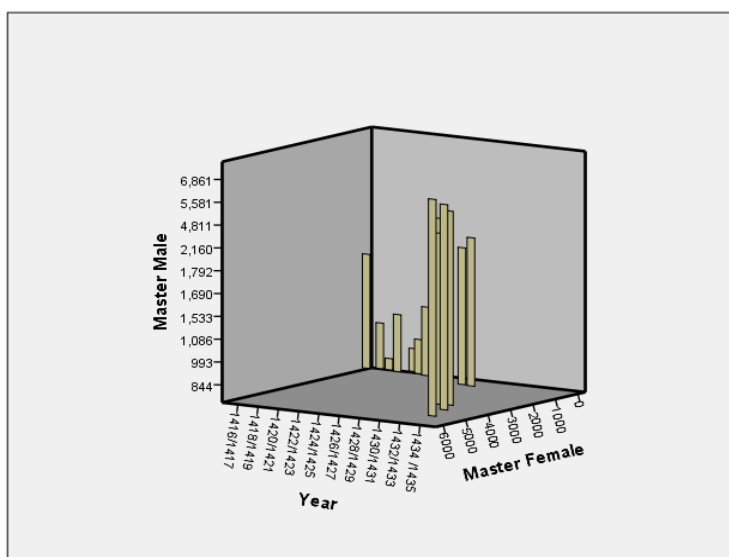
Figure 71 New Master degree Students

The below graph shows that the count of Intermediate Diploma degree holder male and female from the academic year of 1434/1435 to 1416/1417.
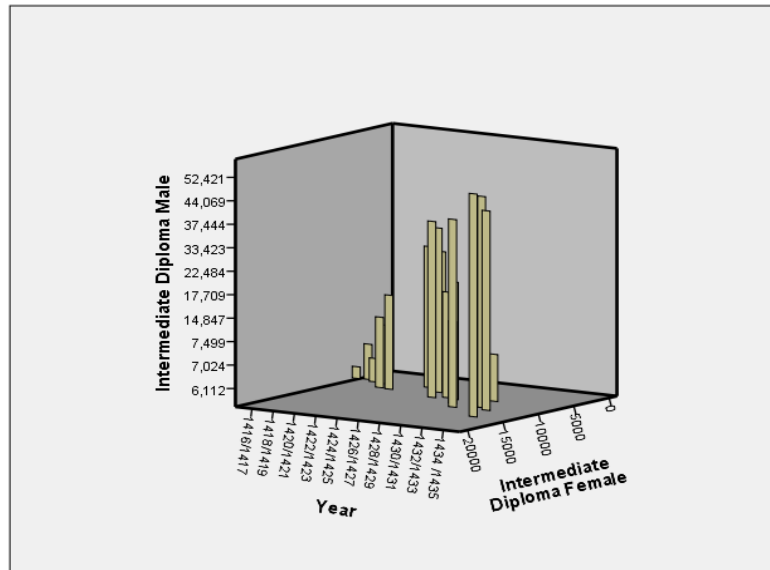
Figure 72 New Students in Intermediate Diploma

The below graph shows that the total number of new male and female students.
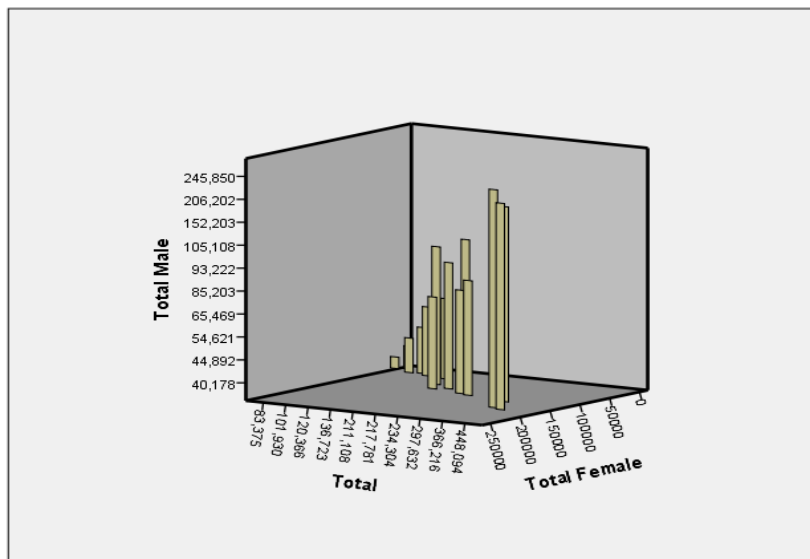
Figure 73 Total number of new Male and Female

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Using Digital Stories for Developing Reading Skills of EFL Preparatory School Pupils

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Abstract

The aim of this study is to investigate the effectiveness of digital stories in developing some reading comprehension skills of the preparatory school pupils. To achieve the study purpose, research instruments were developed after adjusting their validity and reliability. Researcher prepared two instruments. First, the researcher prepared a questionnaire to determine the appropriate reading comprehension skills for the preparatory school pupils. Second, the researcher prepared a pre-post reading comprehension test. This test was used for measuring the pupils' reading comprehension skills. This study adopts the descriptive   method. The participants were divided into two groups. The researcher presented digital stories for first group. The researcher also presented traditional method of teaching for second group. Each group consisted of 40 pupils. The data obtained from this study is analyzed statistically by SPSS program. The results revealed effectiveness of adopting digital stories in developing pupils' reading skills among first year preparatory school pupils.

Key words: Digital Stories, Digital storytelling, Reading Comprehension Skills.

1. Introduction

Over last three decades, information technology has centered on the Internet and the World Wide Web (Robin& Pierson, 2005). Instructional institutions do its best for acquiring the computer skills that are important for pupils and teachers to get the web resources. According to Assia(2012), using multimedia technologies can be used all over the world. Using technology in education, for example, should be well-prepared. Chen, Hsu and Hung (2008) assured integrating technology in classroom demands teachers' attitudes and willingness.

Also, stories are still used to educate learners, just as they have been used throughout history. Oral and written stories are used as teaching and learning tools. As Burmark (2004) stated combining images and written text improve pupils' comprehension. Also, he affirms, digital storytelling is useful for creating, analyzing, and combining images with text.

Tsou, Wang and Li (2006) recommended that teachers could use digital storytelling in learning. It also improved pupils' language performance. Developing reading skills using digital stories is the main concern of the present study. According to Berardo (2006), there are three purposes for reading. These purposes are for survival, learning or pleasure. The first type is related to environment. The second purpose is goal-oriented. It is the type of reading which is practiced in the classroom. The third type is for enjoyment.

According to Robin (2008), teachers could design digital stories find them helpful and facilitating discussion. They also help making content more understandable. Robin (2011) stated that adopting digital stories may be used for enhancing lessons within a larger unit. This facilitates discussion of the story topics.

According to Robin (2006), digital stories could be personal stories, informing or instructing stories, and re-telling historical events stories. Personal stories deal with author's life. The second type is used for convey the instructional material in various fields. This type could be used by teachers and pupils. The third type is about events from history.

According to Signes (2008), the main difference between digital stories and traditional stories is the nature of medium and tools that are used in contrast with those of the traditional stories. Holtzman (1997) affirms the main differences are "nonlinearity, discontinuity and autonomy" In the same context, Handler Miller (2008) added digital stories encourage the use of various media, all tied together to serve the core story".

Lambert (2007) identified elements of effective digital stories. These elements include: "a point of view, a dramatic question, emotional content, economy, pacing, the gift of your voice and an accompanying soundtrack". Moreover, Robin (2006) has classified three types of digital stories:

1) "personal narratives: stories that contain details of one's life".

2) "historical documentaries: stories that present dramatic events to understand the past".

3) "Stories designed to inform or instruct a concept ".

The Researcher uses the digital stories that are designed to instruct for developing reading comprehension skills.

Digital stories have several advantages and can be summarized in these points:

1) Variation: every digital story has a scenario differs from the others.

2) Personalization: the digital story can be created according to the pupils' level.

3) Engaging: Teachers can engage pupils by using digital stories. Pupils can be motivated by the stories they have heard or seen.

4) Active learning: systems of digital stories can present various interactive learning systems. Pupils learn better by doing.

5) Discussion: digital stories allow collaboration with the teachers.

The University of Houston (2009) explained uses and procedures of digital stories in education. First, the teacher presents the definition of story parts, selects a message of story and determines purpose of the story. Next storyteller looks for content, visual and audio resources for the story. Second, the storyteller presents content, audio and images, in an attractive way. The storyteller can organize the order of the resources. Third, the storyteller creates the story. He should determine the point of view of the story. Finally, the digital story is saved in video presentation. Fourth, the storyteller shows the story and gets feedback.

Reading is considered a complex process as it involves sub- skills. Reading is a necessary skill for many foreign language learners. Moreover, Reading in the foreign language is important because it shows the written form in action. Reading comprehension skill is defined as "the process of simultaneously extracting and constructing meaning through interaction, and involvement with written language (Snow, 2002, p. 7) ".

Using Digital Stories in education

There are various methods of using digital stories in education. First, instructor decides creating them or having pupils create. Burmark (2004) found out combining images with text enhances learning process. Teacher-created stories can make use of presenting lessons in larger unit. This makes discussion easy. Researchers affirm teachers can use stories for recalling and understanding information. Although educational digital story shares digital storytelling in various characteristics, the difference is in purpose.

For pupils today, digital tools open a world of creativity and expression that is unique and ever broadening. Pupils can reach a wider audience than ever before. The ease of access to these technologies presents new challenges and expanding opportunities for K–12 pupils and teachers (Frazel, 2011). Pupils need to participate in reading process. They should read and find out meanings of texts. Pupils should be active organizers, not passive recipients.

Teacher's role while using digital stories

Nowadays, teacher becomes facilitator, a coach and a trainer who trains learners to develop a large number of cognitive, intellectual and affective skills. To do this, learners need to use technology – mediated instruction. Teachers still play a vital role in this digital age. According to Bull and Kajder (2004) state that in this world of technology teachers of English language should investigate that interconnect pupils´ digital knowledge with storytelling because "technology offers a number of opportunities for connecting classrooms with the world".

Ohler (2008) affirms that teacher is as a guide than the technician magician. It is important to focus on the story and not the technology. Using technology will not turn the role of the tutor upside down. In e-learning, the teacher is a facilitator; so, he or she must should encourage and support pupils.

Definition of terms

Digital stories

Snow (2002) defined the digital story as "a short (usually between 3 to 5 minutes) clip, which consisted of a series of still images, combined with oral and/or written text".

Digital stories are "a contemporary form of traditional storytelling". Digital stories can be funny, informative, analytical, or thought provoking (University of Houston, 2009).

In the current study, the researcher defined digital stories as "multimedia movies that combine photographs, video, animation, sound, music, text, and often a narrative voice".

Reading

Mikulecky (2008) defined reading as a thinking process where the reader consciously and unconsciously applies some strategies in order to understand the meaning which the author intends to convey through his writing. The reader compares information in the text to his prior knowledge and background information.

Reading comprehension

Snow (2002, 11) added it could be defined as "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language". Snow, also, proposed reading comprehension included three elements: "the reader who is doing the comprehending, the text that is to be comprehended, and the activity in which comprehension is embedded"

Deutsch (2005) configured as "the process of extracting and constructing meaning through interaction and involvement with written language".

The researcher defined reading comprehension as process in which the pupil passes the level of merely identifying letters and words to interaction between text and meaning.

2. Research problem

Several studies revealed that preparatory school pupils had difficulties in reading comprehension skills.

It is also important the value of integrating technology in classes specifically to promote language skills. Researchers (e.g. Haroun, 2012; Sadik, 2008) affirmed its value and usage.

The researcher stated the problem of the study as the following:

Pupils at the preparatory school faced difficulties in skills of reading.

The researcher conducted a pilot study to estimate pupils' levels in the required skills. The researcher conducted a pilot test in the school year 2018/2019. It was found out that the percentage of pupils who scored less than 50% of the total mark of each skill was very low. So, pupils' performance in required skills was not satisfying and that they were inefficient in required skills.

3. Research Questions

The study problem was formulated in the following main question:

How far are digital stories effective in developing EFL preparatory school pupils' reading skills?

This main question can be classified into these questions:

1) What are the EFL reading skills necessary for preparatory school pupils?
2) How far do preparatory school pupils acquire the required EFL reading skills?
3) What are the characteristics of a suggested treatment based on digital stories to develop preparatory school pupils' English reading skills?
4) What is the effectiveness of using digital stories in the developing preparatory school pupils' English reading skills?

4. Research purposes

The purposes of the study are:

1) determine appropriate skills for EFL preparatory school pupils.
2) develop selected reading skills suitable for EFL preparatory school pupils.
3) determine how far digital stories can develop the reading skills of EFL preparatory school pupils.

5. Research significance

This study is expected to be beneficial in the following aspects:

1) helping teachers to use digital stories for developing EFL preparatory pupils' reading comprehension skills.
2) providing a checklist of EFL reading comprehension skills that can be helpful for teachers of English language in constructing different reading comprehension tests.
3) Providing curriculum planners with a non- traditional way of teaching lessons that may enhances teaching as a whole.

6. Review literature

The following review shows a number of researches on the reading skills in general and the usage of digital stories.

Studies about developing EFL reading skills

Yasin (2002) examined the reading skills required for third prep pupils to read "The Reader". The results of the study showed the importance of the treatment in handling "The Reader", the short story associated with the third year prep stage textbook. Pupils' reaction and participation in the experimental treatment showed satisfaction and enthusiasm. In spite of the positive findings, few pupils expressed that they were not interested in the activities because they were not going to be tested in them.

Ibrahim (2007) conducted a study aiming at designing project for improving reading and writing skills for secondary school first graders. The design utilized in this study was two control-experimental group pre-post test study. The method followed in performing the experiment was task-based oriented method. The subjects of the study were one hundred secondary stage pupils classified into 2 groups. The study revealed that there is a need for utilizing such program for developing reading and writing skills for secondary stage first graders.

Mohamed's research (2008) was about interactive storytelling techniques in teaching English short stories upon first year secondary school pupils' English and writing skills. Tools of study included a listening test and a writing test. Analysis of data using t-test showed the group that used digital story surpassed the group that used traditional method on the tests of the listening and writing skills.

Ezz El-Arab (2012) investigated extended reading for improving the EFL reading ability and vocabulary acquisition of first year secondary pupils. The sample for this study origina1ly included 80 female pupils who were enrolled in the first year secondary stage during the academic year 2011/2012 in the first term. The researcher excluded pupils who didn't attend the post test and only counted in her statistics pupils attended both the pre and post test. This study revealed the effectiveness of the treatment.

Studies related to digital stories and instruction

Sadik (2008) carried out a study on digital stories for engaging pupils' understanding. Pupils were motivated to create their digital stories. He found out pupils designed the digital stories did perfectly in their projects. Also, their stories were designed according to the technical and pedagogical attributes of digital stories.

According to Alameen (2011), presented a project for pupils to design digital stories, shared and evaluate them by Voice Thread. Digital stories encourage learners to work with each other.

Studies related to digital stories and developing EFL skills:

Dadour (2004) presented a proposed interactive-reading program. It was for developing the reading skills and the empathic feelings of prospective EFL (English as a foreign language) teachers. The participants were a group of 70 prospective teachers of English. They were classified into 2 groups (n=35): experimental and control. It was concluded that the proposed program proved to be effective for reading skills and empathic feelings, in favor of the group that studies the program.

Verdugo and Belmonte (2007) carried out a study for improving listening skills by using digital stories. Findings indicated the group that used digital stories surpassed the control group in post administration.

Darwish's study (2011) investigated the effects of using a story- based program taught through the discussion method on improving the first year faculty of arts pupils reading skills. There was evidence of superiority of the group that handled the treatment in comparison with the group that used a traditional mode of teaching.

Vinogradova, Linville and Bickel (2011) investigated digital stories as pupil-centered projects and offered applicable recommendation. Researchers concluded that pupils can create the project, determine the subject.

Haroun (2012) presented a study to determine effectiveness of teaching digital stories on primary pupils' speaking skill. The researcher depended on applying eleven digital stories downloaded from the British council website. . The administration was in second semester, in a governmental school, on one class of grade primary five. This study revealed a development in the pupils' EFL speaking skills. Thus, the use of digital stories was effective for teaching speaking skills.

Rosalia and Artigliere (2012) studied the effects of pupil learning when pupils created the digital stories EFL classroom in the middle school. Rosalia and Artigliere created five digital story projects for seven months. Sixteen pupils participated in this project. The findings indicated that the pupils made significant and measurable improvement in their writing, reading, speaking self- confident and self-assess

skills. It was concluded that supporting the project-based learning shows the effectiveness in reading and writing skills.

It can be concluded that digital stories have been improved comprehensive literacy skills of pupils.

7. Research method

7.1 Participants

The participants of the main study were divided into two groups: an experimental group and a control group. The first experimental group was taught using digital stories. The control group was taught using the usual method. Each group consisted of 40 pupils.

7.2 Design

The researcher adopted the quasi-experimental design for administering the digital stories and testing the effectiveness in developing the pupils' reading comprehension skills. The researcher used experimentation to administer the proposed treatment. It was used to test the effectiveness of the suggested treatment in developing the participants' reading performance. Experimentation in the current study went as follows:

Two intact groups were randomly assigned. The first group pupils were presented digital stories. The second group used the regular way of teaching. The pre- test was presented to the two groups before the treatment. The researcher used One Way Analysis of Variance (ANOVA) to compare the results of the two groups.

7.3 Instruments

The following instruments were designed by the researcher:

- Reading comprehension skills questionnaire.
- A pre-post test of EFL reading comprehension skills.

8. Analysis & discussion

Concerning the participants of the studies, the previous studies were applied to all ages. Some of them were conducted for preparatory stage such as Yasin (2002). Other studies were conducted in the middle school such Rosalia and Artigliere (2012). Other studies were conducted in Junior Secondary schools such Ibrahim (2007) and Ezz El-Arab (2012). Thus, Digital stories are effective.

Different tools were used in these studies, which helped preparing instruments. Some tools used in the mentioned studies include reading test as in the study of Ezz El-Arab. The Test of Reading Skills was used in Dadour's study to check effectiveness to proposed interactive-reading project.

8.1 Procedures

To answer the study questions, the researcher adopted the following steps:

To answer the first question which is "**what are the EFL reading skills necessary for the preparatory school pupils?**", the researcher followed these steps:

- reviewing of literature and previous studies related to this study.

- reviewing of the EFL objectives to identify the reading skills appropriate to preparatory school pupils.

- preparing a list and designing a questionnaire given to the jury members.

To answer the second question which is **"how far do the preparatory school pupils have the required EFL reading skills?"**, the researcher followed these steps:

- preparing a pre-reading comprehension test to measure the pupils' reading comprehension skills.

- presenting the pre-reading comprehension test to a panel of jury and modifying it according to their guidance.

- applying the pre-reading comprehension test on the study's group, extract the results and doing the statistical analysis for the data.

To answer the third question which is "**what are the characteristics of a suggested treatment based on digital stories for developing preparatory school pupils'EFL reading skills?"**,the researcher followed these steps:

- reviewing of literature and previous studies related to this study.

- preparing the digital stories that develop the selected reading comprehension skills.

- Presenting the digital stories to the experimental group.

To answer the fourth question which is "**What is the effectiveness of the suggested treatment in developing the preparatory school pupils' EFL reading skills?"**,the researcher followed these steps:

- preparing a reading test to measure the pupils' reading skills, presenting the test to a panel of jury and modifying according to their guidance.

- applying the pre-post test on the study's groups, extracting the results and doing the statistical analysis for the data.

- extracting the results, giving suggestions and proposing recommendations.

The study results showed the superiority of the second group who used digital stories in comparison to pupils who received a regular teaching mode. This was reflected in the high score of the pupils of the second group obtained in the post-administration. Therefore, this study concluded the effectiveness of using digital stories for developing pupils' reading comprehension skills.

It can be concluded that digital stories have been improved comprehensive literacy skills of pupils. The field of research in reading is still open to further studies. Researcher benefited from the review of literature and the findings of the previous studies in formulating the hypotheses, procedures and recommendations.

8.2 Assumptions of the treatment

- Reading skill, not technology, is the focus of the treatment. Nevertheless using computers have obvious advantages over the traditional method.

- The treatment ensures the pupils feel responsible for their study and confident of the progress they are making. The pupils could loop backwards and forwards to whichever they wanted by clicking the button "back" and "previous" for the activities used in the sessions.

- The learner should be the center of the learning process. The learner-centered approach supposed that the pupils are not identical passive containers to be filled with knowledge. Thus, the individuals were assumed to be capable of active and independent learning.

- Therefore, teachers are not just transmitters of knowledge, but rather providers, facilitators, assistants, helpers, promoters, simplifiers of knowledge. Hence, the more interactive the instruction, the more effective the learning outcome is likely to be.

8.3 The lesson plan followed thorough the treatment

Major steps were used in every lesson for both the first and the second experimental groups. The researcher designed a plan for each lesson. The main steps followed in each lesson were:

- Identify the objectives of each lesson

    In each lesson, the researcher determined what pupils should learn.

- Warm up activities:

    The researcher used various activities to prepare the pupils for the lesson and attract their attention.

- Pre-reading the story:

    The researcher discussed the meaning of the new vocabulary and the new structure with the pupils. The most important thing about this stage is to be confident in handling the task. This, in turn, gives pupils exposure and above all, creates interest in doing the task.

- Reading the story:

    Pupils were asked to read the story.

- During reading the story:

    The pupils answered questions that arise as they read the text. They also predicted the conclusion of the story.

- Post-reading the story:

    Pupils were asked questions related to the story.

- **Evaluating:**

    The evaluation techniques used in the treatment consisted of both formative evaluation and summative evaluation.

8.4 The Treatment and the procedures of the study:

The following is a description of the steps followed by the researcher in designing the current treatment.

1- Reviewing the previous studies concerning with developing reading skills,

2- Reviewing the previous studies associated with designing digital stories,

3- Surfing various educational web sites specialized in teaching and learning English using digital stories,

4-Determining the purpose and rationale of the treatment,

5-Stating the aims and the objectives of the treatment,

6-Determining the assumptions of the treatment,

7-Determining the duration of the administration,

8-Describing the digital stories treatment,

9-Describing the content of the treatment,

10- Illustrating the sessions of the treatment, and

11-Describing the activities, the procedures the questions, evaluation followed in the treatment.

9. Conclusions

It is important for the teacher to select stories that grasp pupils' attention and involve them in the action of the stories. In addition, the teacher should plan out well-organized steps in presenting stories and follow-up activities that focus on developing reading skills. The present study reached the following conclusions:

Adopting technology, in teaching English, needs human-ware more than hardware or software. Technology and web-based learning should be driven by the actual, real and suitable for pupils' needs not vice versa.

In adopting digital stories in learning process, the role of both the teacher and the learner has changed. In other words, the teacher's role is to facilitate, present questions and give comments. The teacher's role as a guide, manager, motivator and feedback-provider increased in importance. Nevertheless, learners are no longer dependent or passive recipients in their learning.

Digital stories are considered flexible tools because teachers can use a range of tools from the simplest to the most complicated ones. They can fit most teaching purposes. This depends on purpose and level of the pupils.

It was concluded superiority of the two experimental groups who used digital stories in contrast with the control group pupils who received a regular teaching mode. Therefore, this study concluded that using digital stories is positive in developing pupils' skills.

The field of research in reading is still open to further studies. The review of literature and the findings of the previous studies were helpful in formulating the hypotheses, procedures and recommendations.

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Web quality evaluation of Jordan's e-government

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Abstract

The web quality is very critical factor for the usability and the performance of E-government. It contributes to the success of web applications. Quality evaluation is vital for efficient usage of information. In this paper we evaluate and account the quality of web service for developing strategies that improve web services, and this will increase the user satisfaction. In our approach we consider Jordan's e-government websites.

Keywords— Web quality, E- government, Quality Evaluation, tools.

I. INTRODUCTION

Website is very important in the online businesses planning; so usefulness and ease of use website design will lead to efficient and effective target business. Quality website is important to increase visitor satisfaction, because if the visitors can't find what they want in the website they may not use the website again. The services of organizations are transformed from traditional to electronic way because the continuously growth of using information technology applications and internet.

Web quality evaluation is necessary for efficient usage of web information. It is very critical for the performance and usage of websites since it contributes to the success of web-based applications. The quality evaluation considers the quality of both website and e-service, since customers that use governmental sites are either seeking for information or require a service. In general, quality dimensions depend on the attributes of provided services such as usability, security; availability, and customer satisfaction.

Development policies continuously expand their action scope, considerable combining between public services implementation and the population needs. Many organizations start to evaluate the quality of their services. The European Commission (2013), announced that the Internet is used by 46% of European people for looking for a job, public library used, services of tax submitting, birth registering, and many other services, because 80% of European people believe that using e-services will save time, 76% said that it is flexible, 62% hope for saving money by using e-services. So that measuring quality of online services of government becomes very important for improving services and people satisfaction.

The structure of this paper is organized as the following: Section II reviews some of the recent related work. Methodology and steps of work are detailed described in section III. Section IV presents experimental result and finally, section V concludes the paper.

II. RELATED WORK

Akincilar and Dagdeviren [1] considered a hybrid Multiple Criteria Decision Making MCDM to evaluate the quality of hotels websites especially 5 stars hotels in Ankara. MCDM refers to the analytic hierarchy process for the analytic hierarchy process for weighing criteria and ranking the alternatives.

Yu, Guo, Guo, and Huang [2] evaluated web sites related to E-commerce to rank them using AHP and fuzzy TOPSIS. Aydin and Kahraman [3], in the same field of evaluation, proposed a fuzzy AHP approach to

rank alternatives considering qualitative and quantitative factors. They compared their results to fuzzy VIKOR.

AlBalushi, T., Ali, S., Ashrafi, R. and Al Balushi, S [٤] used web diagnostic tools to evaluate the e-services quality in Oman, they considered the accessibility and performance dimensions for the evaluation.. Website accessibility depends on designing, developing, and modifying a suitable websites for all users. There are some factors ensure accessibility for websites such as functionality, content type, environment, and design of websites. A number of popular websites were chosen for the evaluation, seven websites were chosen. Websites performance affected by many key factors includes page size, load time, average speed, performance grade, speed, response time, and total number of requests. For the performance measuring of chosen websites; the researchers conducted multiple tests at four different times (days and weeks). Moreover, among recent studies, Hung and Tang [٥] interested in evaluating electronic service quality using consistent fuzzy method to distribute weights.

The study of [٦] searched for factors that lead businesses in Jordan to adopt e-government. The researchers used 113 responses for determining the relationships the website quality, website design and adoption of businesses e government. This study predicts that the support for quality website can lead efficient and effective usage of e-government in businesses planning. The researcher used Statistical Package for Social Science (SPSS) for determining the relationship between variables. They used Cronbach alpha method to test reliability for variables. There is strong correlation between website quality and a usage behaviours e-government, and between website design and a usage behaviors e-government.

Ip, Law and Lee [7] used AHP Fuzzy approach to evaluate the functionality of hotel websites .the purpose was to define the most important criterion according to the "Reservation Information". Cebi [8] proposed an Integrated MCDM technique to evaluate the design parameters of websites according to web site type with Decision Making Trial and Evaluation Laboratory (DMTEL) method. Those parameters were discussed to help designers adopting good websites that meet users' satisfaction.

A summary of the literature and related works examined in this paper is provided in Table. It shows the methodology, procedures, results and limitations.

TABLE I.   LITERATURE ANALYSIS AND SUMMARY

Citation	methodology	Procedures	Results	Limitations
Lehemets, 2012	user-centric eGovernment quality management to evaluate 21 criteria	Dimensions Reliability, Efficiency, Citizen Support, and Trust	Comprehensive eGovernment quality assessment model	Lack of user-surveys focused on user-centric e- and user-satisfaction
Jati & Dominic, 2009	Measure the quality of e government web site of five Asian countries	Use online web tools performance and webpage analyser	Egovernment websites neglect performance and quality	No aware of ultimate determinant of quality from cultural perspective
Bikfalvi et al., 2013	Develop holistic service quality assessment tools	Tested 5 participant local	Satisfaction a good level value	Monitor user perception innovation's adoption
Garcia et al., 2005	Propose guidelines to design egovernment sites	Evaluate, services to 127 Brazilian egovernment sites	Sites need to highlight security and information veracity	The evaluation is not at all an accurate and it needs to refine

Choud rie et al., 2004	Evaluative e-Government portals from accessibility, quality and privacy issues	Use standard web diagnostic tools to examine three criteria	Motivate to hurry embracing the first phase of e-governance	Significant work still needs to make the portals 'best practice'

III. DEVELOPMENT OF E-GOVERNMENT QUALITY

E-government means using the communication and information technologies by governments to improve quality of their services provided to companies, citizens, and other governmental bodies [9].

The e-government services quality analysis is based on many dimensions includes website design, responsiveness, reliability, information availability, privacy and ease of use. E_ government service provides online channel for transaction provision, for example paying the bills and obtained the building permits. The services provided by governments is incessant so several Governments in the world offer the electronic services strategies more than services. There are many criteria used to evaluate quality of web:

1) *Website design:* the appearance and technical operation of websites.
2) *Reliability:* Delivering the services on time and this cause citizen satisfaction.
3) *Responsiveness:* The government service is useful, fast, and efficient.
4) *Security/Privacy:* Protecting personal data for web user.
5) *Ease of Use:* E-Government Websites should be user friendly.
6) *Information:* the e-Government service should provide accurate, understandable information.
7) *Customization:* the provided services should focus on consumers.
8) *Communication:* It means using many communication channels for easier access to services.

IV. METHODOLOGY

In our methodology, we use different diagnostics tools to evaluate the Jordanian e-government websites. Table shows the tools we used for evaluation and assessment. These tools are web optimization tool, w3 validator, link popularity, tawdis, website grader, and speed insights.

TABLE II.	WEB DIAGNOSTIC TOOLS
Tool URL and Name	**Goal of use**
http://www.websiteoptimization.com	Webpage speed analyser online service
http://validator.w3.org/checklink	Monitor broken links in the HTML code
http://validator.w3.org	Validate the HTML code
www.linkpopularity.com	Determine the amount and quality of links that are made to a single website from many websites
www.tawdis.net	Test the criteria to be accessed by people with disabilities
https://website.grader.com/	Page size, Page requests, Page speed, Browser caching/
https://developers.google.com/ speed/pagespeed/insights/	Optimizing website for mobile contributes to valuable traffic
http://nibbler.silktide.com/	Accessibility, experience, marketing & technology

A. **Website Grader**

Website Grader is powered by Hubspot and it focus on four essential metrics.

1) **Performance**

Optimizing website's performance is crucial to increasing traffic, improving conversion rates, generating more leads, and increasing revenue. The performance depends on Page size, Page requests, Page speed, Browser caching, Page redirects and Compression.

2) **Mobile**

Traffic from mobile devices is growing fast. Optimizing website for mobile contributes to valuable traffic, leads, and revenue. This can be done by maintaining the Responsive and Viewport.

3) **SEO**

SEO refers to Search Engine Optimization. Website should be easy for users to discover—and easy for search bots to understand—with better page titles, headings, Sitemap and Meta descriptions.

4) **Security**

Protecting websites from attacks strengthens the confidence of visitors that the site is trustworthy and authentic.

B. Nibbler

Nibbler, on high-level, audits website for more than 24 parameters and specifies the overall score. It scans for essential factors including: accessibility, experience, marketing & technology. Each metric has a score, and valued by list of parameters.

1) *Acce*ssibility: How the website is accessible to mobile and disabled users?

2) *Expe*rience: How the website is satisfy for users?

3) *Mar*keting: How popular and well marketed the website is?

4) *Tec*hnology: How well designed the website is

To evaluate each metric, Nibbler analyser considers a list of parameters including: Code quality, Meta tags, Headings, URL format, Mobile, Internal links, Server behaviour, Images, Facebook page, Twitter, Social interest, Analytics, Popularity, Amount of content, Incoming links, Page titles, Freshness. Table 1 bellow obtains the overall score of the analysis.score 70% and above is rated high quality.

C. PageSpeed Insights

PageSpeed Insights is a tools developed by google, page performance for desktop and mobile device can be measured by PageSpeed Insights. The URI is fetched twice once for mobile and once for desktop and provides a score which ranges from 0 to 100 points about how pages applied best performance practices and give a suggestions to make that pages faster, it provides three categories to classify web pages:

1) *Good*: Most of performance best practices are applied by web page and a good user experience should be delivered.

2) *Needs work*: Some of common performance optimizations are missing by web page and a slow user experience may result. Some recommendations have to be investigated.

3) *Poor*: The page is not optimized and is likely to deliver a slow user experience. Many recommendations have to be prioritized and applied.

D. *Website optimization*

In this part, four tools are used for analysis and collecting data. Website optimization tool for Webpage speed analyser online service. W3 validator is used to monitor broken links in the HTML code and validate the HTML code. Further, link popularity tool aims to determine the amount and quality of links that are made to a single website from many websites. Finally, tawdis can test the criteria to be accessed by people with disabilities. The factors and standardized specifications of websites undertaken for evaluation are listed in Table III.

TABLE III.   WEB QULITY EVALUATION .

Tested Factor	Quality Standard
Average server response time	< 0.5 second
Number of component per page	< 20 objects
Webpage loading time	< 30 second
Webpage size in byte	< 64K

V. **RESULTS**

In this section, we induct the main outcomes and findings resulted from the analysis of web portals of Jordanian government. Table IV shows encoding of the website names and their links. We made this step for design of the paper and for more appropriate display if information.

TABLE IV.   WEB PORTALS ENCODES

E- government website	Web link	Code
The Ministry of Public Works and Housing	http://mpwh.gov.jo/	MPWH
Ministry of Energy	http://memr.gov.jo/	MEMR
Ministry of Transportation	http://mot.gov.jo/	MOT
Ministry of Sector Development	http://www.mopsd.gov.jo/	MOPSD
Parliamentary Affairs	http://moppa.gov.jo/	MOPPA
Ministry of Information	http://www.jmm.jo/	JMM
Irrigation and water ministry	http://www.mwi.gov.jo/	MWI
Ministry Of Agriculture	http://www.moa.gov.jo/	MOA
Ministry of Labor	http://www.mol.gov.jo/	MOL
Ministry of Environment	http://www.moenv.gov.jo/	MOENV
Ministry of Youth	http://www.moy.gov.jo/	MOY
Ministry of Finance	http://www.mof.gov.jo/	MOF
Ministry of Planning and International Cooperation	http://www.mop.gov.jo/	MOP
Ministry of Awqaf and Holy	http://www.awqaf.gov.jo/	AWQAF

Sites		
Ministry of Industry, Trade, and Supply	http://www.mit.gov.jo/	MIT
Ministry of Municipal Affairs	http://www.mma.gov.jo/	MMA

Table IV presents the results of analyzing 16 web portals for Jordanian government. The five factor measures viewed in the table are server response time loading time, web page size, markup validation, and broken links. The number of websites the shows good results according to the standardized and threshold numbers is 1 regarding the server response time. Whereas the number of websites that conform loading time is 2. In terms of web page size, there is no website under this criteria and no achievement for standardized web page size. Moreover, 8 websites belong to the quality measure of number of components per page. The results indicate a low level of quality measure for 16 e-government web portals till 16/12/2017. For more details see the numbers in the Table displayed below.

TABLE V. WEB QUALITY EVALUATION

Web portal	Response time (s)	Load time (s)	Size (mb)	Markup Validation	Broken link(n)
MPWH	1.76	31.6	580	40	3
MEMR	0.98	43.0	896	14	8
MOT	1.16	67.3	748	14	1

MOPSD	1.59	28.8	950	13	5
MOPPA	0.42	56.2	829	12	13
JMM	0.84	120	925	24	17
MWI	0.75	45.6	667	7	8
MOA	0.83	50	827	56	0
MOL	1.46	58.9	628	28	25
MOENV	1.34	90.2	885	47	39
MOY	0.54	63.8	467	65	4
MOF	0.62	80.1	792	35	15
MOP	1.36	116	732	18	23
AWQAF	1.47	62.5	947	20	9
MIT	1.72	20	268	5	0
MMA	0.73	76.4	448	39	16

Results

TABLE VI.   WEB QUALITY EVALUATION .

E-government website code	Site Analyzer					
	Nibbler	Website Grader	Page Speed			
			Mobile	Level	Desktop	Level
MPWH	50%	59%	1.00	Good	0.78	Needs work
MEMR	71%	62%	0.99	Good	0.99	Good
MOT	63%	27%	0.00	Poor	0.00	Poor
MOPSD	61%	29%	0.49	Poor	0.42	Poor
MOPPA	64%	62%	0.38	Poor	0.45	Poor
JMM	52%	49%	0.53	Poor	0.68	Needs Work
MWI	44%	34%	0.90	Good	0.72	Needs Work
MOA	58%	62%	0.33	Poor	0.31	Poor
MOL	70%	62%	0.34	Poor	0.40	Poor
MOENV	64%	62%	0.00	Poor	0.00	Poor
MOY	52%	49%	0.29	Poor	0.28	Poor
MOF	40%	45%	0.25	Poor	0.32	Poor

MOP	55%	74%	0.36	Poor	0.42	Poor
AWQ AF	60%	30%	0.48	Poor	0.52	Poor
MIT	72%	55%	0.49	Poor	0.57	Poor
MMA	67%	53%	0.47	Poor	0.54	Poor

VI. CONCLUSIONS

The main goal of our work is evaluating some of e-Government in Jordan, we use five tools: Nibbler, Website, Grader, and PageSpeed insights to evaluate quality for 16 Jordanian web pages. Based on Page Speed tool, 3 websites are good in mobile; these websites are The Ministry of Public Works and Housing, Ministry of Energy, and Irrigation and water ministry. Consequently, 3 websites needs work in desktop; these web sites are The Ministry of Public Works and Housing, Ministry of Information, and Irrigation and water ministry. The rest of websites are poor in mobile and desktop. Further, 1 website is good in desktop which is Ministry of Energy.

Likewise, only 1 website is good in server response time which is Parliamentary Affairs. Furthermore, Ministry of Sector Development and Ministry of Industry, Trade, and Supply are good in loading time. In terms of web page size, there is no website under this criteria and no achievement for standardized web page size. Moreover, Ministry of Energy, Ministry of Transportation, Ministry of Sector Development, Parliamentary Affairs, Irrigation and water ministry, Ministry of Planning and International Cooperation, Ministry of Awqaf and Holy Sites, and Ministry of Industry, Trade, and Supply websites belong to the quality measure of number of components per page. The results indicate a low level of quality measure for 16 e-government web portals till 16/12/2017.

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Work Ethics and Their Impact on Corporate Image in Business Organizations

At Jordanian Telecommunication Companies

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Abstract:

The efficiency and activeness of the human being is both affected by and connected to their deep faith and conviction of the original values and high standard ethical examples which motivate them to raise their knowledge and behavioral and scientific skills to improve the performance. So, the ethical values affect the behavior exactly in the same way it represent scientific conceptions and theories. This study aims to introduce the ethics of public job and their impact on the management of corporate image. The study found that there is a strong effect to the exclusion of work ethics combined in the desired mental image. It has been shown that the two variables of work ethics related to justice and impartiality, time constraints have been influential while the results did not show for these two variables. The study recommended the necessity to develop a clear vision regarding the ethics of work as well as to support it within its strategic objectives.

Keywords: work ethics, public job, corporate image, performance.

Introduction

Loud voices have been raised for management ethics point in the last three decades of the past century. and due to the dramatic increase in ethical scandals and the spread of administrative and economical corruption as a result of the regression of the regional systems, the confronting procedures have become nothing more than tightening the censorship circles and intensifying the conduct rules.

The globalization of business has become an issue that cannot bear silence as a response, and the monocular-stander based business vision should be confronted with a vision that never let down any of their considerations the ethical standards of administration which are of no less importance than profitability and efficiency standards. As a matter of fact, the efficiency of an organization lies outside; for the customer is the centre of profit, whereas in the inside of the organization lies the centre of cost.

The efficiency and activeness of the human being is both affected by and connected to their deep faith and conviction of the original values and high standard ethical examples which motivate them to raise their knowledge and behavioral and scientific skills to improve the performance. So, the ethical values affect the behavior exactly in the same way it represent scientific conceptions and theories. The big challenge for our organizations is not only to be able to interpret knowledge and technology, but also to acquire the ability to form new institutional, civilized ethical values in the framework of our heritage, the culture of the society and the heavenly laws. This can never be done without studying the society, and all that is connected to it of negative or positive phenomena in the administrative units. This is why it is a must to get acquainted with the two leaps of positive values and ethical examples which enable the support of the positive aspects and overpowering the negative ones, plus preparing an effective strategy for development and committing to it, supporting it or modifying it whenever it is necessary. This will be of great help to put the organizations on the right path towards development and keeping up with the development movement.

The public job ethics are presented through how committed the employee is towards their job duties as they are determined by law; for the employer is considered to be restricted with the work rules and instructions. The most important characteristic of a public job is perhaps the employee's caring of the public interest and the acceptance of public service. The question that arises in this context is (what is a public job?). In fact, the studies related to public jobs have occupied a considerable position in the realm of public administration

and administrative law and have made its way through the economical and administrative minds all around the world.

Some, however, have linked the ethics of work to the mental vision; as organizations, currently, and amid a feverous competition are so careful, and more than ever, of the image kept in the mind of all those with whom they deal. This is because every organization has got its own mental image in the minds of all those who deal with it whether it likes it or not and whether it planned for it or not. There is no doubt that the good corporate image can contribute a lot to the success and continuity of an organization. (Gregory, 1999).

As a matter of fact, the corporate image is formed basing on the perceptions of those who have an interest in specific business of the organization to an extent that it makes this image affects the reactions of the people of interest in specific businesses, productions and services of the organization; that is why organizations are supposed to manage their corporate image to enable themselves of creating a positive or even a perfect mental image which in turn is supposed to achieve an advantage over their competitors, a market share and an attraction of efficient clients and employees and investors…etc. Based on what was mentioned above, this study is an attempt to evaluate the effect of work ethics in managing the corporate image in the Jordanian telecommunication companies.

Research Question:

There is a noticed shortage in the Arabic studies that directly aims to evaluate the relation between work ethics and managing the corporate image although work ethics has become a common practice. Hence, this study represents a motive to perform such a study whose main issue is centered on the fundamental question about the possibility of the existence of any relation between work ethics and managing the corporate image within telecommunication companies. For a further clarification of the research question, the following questions this study aims to answer:

1. How far are telecommunication companies interested in the implementation of work ethics?
2. Is there any impact of work ethics (respecting the laws and regulations, justice and impartiality, speed and workmanship, respecting the time) on managing the corporate image (subjective, desired, and realized).

Research Significance:

Work in Business Corporation requires employees' commitment to the behaviors and rules of the administrative job; for being uncommitted to the ethics of the public job will have an effect on the reputation of these organizations.

The significance of this study could be summarized as this;

1) The importance of this study comes from the increasing significance of this topic which has been strongly refocused in the world of business corporations of whatever size or kind, as this topic supports the future heading of the organizations discussed in this research to do more towards work ethics.

2) The importance of this study also comes from the significance of the communication sector which is considered as one of the most sectors participating in countries economy, in addition to the services which it offers for a huge layer of the society; the thing which was a motive for this study to pick up such a sector.

3) The theoretical and field importance which the results of the research can contribute with especially in filling up the lack in these two issues on the level of the Arab world in general and in Jordan in specific.

4) The significance of this study could also be traced to the possibility of making the decision makers in the appointed firms acquainted with this study reaches of results and recommendations that contributes in helping them picture programs and policies which are more civilized, more convenient and more keeping up with the current business environment.

Research Aims & objectives:

This research aims to:

1. Introducing the ethics of public job and management of corporate image.
2. Knowing the extent of commitment by the employees of the ethics of public job and its impact on managing corporate image.
3. Identifying the statistical differences among the personal characteristics of the sample members of this study towards practicing work ethics in the companies under study.
4. Offering a set of suggestions and recommendations that participate in motivating the employees to stick to their job ethics to be part in improving the corporate image

First: Ethics Meaning:

The linguistic book reader can find that the word ethics refers to temper and nature and generosity and religion. Of these meanings Alfaqir and Zabadi say: ((the word ethics in its form is temper, nature, generosity and religion)). The same thing is said by Ibn Manzour about the two forms of pronunciation of the Arabic word.

Ibn Manzour, then, explains that by saying (originally, this word Ethics is a reflection of the inner image of the Human, and it is himself, and their description and special meaning are but the creation of their outer image with their meanings and descriptions; and they have both good and bad descriptions)). In the same context, AlRagheb AlAsfahani says: ((Ethics are originally one thing)). (Hamdan, 2009, p11).

Second: Ethics Terminology

Abdulkarim Zaidan speaks of a definition as this: (we can identify Ethics as a set of meanings and stable characteristics in the being, and according to its light and scale can the act of the human be good or bad, and hence to do it or not).

It is no secret that this definition is the same of Al Ghazali with indiscrete additions that are found in the good idea that the stable meanings and characteristics in the self are the basis upon which we build our decisions whether to do something or not.

There are many definitions of work ethics, and it will be sufficient for us to mention three of them:

1. Researchers identify them as the principles and standards which are considered the basis of the desirable conduct by the members of the work and to which they pledge to commit. (Al Sakarnah, 2009). Plus, each profession has behavior manners, or courtesy manners which are general rules for social traditions and conduct in the realm of the certain job which was appointed by the organization's panels and rules in order to practice the profession. Disobeying or crossing these rules will subject their doer to the reluctance and rejection by the other members, and it could even reach to an extent of applying punishment or retribution upon him sometimes.

2. They are the principles and standards which are considered an authority of the desired behavior for the members of the same profession, and upon which the society depends in evaluating whether their performance is good or bad.

3. They are a general set of beliefs, values and principles which govern the individual's behavior in making up the decisions and distinguishing between what is right or wrong, what is Haram or Halal.

Work ethics cannot be separated from the person's general ethics. On the contrary, the individual must deal with work problems according to the standards of general ethics in which he believes.

Researchers and specialized professionals in management have various opinions about the concept of ethics, so we see (Bayers, and Rue, 1989, 47) have pointed out that ethics are the standards and principles that govern the behavior of the individual and the group. The subject of ethics is also associated with the questions that are related to what is right and what is wrong and with the ethical duties of the individual. This definition goes along with what (Slocum and Hellriegel, 1996, 146) have pointed ; for them ethics are sets of moral rules and dogmatic principles which govern the behavior of individuals and groups about the matters of right and wrong, and they set the standards about what is good and bad in action and conduct as well. In the same context we find that (Gaiden, 1981, 46) doesn't strip ethics from the effects of the situation; going along in that with (Nigro, 1984, 316). The first of them has pointed out that ethics are (the

application of what the individual believes in through doing a certain behavior in a certain position), whereas the second has said that ethics are sets of written principles which order or stop certain conduct under certain circumstances, for they are the reflections of the values that the individual undertakes as standards that govern their behavior. Again, (Kinoski, and Carrett, 1992, 5) didn't step away from these definitions in describing ethics; for, in their opinion, they are personal beliefs that a person holds in what is related to regular and irregular conducts, plus being a referring to the individual's motifs and intentions in looking to what is right and wrong in behavior. On the other hand, we find that (Portillo, 1993, 6) has, in the description of ethics, has linked between the private rules of conduct and the higher values to which the individual is holding up; he argued that these values, traditions and behavior are controlled by whether the person has integrity or not and by how far he is cognitively realizing the values and traditions seen by the society. (Griffin, 1999, 154) agrees with all the above mentioned researchers in describing ethics as he says they are (the personal beliefs of an individual in what is related to right and wrong, good or bad).

Some of these values are:

1- Honesty	6- loyalty
2- Fair	7- helping and cooperation
3- Obedience to regulations	8- self control
4- Mercy	9- trueness
5- Respecting others	10- bravery

Prophet Mohamed (pbuh) said: (I was only sent to complete the best of Ethics). Plus, good manners are of the description of the believers by mighty Allah in his higher verse: ((The believers are those who feel fear in their hearts when they hear the word of Allah, and who get more believing when they hear the holly verses and who depend on their mighty Allah)) (Al Anfal, 2). And in another verse: ((The repentant, worshippers, thank givers, wonderers, kneelers, prostrates, who order the good and prevent the bad and who preserve the disciplines of Allah, foretell those are in good)). (Al Taubah: 112). And in another higher verse: ((The worshippers of Allah who walk moderately on Earth and if the ignorant talked to them they would say

Peace)). (AL Forqan: 36). The existence of these characteristics is a proof of the existence of good manners and their absence gives the opposite result.

The Importance of Ethics for the Human Being:

1. They help building the individual's life and forming their characters.
2. They are the standard which govern the human actions in their public lives and control and direct their behavior.
3. They represent standardized judgments in evaluating the individual's and others' behavior in certain actions and conduct and determine if they are positive and desirable or not.
4. They protect people from perversion,
5. They play a central role in solving the arguments and making decisions among individuals.
6. They preserve the social cohesion and adjust its goals, stable principles and higher values.
7. They act as behavior steer wheels for individuals and communities and protect the society from social perversions; the society can never be right without them.

Ethical Factors:

1) Respecting Laws and Regulations:

Public job duties come from the state legislation starting with the constitution and what results from it of laws, regulations and directions. Civil service employees are, in general, nothing but the representatives of Law and work in a unique framework and a special position in society. They also offer some services upon which the supremacy of Public Law, System, citizens' health and their development depend. Employees of the public administration must stick to the administrative laws, directions and procedures, and must keep the nature of public supremacy; taking into consideration that these laws should be flexible and developable in response to the job's requirements and circumstances. It is so clear as well that the management should enroll administrators and technicians to take part in making these laws and directions to ensure their integration and compatibility. (AL Harahshah, 2003).

The ethical theory is considered to be having an ongoing connection with law. The government is responsible for giving strength and power to its subjects, which is why the public service employees should respect this right that is given to them and to transfer that into the duty of respecting the Law and working by it.

2) Respecting the Values and Traditions of the Society and the Public:

Ethics are a set of traditions, norms and values which the society agrees upon. These values are, in turn, a set of rules and standards which enable the individual to differentiate between right and wrong, and hence they are an administrative behavioral pattern. this means that the individual behavior, which is a result of the ethics of the individual himself, is subjected in the end to the judgment and explaining by the members of the society, taking into consideration that civil service divisions are part of this atmosphere, and that what is spread through this atmosphere of ethical conceptions are transferred to the administrative apparatuses through the interaction among individuals.

The conformity between the individual's values and those of his organization has a direct connection to the with the positive psychological direction he carries for his job, making his number one goal is to take care of the public calling for raising the awareness among auditors making them understand that the importance of their role in dealing with any form of using the power by the employee of public service. Thus, we can see that our traditions and norms have played a basic role in forming up our administrations; that is why we should pay much attention to them because they are but the work that we practice daily. (AL Harahshah, 2003).

3) Justice and Impartiality:

If there is justice, then it will demonstrate the equality, values and basic morals which should be existing in public management as annihilating intermediaries, nepotism, and the family, clan and regional interrelations, plus applying the standards and basics of selecting and equality in offering the bonuses and attaching that to effort.

Imam Ali (content be upon him) said: ((may the most beloved acts to you be the most convenient in right and the most public in justice)). He also said: ((be fair to Allah and to people of yourself, and of your family relatives and whom you like of your people)). Furthermore, Aristotle's theory of justice assured the importance of offering public services to the citizens without bias and under the same terms.

The public job is a job for those who enjoy having the characteristics of honesty, morality, objectiveness, justice and integrity. It is also not acceptable to distinguish between citizens on the basis of religion, area, race or political affiliations; for justice strengthens the employees emotions towards the organization in which he operates and develops the spirit of belonging to it. (Al Harahshah, 2003).

4) Respecting the Time and Adherence to Work:

An employee must dedicate his time to serve the organization which he works in and not to waste his time on works that are of no benefits to it. He should also be adequate in time both in attendance and leaving. It mentioned that Imam Omar once said: ((don't delay today's job till tomorrow; for by doing this many works will be on your shoulders, as you will never know which to start with and which to delay)).

It is also not acceptable to get involved in private matters with the other colleagues and paying visits with them because this will be I kill off and a steal from the management time; this time is paid and accounted for in front of Allah and the conscious.

5) Belonging and Loyalty to the Organization:

An employee must work to raise the value of the government job and to be faithful and affiliating to the work that he is doing at a time and not to attack the state policy because it is there to serve the citizen and to build the nation. It is also very important for the employee to be loving his job and jealous for the benefits of the job because this is considered in his own sake and for his own making of a living; this is why he should preserve this source of income and fight with a strong, valorous and undisputed hand all those who try to harm or attack him or his job or even hurting his job with insult either in saying or

action. The good governmental employee is the one who is proud of himself and dignity. For this particular reason, our efforts should focus on building up the pride in him and keeping it that way.

6) Love of Work:

Employees must be committed to the morals of hard toil; this is represented in the ongoing and serious work and trying to deal with the retarded and droopy and to encourage the superior and the eminent. The employee must do his best to make his work successful in what could please mighty Allah and what pleases his conscious.

7) Politeness and Curtsey:

The employee in the public administration should represent all the general good qualities like seriousness, hard work, honesty, integrity, wisdom, faithfulness and justice, so as it is for disciplinary, patience and response. He must also deal with the public in a good manner and never lose nerves in case of anger or in case of restlessness. Plus, he must never make faces before people or deny the job before them. He must also have patience in case he is in trouble or having a family issue, cooperating with his colleagues and bosses working with teamwork spirit. We mustn't forget his respect to his religion and to the traditions of his society, acting kindly in solving the problems with his personnel and working to manage the misunderstanding that might take place among the members of his team.

8) Speed and Craftsmanship:

The procedures of the job must never be hampered whether intentionally or unintentionally, with the exception of stepping aside from some of the procedures that are unjustified and hamper the time and accomplishing the assignments in a limited time and through a functionality that is so perfected and in harmony with the appointed standards. We shouldn't miss here concentrating the thought on the accurate accomplishment and what it carries of organizing and coordinating of the administrative body, establishing the perfect atmosphere to work actively and in the needed efficiency.

9) Preserving Possessions:

As it is such a serious job, the employee must be careful with the public money as he is with his own, making good use of it and considering the country's financial capacities, and never to act unless through the available budget attracted by the passion to fulfill the public interest rather than merely fulfilling the tightly personal economical and social interests.

Consequently, it is a duty to take care of the public money because by this we could achieve a preserving of the rising in the society and of his conscious, as it is an honor to his earnings. How beautiful it is to see each other leaving the stationary we use in the work place and not to use it in our own business or at home whether intentionally or unintentionally.

10) Productivity:

 Some say it is so good to have a competition between the governmental sector along with all its administration and the private sector because this will inflame the enthusiasm among employees to innovate new work styles seeking the development of productivity. This entails a perfection in doing the jobs as much as possible and dedicating all the time for the job with the ultimate necessity of applying the characteristic of production and efficiency in the least expenditure possible; taking into consideration that the human conduct is so important in the production process and that depending on technology and the machines that are run by it can never be sufficient without the intervention of the human concept. (Al Harahshah, 2003).

Corporate Image: Concept, Significance and Kinds:

Many organizations have realized the importance of a good corporate image, so they invested huge sums of money in an attempt to root it in the minds of people of interest. Gregory (1999) believes that each corporation has its own corporate image, and that it has a great influence on the success of the organizations, whereas Ferrand and Pages (1999) see that the corporate image is capable of founding a value and that it has an impact on the consumer's behavior, as it involves a certain cognition among them and that this cognition might not represent the objective reality. Boyd (2001) on the other hand

believes that corporate image for business corporation contributes in the improving the behavior and individual positions of the employees, whereas, Boyle (2002) looks at it as a treasure that is hard to get and easy to lose. Gregory (1999) says that this realization has a great impact on the organizations' capacity to survive under the complex current circumstances and sever competition.

Smith (2001) assures that it is so important for an organization to distinguish itself from the others so that they can still be able to compete, especially in the conditions of Globalization that we are living nowadays. He specifies those organizations which offer the same kinds of services like banks and airline companies which are so typical in providing services. In order to distinguish themselves from others and to possess the necessary competitive quality, Greener (1991) says that organizations should plan for a corporate image that centers on precise differences like service, accountability, speed of delivery and safety. Patrick (1999) and others, on the other hand, see that organizations' corporate image is one of the most important intangible resources which supports the continuity of the competitive nature they own.

Smaizien and Orzekauskas (2006) look at corporate image as one of the strategic assets which lead to finding a competitive nature and encouraging surroundings to maintain and develop the organization. A lot of writers use the terms of corporate image and fame as they are alike, while others consider that there is a difference between the two in that the corporate image may involve negative meanings and that there is fabling and maintenance which hold no truth. On the other hand, they focus on managing the impression instead of the expected corporate image and use the word fame instead of the cognitive corporate image.

Van Heerden (1999) has clarified that the personality of the organization is made through its vision, message, direction, management style, history and goals. This personality which forms the identity of the organization is a set of codes which the organization uses to identify itself to the people like products, services, logo, buildings and others. All these signs make up the corporate image of the organization (Argenti, 1998). So, the corporate image is considered as a set of impressions among the audience of this organization (Carter, 1982), and as soon as the corporate image is made positively, fame will be the result.

Managing Corporate Image:

Gottschalk (1993) tried to gather many of the scientific situations that assure the importance of managing the corporate image, especially in the face of crisis and dealing with them. Planning for a positive corporate image is considered insufficient in the advertisements campaigns unless the organization is working on managing them to make sure of their positivity. As for the cases of crisis, Reid (2001) sees that ignoring or trying to mislead the media can have a negative effect. He also notices that in the worse conditions, admitting the guilt, and then announcing of the procedures that should be followed to solve the problem and stating that this will never happen again could be the best way to strengthen the corporate image. He also advises to put emotions aside, and to appoint an official spokesman for the company- the same thing is hinted by Puchan (2001) - to send a clear, precise and coherent message that must be transparent and highly honest. As corporate image affects the behavior of stakeholders, organizations fight over developing and managing their corporate images for many reasons such as: energizing sales, establishing the good intentions of the organization, creating an identity for the employees, affecting the investors and the financial institutions, enhancing good relations with the government and the society and special stakeholders groups and decision makers plus others in order to create a competitive position.

Sobnosky (1999) believes that the main reason to invest in the corporate image is to get the competitive advantage because the corporate image attracts the investments and consumers and it pulls a good quality of employees. In Hammerstein's opinion (1997), one of the basic purposes in serving humanity is to establish a positive and lovely relation with the outside society; it also aims at fulfilling care and respect in the eyes of the outside society (Lookie, 1999).

In a study by Goldsmith et.al (2000), they have reached to the fact that the consumers point of view to the organization with what it offers of products and services is affected by the credibility of this organization; a thing that can be identified as (believing the trueness and honesty of the organization and how experience and capacity can provide the product or the service which the consumer desires), and this credibility will affect the customer's will to buy.

A lot of organizations embrace a set of values which represent their supposed identity. However, these values might not be realized by the employees, so the corporate image among them might be different from what it is planned to be. Ashforth and Kreiner (1999) see that a bad job results in a social stigma (perceived corporate image), as it is the case with cigarettes manufacturers (Byrne, 1999). For instance, Philip Morris Company has done a group of initiations to improve it corporate image such as stopping the cruel T.V. sketches that may make the company look in a harmful way, as Weissman (2000) says, and this fights the negativity of the perceived corporate image or what was fixed in the minds of people.

Based upon what we have mentioned above, the corporate image was classified into three main categories, which are:

***The personal corporate image*:** it is the sensation of the organization of itself (Ind, 1990). Dowling (1994) believes that building a successful corporate image requires the organizations to start first with changing their personal image, as the change in the perceived image lies on the shoulders of the workers in the organization, and the connection between them and the audience will either strengthen or weaken the corporate image which they have.

Planned (desired) corporate image: it is what the organization desires to deliver to the public about itself (Ind, 1990). Borger (1999) pointed that the organization should plan for its image in its audience's minds so well that it can show clearly and without ambiguity. Marchand (1999) gives an example of AT&T Corporation which fancies itself as a group of heroic symbols patient and capable of overcoming the difficult conditions to link the entire world with each other.

Perceived corporate image: it is the perceptions, sensations and relations (Synder, 2000). Perception among people reflects their reality; as it is their personal cognition which affects their buying decisions. Studies show that perceived image is what the employees think and feel and that the expected image is what the corporation is doing; the perceived image is what the consumer thinks about and what affects his behavior towards this organization.

The Reciprocal Relation among the Three Dimensions of the Corporate Image:

Cassidy (1999) considers the corporate image as one of the assets and that it attracts the consumers, workers and investors. He points that it consists of six elements: emotional attraction, social responsibility, merchandise and services, work environment, vision and leadership and financial performance. These six elements are related to the three dimensions of the complete corporate image i.e. the personal, expected, and perceived image. This means that the work environment, vision and leadership represent the corporate image, whereas the emotional attraction (which indicates that the corporation is adorable, admired and respected) represents the desired corporate image. Social responsibility (which is doing well to the society like financial support and sponsoring various activities) represents both the expected and the perceived image. The financial performance, on the other hand, expresses the success of this organization and that the customers would always like to be linked with the successful. This represents the three corporate images put together.

Earlier Studies

First: Arabic Studies:

In a study done by Al Anzi (2002) in order to recognize the effect of job morals on minimizing the chances for administrative corruption within the governmental jobs, and which was a theoretical study, he reached a set of results:

- The challenges that face the implementation of the management morals are the result of interior and exterior effects, as the exterior challenges do not represent as much danger on the individuals as the danger that is represented from effects from inside the organization.
- Separation of policy and management which was set in a many of the organizations, has led to the consecration of the moral neutrality principle among workers and dealing with them as members who can let go of their beliefs and principles and blend in with the policies of the organization they are working in, regardless of the moral outcomes resulting from such policies.
- Management ethics have never got the sufficient interest in most of the Arabic organizations; the thing that appears clearly in the weakness of moral training programs and the hesitation of these organizations to accept the studies and researches which involves the field of management ethics.

As for the recommendations, they are:

1. The principle of management ethics is no longer a subjective one that is related to the individual or that cannot be affected. On the contrary, management, today, desperately need to leave this principle and to look at management ethics as one of the financing behavioral resources that will lead to a social profit and that is not less important than the rest of the kind of Capitals that the organization counts on to achieve profit.

2. Managements should seek to represent the reality of the management professionalism in order to establish traditions and norms and the originalities of the profession just like other professions and to pass the concept that is considers management as the specialization of those who have no specialization. The study done by Alzyadat and others under the title (*Management of Corporate Image of the Jordanian Corporations in under the Reality of Social Responsibility, a Field Study on the Jordanian Telecommunication Corporations) in 2008,* aimed at discovering how far these companies are interested in the implementation of social responsibility towards stakeholders (local community, employees, customers, suppliers, environment, shareholders, …etc) and in identifying the level of differences in the sample study members realization of the extents of social responsibility; a thing that is related to their personal variables. This study also aimed at evaluating the effect of social responsibility in running the corporate image. Data of the field study was raised through a questionnaire that was administered among the managers and employees who attend their jobs in the headquarters, plus the customers of the four companies in the city of Amman. The statistical methodologies were used the thing which was convenient for the questions and hypothesis of the study like the descriptive and inferential statistics. The findings showed the following:

A. No significance impact of social responsibility along with all its dimensions gathered on the corporate image.

B. A significance impact of social responsibility along with all its dimensions gathered on the desired corporate image.

C. No significance impact of social responsibility on the perceived corporate image, while there was a significance impact of social responsibility towards suppliers which had a significant impact on the perceived corporate image.

The study which was done by Al Skarnah in 2010 which was entitled (*Work Ethics and its Impact on the Administrative corruption, A Field Study on the Jordanian Ministry of water)* had a sample study of (120) and reached the following:

- There is an inferential statistical relation between public job ethics and the increase of administrative corruption in the Jordanian Governmental Institutions.
- There is an inferential statistical relation between public job ethics and the laws and regulations that control the Ministry.
- There is an inferential statistical relation between job satisfaction and commitment to the ethics of public job.

As for the recommendations, they are:

- ✓ The importance of doing the necessary procedures to encourage the employees to be strictly committed to job ethics.
- ✓ The necessity of emphasizing the laws and procedures related to the implementation of public job ethics.
- ✓ The importance of fighting administrative sagging and corruption spur the employees for bribery and the ignorance of the public job ethics.

Second: Foreign Studies:

A study by Narwal (2007) aimed at exploring the social work ethics adapted by the Indian Banking Sector, which are expected to help them enhance their general behavior. The study showed that banks have a positive point of view towards social responsibility initiations, and that they have focused basically on education, the balanced growth of the different social classes and health, in addition to the most important focusing which includes the customer's satisfaction and environmental marketing.

As for the study done by Management Collage in the University of Waikato in New Zealand (2004) on 811 company of all sizes, we find it aiming at how far are these companies committed to work and environment ethics. The study reached a set of results the most important of which was that the majority of these companies paid both money and time to projects in the local community they operate in, and that two thirds of them paid contributions to charities. It also showed that three quarters of these companies are interested in the field of training and at the same time offering financial aids for the employees to finish their studies. Finally, the study showed that these companies depend in appointment decisions on what reaches to 57% diversity.

Another study by Hooghiemstra and Van Manen (2002), and which was applied on 2500 of the largest companies in The Netherlands, showed the importance of the increase of social and ethical issues in the dialectical judgment of the corporation, and that such issues could put the non-executive managers in trouble when they do not share their opinions neither with Members of the Supervisory Board nor with Board of Directors.

Results

The study showed the impact of the work ethic in managing the mental image of companies' cellular communications. We can summarize these study findings as follow;

-The results of the study show that there is a high level of interest by Jordanian cellular operators in ethics. This indicates the increased awareness of the companies for the importance of the ethics of work, and that doing more is considered of the new competitive game rules imposed by the current business environment, particularly in the telecommunications sector. This result is the same as the study result done by (Anselmsson and Johansson, 2007). The study was done by a work team headed by Canada Natural Resources Task Force.

-The results of the study showed that Jordanian cellular operators improve their mental image by distance

-The study concluded that there is a strong effect of the exclusion of the work ethics combined in the mental picture by its dimensions. This is a natural result and not surprising; the key to survival, sustainability and excellence necessarily depends on. Distinguished organizations offer their work, and charitable

contributions guarantee their way to gain a positive mental image in the eyes of those who deal with them from the stakeholders and which led to success and excellence.

-The study showed that there is no effect of the exclusion of work ethics combined in the mental image.

-The study found that there is a strong effect to the exclusion of work ethics combined in the desired mental image. It has been shown that the two variables of work ethics related to justice and impartiality, time constraints have been influential while the results did not show for these two variables.

-The results of the study showed that there is no effect of the dimensions of the work ethic combined in the mental picture،with the exception of the ethics of work related to the licensing of laws, regulations, speed and workmanship, which showed significance.

Recommendations:

In light of the findings of the study, the following recommendations can be made:

1 - Double the interest of Jordanian cellular operators to work ethics, especially in light of growing the needs and of the community on the one hand, and other responsibilities that have become ethical. It is legally incumbent on business organizations, on the other hand, to diversify their methods and methods of work

2. It is necessary to develop a clear vision regarding the ethics of work as well as to support it within its strategic objectives.

3 - The results revealed the absence of a significant impact on the ethics of work in the management of mental image self, which means the need for more companies to remove the ethics of work related to (laws and regulations, Justice and impartiality, speed and workmanship, time constraints), because the recruitment or retention of competent staff depends Necessarily on the extent to which companies are responsible for the ethics of working towards their employees, as well as building bridges Trust necessarily depends on the degree to which companies are responsible for their employees.

4 - Jordanian mobile operators are required to do more in managing their mental image of all three types,

Self-interest, awareness and awareness through the most active philanthropy.

5. Holding conferences and workshops by Jordanian cellular operators as a means of communicating with them

Employees, to develop a sense of responsibility by companies and employees towards adhering to work ethics.

6 - Requires Jordanian cellular operators to build an advanced evaluation system, in order to depend on the evaluation of their performance On the activities of ethics work periodically, which will enhance the possibility of continuous improvement in Its ethical obligations to work.

7 - Establishment of a specialized department in human resources management means work ethic to enhance the positive mental image Especially in light of the intensification of competition among companies, and what can affect the image Mental, and increases the chances of excellence.

8. Jordan's mobile telecom companies have targeted the field of education, which encourages

But in other sectors, in order to assess the extent to which other companies are complicit in ethics

The work.

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