

# **The Use of Capital Budgeting Techniques in Evaluating Investment Projects: An Applied Study on the Palestinian Corporations Working in Gaza Strip\***

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## ملخص:

تهدف هذه الدراسة إلى التعرف إلى مدى استخدام أساليب الموازنة الرأس مالية في اختيار المشروعات الاستثمارية والمعوقات (إن وجدت)، التي تحد من استخدام أساليب الموازنة الرأس مالية في شركات المساهمة العامة بقطاع غزة.

ولتحقيق هذا الهدف، استخدمت الدراسة المنهج الوصفي التحليلي، وقد اشتمل مجتمع الدراسة على ثماني عشرة شركة مساهمة عامة، وهي جميع الشركات المساهمة المسجلة في وزارة الاقتصاد الفلسطينية بقطاع غزة. ووزعت خمسون استبانة على العاملين بأقسام الاستثمار أو الشؤون المالية بالشركات محل الدراسة، وبلغت نسبة الاسترداد ٨٠٪، واستخدم برنامج SPSS الإحصائي بغرض تحليل النتائج.

وخلصت الدراسة إلى أن الشركات المساهمة العامة بقطاع غزة تستخدم أساليب الموازنة الرأس مالية عند اختيار المشروعات الاستثمارية، وإن نسبة استخدام هذه الأساليب تتراوح بين ٦١ إلى ٨٠٪، بالإضافة إلى أن مؤشر الربحية هو الأسلوب الأكثر استخداماً في هذه الشركات، في حين أن أسلوب صافي القيمة الحالية هو الأسلوب الأقل استخداماً. هذا وقد خلصت الدراسة إلى أن هذه الشركات لا تستخدم متوسط التكلفة المرجحة لرأس المال سواء كان معدلاً أم غير معدّل في تحديد معدل الخصم اللازم لاستخدام بعض الأساليب. كما وجدت الدراسة أن الشركات تأخذ بعين الاعتبار العديد من العوامل قبل اعتماد أحد أساليب الموازنة الرأس مالية أساساً للمفاضلة بين المشروعات الاستثمارية، وأهم هذه العوامل مدى توافر البيانات والمعلومات اللازمة لاستخدام هذا الأسلوب، كما أظهرت الدراسة أن هذه الشركات تفضل الأساليب التي تركز على التدفق النقدي، وتلك الأساليب التي تقتنع بها إدارة المنشأة.

من ناحية أخرى، أظهرت الدراسة وجود عدد من المعوقات التي تقوض استخدام أساليب الموازنة الرأس مالية في شركات المساهمة العامة بقطاع غزة، أهمها عدم توافر البيانات والمعلومات اللازمة لاستخدام هذه الأساليب، إضافة إلى عدم التأكد المصاحب لاستخدام أساليب الموازنة الرأس مالية، في حين أن وجود مؤسسات خارجية لإدارة الاستثمارات هو المعوق الأقل تأثيراً على استخدام أساليب الموازنة الرأس مالية في هذه الشركات.

ولقد اقترحت الدراسة مجموعة من التوصيات أهمها ضرورة التوسع في استخدام أسلوب صافي القيمة الحالية بشكل خاص، واستخدامه أسلوباً أساساً لتقويم المشروعات الاستثمارية لما له من تفوق نوعي على باقي الأساليب، وبخاصة أنه يقيس الزيادة في رأس مال المساهمين.

## ***Abstract:***

The objective of this study is to explore the use of capital budgeting techniques in evaluating investment projects and the obstacles (if any) that hinder the use of capital budgeting techniques in the Palestinian public corporations in Gaza strip.

For this purpose, the study used the descriptive analytical approach and the population of the study included all the eighteen Palestinian public corporations registered in the ministry of economy-Gaza. Fifty questionnaires were sent to financing affairs and investing departments employees. The response rate was 80% and the study used the SPSS program to analyze the results.

The results indicated that the Palestinian public corporations in Gaza strip use the capital budgeting techniques when selecting investment projects and that the use of these techniques was in the range from 61 to 80%, and that the profitability index is the most used technique while the net present value was found to be the least used technique. The results also indicated that the Palestinian public corporations in Gaza strip do not use the weighted average cost of capital (whether adjusted or unadjusted) for determining the discount rate needed in the use of some techniques. The study also found that the Palestinian corporations in Gaza strip consider many factors before adopting any capital budgeting technique as a basis for comparing different investment projects and that the availability of data and information for the company, followed by the preference of the CBT that concentrates on the cash flows and the management's conviction of the technique was found to be the most important factor that is considered before adopting a technique of capital budgeting as a basis for evaluating proposed investment projects.

On the other hand, the results indicated that there are many obstacles that hinder the use of capital budgeting techniques by the Palestinian corporations in Gaza strip and that the unavailability of the necessary data and information, followed by uncertainty surrounding the use of the capital budgeting techniques, is the most important obstacle hindering the use of capital budgeting techniques whereas the existence of external institutions for managing investments was found to be the least effective factor in undermining the use of capital budgeting techniques .

The study suggested a set of recommendations, foremost of which is to increase the use of the net present value when choosing among alternative investment projects as it measures the addition to the stockholders' wealth.

## 1. Introduction:

Companies are often encountered with the decision to make large expenditures. However, for any firm, expenditures are not the same. They can be divided into two types, the first type is the current expenditure which is incurred frequently by the firm, relates to a specific period and is relatively smaller in amounts such as the electricity expenses, the phone expenses, and the salaries of employees.

The second type is the capital expenditure which is a nonrecurring expenditure that relates to long periods of time and it usually entails the disbursement of large amounts of dollars such as investments in fixed assets, capital improvements, and new companies (Alnaaemi, et al., 2010).

According to Horne, (2004), when a business firm makes a capital investment, it incurs a current cash outlay for benefits to be realized in the future. Hence, decisions of capital expenditures, such as the decisions to invest in fixed assets, are of a particular importance to any company as they usually involve large capital outlays and the consequences of these decisions impact a firm's operations for a very long time. Corporations often make decisions costing billions of dollars for capital expenditures. Thus, decisions to make such investments can lead to bankruptcy if made without the proper understanding of capital budgeting procedures (Lawrence, 2002).

On the other hand, firms usually have a capital budget ceiling, or constraint, on the amount of funds available for investment during a specific period of time; this situation is called capital rationing (Horne, 2004). According to Ross et.al., (2006), capital rationing is defined as the situation that exists if a firm has feasible projects but cannot obtain the necessary financing. Such a constraint is prevalent in most of the firms, particularly in those that have a policy of financing all capital expenditures internally and avoiding resorting to the capital markets (Horne, 2004). Thus, a firm cannot undertake all the appealing feasible projects if it has a capital budget constraint. This, in turn, places more pressure on the firm to undertake the best available capital investments.

Hornrgren et al., (2005) defines capital budgeting as "the long-term planning for making and financing investments that affect financial results over a period longer than just the next period".

In essence, the capital budgeting process defines the set and size of the firm's real assets, which in turn generate the cash flows that ultimately determine its profitability, value, and viability (Gervais,2009). The process of capital budgeting is similar to the securities valuation process in that both forecast a set of cash flows, find the present value of those flows, and then make investment if the present value of future expected cash flows exceeds the investment's cost (Ehrhardt & Brigham, 2011).

Moreover, the capital budgeting decision involves the planning of expenditures for a project with a life of more than one year, and usually considerably longer and requires extensive planning (Block and Hirt, 2011). Decisions made based on capital budgeting techniques should maximize owners' wealth. But how do you tell if selected projects will create value in advance can be answered through the use of capital budgeting techniques (Lawrence, 2002)?

A number of capital budgeting techniques are available to financial managers of either small businesses or large businesses. The generally accepted techniques are Net Present Value (NPV), Payback Period (PP), Profitability Index (PI), Internal Rate of Return (IRR), and Accounting Rate of Return (ARR).

Although each one of these techniques has its own advantages and disadvantages, this research is not intended to differentiate between the various methods of capital budgeting techniques but rather to investigate the use of capital budgeting techniques in the Palestinian corporations in Gaza strip as tools for evaluating investments.

## **2. The Problem of the Research:**

In light of the preceding emphasis on the importance of the proper selection of the capital investments and how the capital budgeting techniques contribute to this process, it has been necessary to find out how the issue of capital investment decisions is being dealt with in the Palestinian corporations, particularly those operating in Gaza strip.

*The problem lies in the following main question:*

**“To what extent are the capital budgeting techniques used in the investment evaluation processes of the Palestinian corporations in Gaza strip”.**

*The following secondary questions arise from the main question:*

1. Do the Palestinian corporations in Gaza strip use the capital budgeting techniques when choosing among investment projects?
2. Do the Palestinian corporations in Gaza strip consider factors (such as the cost of using the technique and the simplicity and convenience of the technique) before adopting a capital budgeting technique as a basis for comparing different investment projects?
3. Are there obstacles that undermine the use of capital budgeting techniques by the Palestinian corporations in Gaza strip for choosing among investment projects?
4. Are there differences at the significance level ( $\alpha= 0.05$ ) in the responses about the use of capital budgeting techniques in evaluating investment projects due to organizational factors (Such as qualification, specialization, job, experience, and classification of the firm)?

### **3. The Importance of the Research:**

*The importance of the research stems from the following:*

1. Highlighting the importance of the capital budgeting techniques and their role in evaluating capital investment projects to make a good investment decision that, in turn will improve the current position of the companies that use them and boost them in the market in spite of the increasing competition to undertake the best available investment projects.
2. The benefits gained from knowing whether the capital budgeting techniques are used in the Palestinian corporations in Gaza strip, the capital budgeting techniques that are used (if any), and the obstacles that undermine the use of capital budgeting techniques.

Thus, the research will positively affect the Palestinian national economy through providing it with a realistic view and incentives for the growth, prosperity, and continuing improvement of the economy. The research highlights the importance of the proper selection of investments and which is to activate the investment sector.

## 4. Research Objectives:

*This Research has multiple purposes:*

1. To explore whether the capital budgeting techniques are used in the Palestinian corporations in Gaza strip.
2. To know what the most commonly used capital budgeting techniques are, if any, by the Palestinian corporations in Gaza strip.
3. To explore the most important obstacles (if any) that undermine the use of capital budgeting techniques in the Palestinian corporations in Gaza strip.
4. To know whether the WACC (adjusted or unadjusted) is used for determining the required rate of return from investments in the Palestinian public corporations in Gaza strip.
5. To investigate the factors that are taken into consideration (if any) before adopting any capital budgeting technique as a basis for comparing different investment projects in the Palestinian corporations in Gaza strip.

## 5. Research Hypotheses:

1. **The First Hypothesis:** The Palestinian public corporations in Gaza strip use the capital budgeting techniques when choosing among investment projects.
2. **The Second Hypothesis:** The Palestinian corporations in Gaza strip consider many factors (such as the cost of using the techniques and the simplicity and convenience of the techniques) before adopting any capital budgeting technique as a basis for comparing different investment projects.
3. **The Third Hypothesis:** There are many obstacles that hinder the use of capital budgeting techniques by the Palestinian corporations in Gaza strip when evaluating investment projects.
4. **The Fourth Hypothesis:** There are no differences at the significance level ( $\alpha= 0.05$ ) in the responses about the use of capital budgeting techniques in evaluating investment projects due to organizational

factors (Such as qualification, specialization, job, experience, age, and classification of the firm).

## **8. Theoretical background:**

This section attempts to give a clear idea about the topic of capital investments. For this purpose, the section addresses the following points: Characteristics of capital investments, objectives of capital investments, pillars of capital investments and the basic assumptions and limitations of capital budget.

### **Characteristics of Capital Investments:**

*There are many characteristics of capital investments (Shabeeb, 2009):*

- Capital investments' decisions result in a large financial outlay for a long time as well as the sunk costs that are to be paid whether the capital investment project has been undertaken or not.
- Capital expenditures are highly risky, since they do not yield any returns in the short run, in addition to the fact that any failure in estimating the project's future cash flows would affect the value of the project.
- Capital investment depends heavily on the process of scanning and evaluating future events which is a complicated process that requires a high degree of accuracy.
- Capital investment requires conducting accurate studies to compare among alternative investment opportunities.
- It is difficult to cancel the project after it has been executed due to the magnitude of the money invested which may lead to incurring a loss.

### **Objectives of Capital Investments:**

*The objectives of capital investments are (Alwadi, et al., 2008):*

- Obtaining an appropriate return: the investor usually desires a return that is compatible with the size of his or her invested capital.
- Maintaining the actual value of assets: through exploring investment alternatives that guarantee that the invested capital will be intact.
- Obtaining an increasing continuous income: through increasing the



- return on invested capital.
- Having sufficient liquidity: that is having the minimum limit of liquidity needed to satisfy the obligations from the production process, the requirements of the work, and any emergent liabilities that arise during the production process.
  - Creating a competitive advantage: through raising the capacity of the project and reducing the unit cost.

### **Pillars of Successful Capital Investments:**

*The pillars of successful capital investments project are as follows (Kidawi, 2008):*

- Adopting the proper strategy: this depends on the decision maker's priorities are revealed by his/her investment preference curve which is composed of the investor's desires towards profitability, liquidity, and certainty, in addition to other factors specific to the investor.
- Following the right steps to decision making: to make a rational investment decision, *investors should follow the Five-Step Decision-Making Process in addition to meeting a variety of rules and criteria such as:*
  - The availability of multiple investment alternatives: that is to select the investment from a number of different alternatives that could be from the same industry or from other industries, this is to give the decision maker the flexibility required for making the right decision.
  - Convenience: that is to select the investment which is more appropriate and compatible with the company's capabilities, experience, and facilities.
  - Knowledge and experience: investors should have the appropriate experience and knowledge to be able to make investment decisions or have financial consultants to help them in making the decisions.
  - Decreasing risk through investments' diversification: diversifying investments reduces the risks inherent with the decision.
- Marinating the trade off between risk and return: the investment decision is related to two variables: risk and return; investors should have a higher return on riskier projects.

## **Basic Assumptions of Capital Budgeting Techniques:**

*The basic assumptions of capital budgeting techniques are as follows (Clark et.al.,1998):*

1. The primary function of management is to increase the value of the firm as reflected by the price of the common stock.
2. Owners have preference to current, as opposed to future cash flows.
3. Shareholders are risk averters.
4. In the evaluation of capital budgeting projects, the analysis is based upon the incremental cash flows directly attributable to the project.
5. Cash flow analysis may differ from accounting income reporting.
6. Since capital investment decisions rest upon multi-period estimates of cash flows, a formalized forecasting procedure is essential to the process.
7. The trend in asset acquisition by the firm indicates management's risk posture.
8. Every capital project has to be financed, and there are no free sources of capital.
9. Capital budgeting always involves allocating scarce resources among competing investment opportunities.

## **Limitations of capital budgeting techniques:**

*The preparation of capital budgets have several limitations as follows (Hanafi,2002):*

**The firm's strategy and objectives:** it is necessary for the firm to choose investment projects that meet its objectives, that are compatible with its overall policy and strategies, that maximize its value, that increase its market share, and boost its competitive advantage. Thus, the managers encounter the constraint of ranking the capital investments according to the firm's objectives and strategy.

**Financing (capital rationing):** determining the amount of money available for funding the capital investments, as well as specifying other

sources of funds that can be used (capital structure). The financing constraint determines a maximum limit for the investments to be undertaken, thus managers should strike a balance between the investments to be undertaken and the available funding.

Alnaaemi, and Altameemi (2009) suggested two extra limitations for capital budgets:

**Inflation:** the financial manager should take the inflation into consideration when estimating the cash flows. Given that the cash inflows are more exposed to inflation than are the cash outflows because the cash inflows are received over a longer period of time.

**Risks and uncertainties:** risks in capital budgeting are the possible changes in the cash flows of the projects. These risks are usually impounded in the decisions of capital budgeting using a risk-adjusted rate. Risks and uncertainties are of a particular concern to financial managers using CBT.

## 7. Previous Studies:

### 1. **Graham (2002)**, “How Do CFOs Make Capital Budgeting & Capital Structure Decisions”.

The purpose of this study was to analyze the current practice of corporate finance, with a particular focus on the area of capital budgeting and capital structure. For this purpose, the study conducted a comprehensive survey & solicited responses from approximately 4,440 companies and received 392 surveys, representing a wide variety of firms & industries. The survey results helped to identify aspects of corporate practice that are consistent with finance theory as they demonstrated that most respondents cited net present value and internal rate of return as their most frequently used capital budgeting techniques.

### 2. **Apap and Masson (2005)**, “A Survey of Capital Budgeting in Publicly Traded Utility Companies”.

The purpose of this study was to determine which capital budgeting techniques do the publicly traded utility companies in America use and to ascertain if they changed their emphasis on the use of capital budgeting techniques in the last ten years. For this purpose,

a survey was sent to 207 publicly traded utility companies asking questions concerning capital budgeting techniques used and changes to the techniques used. The results indicated that payback, net present value and internal rate of return are the techniques used most often. Perhaps the most surprising finding was that 27.3% of the respondents indicated that their companies do not use capital budgeting techniques.

**3. Hermes et al., (2007) ,”Capital Budgeting Practices: A Comparative Research of the Netherlands and China”.**

The purpose of this study was to compare the use of capital budgeting techniques of Dutch and Chinese firms from a comparative perspective to see whether economic development matters. For this purpose, data were obtained from a survey among 250 Dutch and 300 Chinese companies. The empirical analysis provided evidence that Dutch CFOs on average use more sophisticated capital budgeting techniques than Chinese CFOs do. At the same time however, the results suggested that the difference between Dutch and Chinese firms was smaller than might have been expected based upon the differences in the level of economic development between both countries, at least with respect to the use of methods of estimating the cost of capital and the use of CAPM as the method of estimating the cost of equity.

**4. Brijlal (2008) , ”The Use of Capital Budgeting Techniques in Businesses: A Perspective from the Western Cape”.**

The purpose of this study was to examine the use of capital budgeting techniques in businesses in the Western Cape province of South Africa. The study focused on small, medium and large businesses and investigated a number of variables and associations relating to capital budgeting practices in businesses in the Western Cape province of South Africa. The results revealed that payback period, followed by net present value, appears to be the most used method across the different sizes and sectors of business. It was also found that 64% of businesses surveyed used only one technique, while 32% of the respondents used between two to three different types of techniques to evaluate capital budgeting decisions. The findings show that the more complicated methods such as IRR and NPV are most favored by the large businesses as compared to the small businesses. The majority of the respondents believed that project definition was the most important stage in the capital budgeting process. Implementation stage appeared to be the most difficult stage for the manufacturing sector whereas Project definition,

analysis and selection and implementation were generally rated as being the difficult stages by the retail sector. Project definition and analysis and selection were found to be the most difficult stages by the service sector. Most businesses used the cost of bank loan as a basis in capital budgeting and more than two thirds of respondents used non-quantitative techniques to consider risk when making a decision on investing in fixed assets.

5. **Abuermaela, (2008)** ,”The Capital Budgets and The Static Budgets in The Jordanian Public Industrial and Service Corporations “.

The objective of this study was to explore the use of capital budgets and the static budgets in the Jordanian public industrial and service corporations as well as specifying the advantages and disadvantages from using them. For this purpose, questionnaires were sent to 60 respondents who have held different jobs in the Jordanian public industrial and service corporations that included financial managers, heads of accounting departments, and accountants. The response rate was 85.7% and the results indicated that most of the corporations used the discounted cash flows methods that take into consideration the time value of money. But they also used the conventional methods that do not take into consideration the time value of money other than economic value added. The study recommended that the corporations should work on boosting the theoretical expertise of those who evaluate the capital investments and that corporations should increase their reliance on sophisticated capital budgeting.

6. **Abdulsamad (2009)**,”The Perception of Risk & Uncertainty & The Usage of Capital Budgeting Technique: Evidence from Public listed Firms in Malaysia”.

The purpose of this study was to investigate the perception of risk and the use of capital budgeting techniques in the public listed firms in Malaysia. For this purpose, the study conducted a postal survey where questionnaires were distributed to 800 public listed companies in Malaysia securities market. However, 83 questionnaires were replied and returned which represented a 10.83% response rate. The study found that most of the firms perceived the risk as the potential size of loss where the main source of uncertainties comes from changes in government policy. While large companies prefer to use DCF as compared to small companies, payback period is the most popular model for those who do not use DCF technique. Lack of competent staff & information were cited as the main reason for not using DCF. Consistent to the findings of other studies, the study shows that companies are more

inclined to use CAPM to estimate required return by investors. Overall, the results suggest that as far as perception of risk and uncertainty & the usage of capital is concerned, theory-practice gap still exists in Malaysia.

7. **Shinoda (2010)**, "Capital Budgeting Management Practices in Japan: A Focus on The Use of Capital Budgeting Methods".

This study examined the capital budgeting decision-making methods used by managers of listed companies on the Tokyo Stock Exchange in Japan. The purpose of this study was to discover how Japanese firms currently use capital budgeting methods. A survey in the form of questionnaire was conducted by sending 225 questionnaire to 225 people in charge of capital budgeting at firms listed on the Tokyo Stock Exchange in Japan, with a focus on capital budgeting practices. The results show that Japanese firms manage their decision-making by a combination of payback period method and net present value method.

8. **Khamees, et. al. (2010)**, "Capital Budgeting Practices in the Jordanian industrial corporations".

The purpose of this study was to provide additional empirical evidence about capital budgeting practices in an emerging economy. The study utilized a questionnaire and interview to collect data from respondents. The results showed that the Jordanian industrial corporations give almost equal importance to the discounted and undiscounted cash flow methods in evaluating capital investment projects. It appeared also that the most frequent used technique is the profitability index followed by the payback period. Based on these results, the study recommended putting a great attention to apply the concepts and techniques of capital budgeting in an appropriate manner. It also recommended to take into consideration the importance of information technology and its applications in capital budgeting.

9. **Brunzell, et. al. (2011)**, "Determinants of Capital Budgeting Methods and Hurdle Rates in Nordic Firms".

The purpose of this study was to investigate the choice of capital budgeting methods in five Nordic countries. The study combined survey data with a rich set of determinants, including ownership data, CFO characteristics, as well as financial data. The results indicated that the use of the NPV method as a primary method, and the sophistication of the capital budgeting, is related

both to firm characteristics, variables proxying for real option features in investments, as well as to CFO characteristics (age and education).

**10. Ekeha (2011)**, “Capital Budgeting Practices and Economic Development: A Comparative Research of Companies in Western Europe and West Africa”.

The purpose of this study was to analyze the use of capital budgeting techniques by companies in Europe and West Africa from a comparative perspective to see whether economic development matters in the choice of which technique to use. For this purpose, the study compared the use of capital budgeting techniques by companies in Europe and West Africa, & data were obtained from a survey between 225 European and 120 West African companies. The empirical analysis provided evidence that European CFOs on average use more sophisticated capital budgeting techniques than their counterparts in West Africa. At the same time, however, the results suggested that the differences between European and West African companies are smaller than might have been expected based upon the differences in the level of economic development between both economic blocs. At least, this is evident with respect to the use of methods of estimating the cost of capital and the use of CAPM as the method of estimating the cost of equity.

**11. Maroyi and Poll (2012)**, “A Survey of Capital Budgeting Techniques Used by Listed Mining Companies in South Africa”.

The purpose of this study was to investigate the use of capital budgeting techniques by South African mines listed on the Johannesburg Securities Exchange (JSE) and the reasons behind their use. For this purpose, questionnaires were conducted during the period from March to May 2011 to gather data. The results indicated that the net present value (NPV) (69%), the internal rate of return (IRR) (46%) and the payback period (PB) (23%) were the most common techniques used to evaluate major projects. The main reason for the use of the NPV was its superiority as it accurately takes into account the time value of money. The IRR method is used owing to its ability to rank projects and to indicate the actual return of each project, thereby informing managers whether an investment will increase the company’s value. The results indicated that the continual use of PB was based on the simplicity of the technique. The study recommended the use of other techniques such as, discounted payback period (DPB), profitability index (PI) and the real options which are valuable in determining the feasibility of projects.

**12. Daunfeldt and Hartwig (2012),** “What Determines the Use of Capital Budgeting Methods? Evidence from Swedish listed companies”.

The purpose of this study was to examine the choice of capital budgeting methods used by companies listed on the Stockholm Stock Exchange (SSE). For this purpose, a multivariate regression analysis on questionnaire data from 2005 and 2008 was used. The results indicated that both recommended and non-recommended methods are found to be commonly used, with large companies using capital budgeting methods more frequently than small firms. Moreover the study found that the choice of capital budgeting methods is also influenced by leverage, growth opportunities, dividend pay-out ratios, the choice of target debt ratio, the degree of management ownership, foreign sales, industry, and individual characteristics of the CEO. The results also indicated that the total use of capital budgeting methods is lower in Swedish companies compared to U.S. and continental European companies.

In general, the previous studies have investigated the use of capital budgeting in different countries. Most of the previous studies came to an agreement that the capital budgeting techniques are used when making capital investment decisions. But they disagreed as to the ranking of the most commonly used capital budgeting techniques as some studies cited the NPV as the most commonly used technique where as other studies cited the IRR or Payback Period. They also disagreed as to the difficulties and obstacles that are expected to undermine the use of capital budgeting techniques.

This research is an extension to the previous studies in that it addresses the use of capital budgeting techniques in evaluating investment projects. However, this Research differs from the previous studies as it is conducted on the Palestinian corporations operating in Gaza strip which is going through a difficult economic state. Thus, this research is to investigate the use of capital budgeting techniques in the Palestinian corporations in Gaza strip as tools for evaluating and selecting investments and is to explore the obstacles to their use.

## **8. Limitations of The Research:**

The Research was confined to the Palestinian corporations that operate in Gaza strip because of the difficulty in communicating with the Palestinian corporations operating in west bank due to the current political situation.



## 9. Research Methodology:

*The Research used two basic information sources:*

1. The secondary sources: those represent the sources used in the theoretical framework of the research such as books, the related Arabic and foreign references, periodicals, articles, reports, researches and the previous studies that addressed the same topic as well as searching and exploring different internet websites.
2. The primary sources: to deal with the analytical perspectives of the research topic, questionnaires were designed and used as the main tool to collect data by distributing them to the individuals working in the Palestinian corporations in Gaza strip.

### **Research Population and Sample Size:**

The population of the Research includes all the Palestinian public corporations registered in the ministry of economy-Gaza. The Research intended to include all the population of the Research; but after visiting the corporations, it has been found out that four of the corporations left Gaza strip, and one financial corporation was totally destroyed during the last Israeli assault on Gaza strip. In light of the preceding situation, the study included only ten corporations, which are the existing corporations that accepted to answer the questionnaires. A number of fifty questionnaires were administered to employees working in the investment and finance departments in those corporations and the research received back forty questionnaires. That is, the response rate was 80%. The following are the properties of the sample:

### **Personal Information:**

#### **1. Qualification:**

Table No.(1) shows that 20.0% from the sample individuals holds "Community college degree", 57.5% from the sample individuals hold "bachelor degree", 22.5% from the sample individuals holds "master degree".

**Table (1)**  
Qualification

Qualification	Frequency	Percentages
Community college	8	20.00%
bachelor	23	57.5%
master	9	22.5%
<b>Total</b>	40	100%

As indicated in the table, 80% of the respondents holds bachelor degree or master degree. This ensures that the respondents have the required educational qualifications to understand and objectively respond to the questions about the use of capital budgeting techniques. Which, in turn, give more credibility to the answers received from the sample respondents.

## 2.Specialization:

Table No.(2) shows that 50.0 % from the sample individuals specialized in “ Accounting”, 32.5 % from the sample individuals specialized in “Business administration” , 7.5% from the sample individuals specialized in “Economics”, and 10.0% from the sample individuals specialized in “Financial sciences” .

**Table (2)**  
Specialization

Specialization	Frequency	Percentages
Accounting	20	50%
Business administration	13	32.5
Economics	3	7.5
Financial sciences	4	10
<b>Total</b>	40	100

As indicated in the table, 50% of the respondents have an accounting major, and the other respondents specialized in related fields. This ensures that the respondents have the proper and convenient accounting background to understand and objectively respond to the questions about the use of capital budgeting techniques.

### 3.Job:

Table No.(3) shows that 7.5 % from the sample individuals hold the job of “staff member” , and 7.5% from the sample individuals hold the job of “head of department” , and 45.0% from the sample individuals hold the job of “manager” , and 40.0% from the sample individuals hold job of “ General Director “ .

**Table (3)**

**Job**

<b>Job</b>	<b>Frequency</b>	<b>Percentages</b>
staff member	3	7.50%
head of department	3	7.50%
manager	18	45.00%
general director	16	40.00%
<b>Total</b>	<b>40</b>	<b>100%</b>

As indicated in the table, 85% of the respondents are either managers or general directors. This ensures that the respondents are well-acquainted with the firm related information about the use of capital budgeting techniques in their firms.

### 4.Experience (years):

Table No.(4) shows that 12.5% from the sample individuals have years of experience that are “less than 5 years” , 42.5% “from 5 to 10 years” , 22.5% “from 11 to 15 years” , and 22.5% “More than 15 years “ .

**Table (4)**

**Experience (years)**

<b>Experience (years)</b>	<b>Frequency</b>	<b>Percentages</b>
less than 5 years	5	12.5%
5-10 years	17	42.5
11-15 years	9	22.5
More than 15 years	9	22.5
<b>Total</b>	<b>40</b>	<b>100</b>

As indicated in the table, 87.5% of the respondents has years of experience of at least 5 years. This ensures that the respondents have the required knowledge and awareness about the use of capital budgeting techniques in their firms.

## 5. Classification of the firm:

Table No.(5) shows that 52.5 % from the sample firms are classified as “industrial”, 32.5% are classified as “insurance”, 15.0% are classified as “service”.

**Table (5)**  
Classification of the firm

classification of the firm	Frequency	Percentages
industrial	21	52.5
insurance	13	32.5
service	6	15
<b>Total</b>	40	100%

As indicated in the table, the agricultural and the commercial sector are not represented. However, the majority of the sectors that the corporations belong to is represented in the sample.

## The Tool of the Research:

A questionnaire has been designed on “the use of capital budgeting techniques in evaluating investment projects in the Palestinian corporations in Gaza strip”. *It is divided into two parts as follows:*

**The first part:** is related to general information about the respondent such as

qualifications, specialization, job, experience, and the classification of corporation for which the respondent works. This part consists mainly of five questions.

**The second part:** which is composed of five sub-parts that contain forty questions concerning the research as follows:

**The first section:** is a set of five questions that aims to investigate the use of capital budgeting techniques (NPV, IRR, PBP, ARR, PI) in the investment selection process in the Palestinian corporations in Gaza strip.

**The second section:** is a set of five questions that aims to investigate the methods used in the Palestinian corporations in Gaza strip when determining the required rate of return from the investment projects.

**The third section:** is a set of eight questions that aims to investigate the factors taken into consideration when adopting a technique of capital budgeting as a basis for comparing alternative investment projects in the public Palestinian corporations in Gaza strip.

**The fourth section:** is a set of sixteen questions that aims to find out possible obstacles to the use of capital budgeting techniques when evaluating investment projects in the Palestinian corporations in Gaza strip.

**The fifth section:** is a set of six questions that aims to find out the methods of capital budgeting usually used by the Palestinian corporations in Gaza strip to assess different operations such as expansion in existing operations, capital investment projects, expansion in new operations, foreign operations, general administrative projects, and social projects.

*And all questions follow the following scale (Likart scale):*

Level	Very high	high	moderate	Low	Very Low
Degree	5	4	3	2	1

## Validity and Reliability of The Questionnaire

### 1. The Judgment/Evaluation of The Questionnaire:

The questionnaire was administered to a number of academic staff specializing in relevant fields (mainly accounting and statistics) to evaluate and judge the questionnaire. The research responded to the opinions by omitting some items and amending other items of the questionnaire.

### 2. Cronbach's Alpha Coefficient:

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. Sekaran,(2005) stated that a value of 60% is acceptable whereas a value of

90% is excellent. As shown in Table No. (6) the results of the Cronbach's alpha coefficient were in the range from 0.8391 to 0.9157, and the general reliability for all items equals 0.8896. This range is considered high; the result ensures the reliability of the questionnaire.

**Table (6)**  
for Reliability Cronbach's Alpha

Number	section	No. of Items	Cronbach's Alpha
1	The use of capital budgeting techniques in evaluating investment projects in the firm	5	0.8678
2	Methods used in determining the required rate of return from investment projects in the firm	5	0.8539
3	Factors taken into consideration when adopting a technique of capital budgeting for choosing among proposed investment projects	8	0.8391
4	Obstacles to the use of capital budgeting techniques	16	0.9157
5	Methods usually used to assess the specific operations by your company	6	0.9057
<b>Total</b>		40	0.8896

### Statistical Techniques Used:

To achieve the research goal, the Research used the statistical package for the Social Science (SPSS) for Manipulating and analyzing the data.

### Statistical methods used are as follows:

1. Frequencies and Percentile.
2. Alpha-Cronbach Test for measuring reliability of the items of the questionnaires.
3. spearman –Brown Coefficient.
4. one sample t test.
5. one way ANOVA.
6. Scheffe test for multiple comparison.

## 10. Data Analysis and Discussion:

### Testing The Distribution of The Sample:

1. Sample K-S Test will be used to determine whether the data follow a normal distribution or not. This test is considered necessary for testing hypotheses as most of the parametric tests stipulate that the data be normally distributed. The results of the test are shown in table (7). This table illustrates that the calculated p-value is greater than 0.05 ( p-value > 0.05), this, in turn, indicates that data follow a normal distribution, and so the parametric tests can be used.

**Table (7)**  
1- sample K-S Test

Number	Section	Number of items	Statistic	P-value
1	The use of capital budgeting techniques in evaluating investment projects in your firm	5	0.856	0.456
2	Methods used in determining the required rate of return from investment projects in your firm	5	0.744	0.638
3	Factors taken into consideration when adopting a technique of capital budgeting for choosing among proposed investment projects	8	0.666	0.767
4	Obstacles to the use of capital budgeting techniques	16	0.803	0.539
5	Methods usually used to assess the following operations by your company	6	0.736	0.651
<b>Total</b>		40	0.856	0.456

### Testing the Research Hypotheses:

#### The First Hypothesis:

**The Palestinian public corporations in Gaza strip use the capital budgeting techniques when choosing among investment projects at significant level ( $\alpha= 0.05$ ).**

The Research used a one sample T test to test the opinions of the respondents about whether or not the capital budgeting techniques are used in evaluating investment projects in their firms and the results are shown in Table No. (8) as follows:

1. In item No. (5) the weight mean equals “73.50%” and p-value equals “0.000” which is less than 0.05, this means (The respondents consider that their firms use PI when evaluating investment projects).
2. In item No. (2) the weight mean equals “65.00%” and p-value equals “0.000” which is less than 0.05, this means (The respondents consider that their firms use IRR when evaluating investment projects).
3. In item No. (3) the weight mean equals “59.50%” and p-value equals “0.032” which is less than 0.05, this means (The respondents consider that their firms use PBP when evaluating investment projects).
4. In item No. (4) the weight mean equals “56.50%” and p-value equals “0.193” which is greater than 0.05, this means (The respondents are neutral as to whether their firms use AAR when evaluating investment projects).
5. In item No. (1) the weight mean equals “52.00%” and p-value equals “0.578” which is greater than 0.05, this means (The respondents are neutral as to whether the NPV is used when evaluating investment projects).

### **The Result of Testing The First Hypothesis:**

In general, the results for all items of the field show that the average mean equals 3.21 and the weight mean equal 64.20% which is greater than « 50%». The value of t test equals 3.354 which is greater than the critical value of 2.01, and the p-value equals 0.002 which is less than 0.05; thus, the research have sufficient evidence to conclude that the Palestinian corporations in Gaza strip use the capital budgeting techniques when choosing among investment projects at a significance level of ( $\alpha= 0.05$ ). This means that the research accepts the first hypothesis at significant level ( $\alpha= 0.05$ ). This result is consistent with the previous studies in that the capital budgeting techniques were used. In addition, the result agreed with the research of Khamees, et al., (2010) in that PI & PBP was the most used technique by Jordanian Industrial Corporations. Whereas Apap & Masson (2005) and Maroyi & Poll (2012) found out that NPV, PBP, and IRR the most commonly used by American and South Africa companies. Also Brijlal (2008) noted that PBP & NPV were most used from Western cape province of South Africa, whereas IRR & NPV most favored by large companies. However, it disagreed with Shinoda (2010) which denoted that Japanese companies combined NPV and PBP.



**Table(8)**

The use of capital budgeting techniques in evaluating investment projects in the firm

No.	Items	Mean	standard deviation	Weight mean	t-value	P-value
1	The firm uses NPV when evaluating investment projects.	2.60	1.128	52.00	0.561	0.578
2	The firm uses IRR when evaluating investment projects.	3.25	1.235	65.00	3.840	0.000
3	The firm uses PBP when evaluating investment projects.	2.98	1.349	59.50	2.227	0.032
4	The firm uses ARR when evaluating investment projects.	2.83	1.551	56.50	1.326	0.193
5	The firm uses PI when evaluating investment projects.	3.68	1.023	73.50	7.268	0.000
<b>Total</b>		3.21	1.339	64.20	3.354	0.002

Critical value of t at df "39" and significance level 0.05 equal 2.01

**The Following is The Result for The Methods Used for Determining The Required Rate of Return from Investments in The Palestinian Public Corporation in Gaza Strip:**

The Research used a one sample t test to test the opinions of the respondents about the use of methods of determining the required rate of return from investment projects in their firms at significant level ( $\alpha= 0.05$ ) and the results are shown in Table No. (9) that follows.

From table (9), it can be seen that the respondents were neutral as to whether their firms use the weighted average cost of capital (WACC), the weighted average cost of capital (WACC) adjusted for the project's risk, the weighted average cost of capital (WACC) adjusted for division's risk, and the required rate of return based on project's risk associated with financing the project. However, the respondents considered that their firms do not use the weighted average cost of capital (WACC) adjusted for country's risk for determining the required rate of return from investments. This result is consistent with the research of Brijlal (2008) which found that non-quantitative techniques were used for determining the required rate of return. However, the result disagreed with the result of Niels (2005) & Ekeha (2011) which found out that the cost of capital was used.

**Table (9)**

Methods used in determining the required rate of return from investment projects in the firm

No.	Items	Mean	Standard deviation	Weight mean	t-value	P-value
1	The firm uses the weighted average cost of capital (WACC).	2.38	1.334	47.50	-0.593	0.557
2	The firm uses the weighted average cost of capital (WACC) adjusted for the project's risk.	2.83	1.517	56.50	1.355	0.183
3	The firm uses the weighted average cost of capital (WACC) adjusted for division's risk.	2.40	1.236	48.00	-0.512	0.612
4	The firm uses the weighted average cost of capital (WACC) adjusted for country's risk.	1.98	1.387	39.50	-2.395	0.022
5	The firm determines the required rate of return based on project's risk associated with financing the project.	2.78	1.493	55.50	1.165	0.251
<b>Total</b>		2.47	1.169	49.40	-0.162	0.872

Critical value of t at df "39" and significance level 0.05 equal 2.01

### **The Second Hypothesis:**

**The Palestinian corporations in Gaza strip consider many factors (such as cost of using the technique & the simplicity and convenience of the technique) before adopting any capital budgeting technique as a basis for comparing different investment projects at significant level ( $\alpha= 0.05$ ).**

The study used a one sample t test to test the opinions of the respondents about the factors taken into consideration before adopting a technique of capital budgeting as a basis for choosing among proposed investment projects and the results are shown in Table No. (10) as follows:

In item No. (3) the weight mean equals "73.00%" and p-value equals "0.000" which is less than 0.05. This means that the availability of data and information for the company is considered before adopting a technique of capital budgeting as a basis for choosing among proposed investment projects. This result asserts the importance of having the required data and information for the use of the capital budgeting techniques in the Palestinian corporations

in Gaza strip because those techniques cannot be computed unless the required data and information are available.

In item No. (5) the weight mean equals “71.00%” and p-value equals “0.000” which is less than 0.05. This means that a priority is given to the capital budgeting techniques that concentrates on the cash flow. This result indicates that the Palestinian corporations in Gaza strip are well aware of the importance of the concentration on the CBTs that concentrate on the cash flows.

In item No. (7) the weight mean equals “62.50%” and p-value equals “0.001” which is less than 0.05. This means that the respondents agreed that their firms avoid the techniques that does not consider all the cash flows from the project when adopting a technique of capital budgeting as a basis for choosing among proposed investment projects. This asserts the importance of including all the cash flows from a project in the computations when using the capital budgeting techniques in the Palestinian corporations in Gaza strip.

In item No. (6) the weight mean equals “58.00%” and p-value equals “0.088” which is greater than 0.05, this means that the respondents are neutral as to whether priority is given to the capital budgeting techniques that consider the time value of money. This denotes that the Palestinian corporations in Gaza strip do not pay attention to the TVM.

### **The Result of Testing The Second Hypothesis:**

In general, the results for all items of the field show that the average mean equals 3.34 and the weight mean equals 66.81% which is greater than “50%” and the value of t test equals 6.202 which is greater than the critical value which is equals 2.01 and the p-value equals 0.000 which is less than 0.05, thus, the study has sufficient evidence to conclude that the Palestinian corporations in Gaza strip consider many factors (such as the cost of using the technique and its simplicity) before adopting any capital budgeting technique as a basis for comparing different investment projects at a significant level. This means that the research accepts the research hypothesis at significant level ( $\alpha= 0.05$ ). This result is consistent with the research of Daunfeldt and Hartwig (2012) in that the management’s conviction affects the choice of the capital budgeting techniques. In addition to Maroyi & Poll (2012) which detected that South Africa companies used PBP for its simplicity.

**Table(10)**

**The factors taken into consideration when adopting a technique of capital budgeting for choosing among proposed investment projects**

No.	Items	Mean	standard deviation	Weight mean	t-value	P-value
1	Simplicity and convenience of the technique.	3.38	1.353	67.50	4.091	0.000
2	Cost associated with the use of the technique.	3.25	1.032	65.00	4.598	0.000
3	Available data and information for the company.	3.65	1.051	73.00	6.919	0.000
4	The competencies and skills of the existing staff.	3.38	1.275	67.50	4.341	0.000
5	Priority is given to the capital budgeting techniques that concentrates on the cash flow.	3.55	1.300	71.00	5.109	0.000
6	Priority is given to the capital budgeting techniques that consider the time value of money.	2.90	1.446	58.00	1.749	0.088
7	The firm avoids the techniques that does not consider all the cash flows from the project.	3.13	1.067	62.50	3.706	0.001
8	The management conviction of the technique.	3.50	1.109	70.00	5.701	0.000
<b>Total</b>		3.34	0.857	66.81	6.202	0.000

Critical value of t at df "39" and significance level 0.05 equal 2.01

### **The Third Hypothesis:**

**There are many obstacles that undermine the use of capital budgeting techniques by the Palestinian corporations in Gaza strip when evaluating investment projects at significant level ( $\alpha = 0.05$ ).**

The research used a one sample t test to test the opinions of the respondents about the obstacles to the use of capital budgeting techniques by the Palestinian corporations in Gaza strip when evaluating investment projects and the results are shown in Table No. (11) as follows:

In item No. (9) the weight mean equals "68.00%" and p-value equals "0.000" which is less than 0.05. This means that the respondents agreed that the unavailability of the necessary data and information is an obstacle to the use of CBT. In addition, this result indicates that the unavailability of the necessary data and information is the greatest obstacle that hinders the use of the capital budgeting techniques in the Palestinian corporations in Gaza strip. Hence, it is important for those corporations to work on overcoming this obstacle.

In item No. (2) the weight mean equals “67.00%” and p-value equals “0.000” which is less than 0.05, this means that the respondents agreed that uncertainty is considered an obstacle to the use of CBT. Moreover, This result suggests that the uncertainty is the second largest obstacle to the use of CBT in the Palestinian corporations in Gaza strip.

In item No. (7) the weight mean equals “67.00%” and p-value equals “0.001” which is less than 0.05. This means that the political and economic situations in Gaza strip hinder the use of capital budgeting techniques from the respondent’s point of view. As the result indicates, this is the third largest obstacle to the use of CBT.

In item No. (10) the weight mean equals “52.00%” and p-value equals “0.618” which is greater than 0.05. This means that the respondents were neutral as to whether the lack of confidence is an obstacle to the use of CBT. Hence lack of confidence is not an important obstacle to the use of CBTs in those corporations.

In item No. (16) the weight mean equals “52.00%” and p-value equals “0.634” which is greater than 0.05. This means that the respondents were neutral as to whether the firm’s contraction with external consultants specialized in investment management undermines the use of capital budgeting techniques. Hence, the result suggests that this is not an important obstacle to the use if CBT in those corporations.

In item No. (6) the weight mean equals “43.00%” and p-value equals “0.119” which is greater than 0.05. This means that the respondents were neutral as to whether the existence of outside institutions for managing the investments undermines the use of capital budgeting techniques. As the result indicates, this is considered the least important obstacle undermining the use of CBT in those corporations.

### **The Result of Testing the Third Hypothesis:**

In general, the results for all items of the field show that the average mean equals 2.97 and the weight mean equals 59.44% which is greater than “50%” and the value of t test equals 3.113 which is greater than the critical value which equals 2.01 and the p-value equals 0.003 which is less than 0.05. Thus, the research have sufficient evidence to conclude that there are many obstacles that undermine the use of capital budgeting techniques by the

Palestinian corporations in Gaza strip when evaluating investment projects at significance level ( $\alpha= 0.05$ ). This means that the research accepts the research hypothesis at significant level ( $\alpha= 0.05$ ). This result is consistent with the result of Abdulsamad (2009) in that lack of competent staff & information were reasons for not using capital budgeting techniques by Malaysian companies.

**Table(11)****The obstacles to the use of capital budgeting techniques**

No.	Items	Mean	standard deviation	Weight mean	t-value	P-value
1	Lack of management's conviction of the capital budgeting techniques undermines their use in the firm.	2.88	1.159	57.50	2.047	0.047
2	Uncertainty is considered an important reason why some firms are reluctant to use capital budgeting techniques.	3.35	1.122	67.00	4.791	0.000
3	The availability of effective alternatives for evaluating investment projects undermines the use of CBT.	3.33	1.071	66.50	4.870	0.000
4	Capital budgeting techniques consume a lot of time.	2.93	1.289	58.50	2.086	0.044
5	The use of capital budgeting techniques is too costly	2.98	1.025	59.50	2.931	0.006
6	The existence of outside institutions for managing the investments undermines the use of capital budgeting techniques.	2.15	1.388	43.00	-1.595	0.119
7	The political and economic situations in Gaza strip undermine the use of capital budgeting techniques.	3.35	1.477	67.00	3.639	0.001
8	Lack of the due skills and competencies needed to use the capital budgeting techniques is an obstacle to the use of CBT.	2.75	1.335	55.00	1.184	0.243
9	Unavailability of the necessary data and information is an obstacle to the use of CBT.	3.40	1.257	68.00	4.529	0.000
10	Lack of confidence is an obstacle to the use of CBT.	2.60	1.257	52.00	0.503	0.618
11	Lack of the appropriate training for personnel is an obstacle to the use of CBT.	3.03	1.187	60.50	2.797	0.008

No.	Items	Mean	standard deviation	Weight mean	t-value	P-value
12	Lack of specialized managerial accountants undermine the use of capital budgeting techniques.	2.93	1.607	58.50	1.672	0.103
13	The existence of incompetence and unskillful workers in the investment department in your firm is an obstacle to the use of CBT.	3.00	1.468	60.00	2.155	0.037
14	The inability of management in the firm to understand the results of the capital budgeting techniques analysis is an obstacle to the use of CBT.	3.00	1.432	60.00	2.208	0.033
15	The management of the firm is inefficient in managing the investments.	3.30	1.471	66.00	3.439	0.001
16	The firm's contraction with external consultants specialized in investment management undermines the use of capital budgeting techniques.	2.60	1.317	52.00	0.480	0.634
<b>Total</b>		2.97	0.959	59.44	3.113	0.003

Critical value of t at df "39" and significance level 0.05 equal 2.01

### **The Following Results Are for Capital Budgeting Techniques Used for The Various Operations:**

*Table No. (12) shows the methods usually used to assess the different types of operations by the corporations as follows:*

- 1. For "Expansion in existing operations"** , " ARR" was used with a percentage of 40.0 % , " PI" with a percentage of 20.0% , "PBP " with a percentage of 30.0% and "IRR " with a percentage of 0.10 % . This result means that the AAR was the most used technique of capital budgeting for assessing the expansion in existing projects, whereas the net present value was not used at all and is thus the least used technique for assessing expansion in existing operations.
- 2. For "Capital investment projects"** , " ARR" was used with a percentage of 12.5% , " PI" with a percentage of 35.0% , "PBP" with a percentage of 45.0% , "IRR " with a percentage of 5.0% and " NPV" with a percentage of 2.5%. This result means that the payback period was the most use

technique of capital budgeting for assessing capital investment projects while the net present value was also the least used technique for assessing capital investment projects.

3. **For “Expansion in new operations”**, “ARR” was used with a percentage of 2.5 % , “PI” with a percentage of 27.5% , “PBP” with a percentage of 37.5% , “IRR “ with a percentage of 20.0 % and “NPV” with a percentage of 12.5%. This result means that the payback period was the most used technique of capital budgeting for assessing expansion in new operations while ARR was the least used technique for assessing expansion in new operations.
4. **For “Foreign operations”**, “PI” was used with a percentage of 35.0% , “PBP” with a percentage of 35.0 % , “IRR “ with a percentage of 15.0%, “NPV” with percent 15.0%, but “ARR” was not used. This result indicates that both the profitability index and the payback period were the most used techniques for assessing the foreign operations while the ARR was not used at all and is thus the least used technique for assessing foreign operations.
5. **For “General administrative projects”**, “ARR” was used with a percentage of 12.5 % , “PI” with a percentage of 37.5% , “PBP” with a percentage of 27.5% , “IRR “ with a percentage of 10.0 % and “NPV” with a percentage of 12.5 % . Thus, the profitability index was the most used technique for assessing general administrative projects whereas IRR was the least used technique for assessing general administrative projects.
6. **For “Social projects”**, “ARR” was used with a percentage of 22.5% ,”PI” with a percentage of 37.5 % ,”PBP” with a percentage of 17.5% , “IRR “ with a percentage of 17.5% and “NPV” with a percentage of 5.0%. Thus, the profitability index was the most used technique for assessing social projects whereas NPV was the least used technique for assessing social projects.

**Table (12)**

Methods usually used to assess the different operations by the company

No.	Items	ARR	PI	PBP	IRR	NPV
1	Expansion in existing operations.	40.0	20.0	30.0	10.0	0.0



No.	Items	ARR	PI	PBP	IRR	NPV
2	Capital investment projects	12.5	35.0	45.0	5.0	2.5
3	Expansion in new operations	2.5	27.5	37.5	20.0	12.5
4	Foreign operations	0.0	35.0	35.0	15.0	15.0
5	General administrative projects	12.5	37.5	27.5	10.0	12.5
6	Social projects	22.5	37.5	17.5	17.5	5.0
	<b>Average</b>	15.0	32.1	32.1	12.9	7.9

### The Fourth Hypothesis:

There are no differences at the significance level ( $\alpha= 0.05$ ) in the responses about use of capital budgeting techniques in evaluating investment projects due to organizational factors (Such as Qualification, Specialization, Job, Experience, and classification of the firm).

1. *Testing the differences in the responses about “the use of capital budgeting techniques in evaluating investment projects” due to qualification at significance level ( $\alpha= 0.05$ ).*

To test the hypothesis the research used the one way ANOVA and the result illustrated in Table No.(13) which shows that the p-value equal 0.184 which is greater than 0.05 and the value of F test equal 1.775 which is less than critical value of 3.25. That means there are no differences at significant level  $\alpha = 0.05$  in the responses about the use of capital budgeting techniques

in evaluating investment projects due to Qualifications.

**Table (13)**

One way ANOVA test for the difference in responses about the use of capital budgeting techniques in evaluating investment projects due to Qualification

Field	Sources	Sum of Squares	df	Mean Square	F value	Sig. (P-Value)
The use of capital budgeting techniques in evaluating investment projects	Between Groups	2.180	2	1.090	1.775	0.184
	Within Groups	22.725	37	0.614		
	<b>Total</b>	24.905	39			

Critical value of F at df «2,37» and significance level 0.05 equal 3.25

**2. Testing the differences in the responses about “The use of capital budgeting techniques in evaluating investment projects” due to Specialization at significance level ( $\alpha= 0.05$ ).**

To test the hypothesis the study used the one way ANOVA and the result illustrated in Table No.(14) which shows that the p-value equals 0.035 which is less than 0.05 and the value of F test equals 3.181 which is greater than critical value which equals 2.87. That means there are differences at significant level ( $\alpha= 0.05$ ) in the responses about the use of capital budgeting techniques in evaluating investment projects due to Specialization, and Scheffe test Table No.(15) shows that the difference is between the “Financial sciences” and “the Economics” specializations and that the difference is in favor of “Financial sciences”.

**Table (14)**

**One way ANOVA test for the difference in responses about the use of capital budgeting techniques in evaluating investment projects due to Specialization**

Field	Sources	Sum of Squares	df	Mean Square	F value	Sig. (P-Value)
The use of capital budgeting techniques in evaluating investment projects	Between Groups	5.218	3	1.739	3.181	0.035
	Within Groups	19.687	36	0.547		
	Total	24.905	39			

Critical value of F at  $df \langle 3,36 \rangle$  and significance level 0.05 equal 2.87

**Table (15)**

**Scheffe test for multiple comparison**

Difference in means	accounting	B.A	Economics	Financial sciences
accounting		-0.148	1.240	-0.287
B.A	0.148		1.388	-0.139
Economics	-1.240	-1.388		-1.527
Financial sciences	0.287	0.139	1.527	

**3. Testing the differences in the responses about «the use of capital budgeting techniques in evaluating investment projects» due to Job at significance level ( $\alpha= 0.05$ ).**

To test the hypothesis the research used the one way ANOVA and the result illustrated in Table No.(16) which show that the p-value equals 0.421 which is greater than 0.05 and the value of F test equals 0.963 which is less than the value of critical value which equals 2.87. That's means there are no differences at significant level ( $\alpha= 0.05$ ) in the use of capital budgeting techniques in evaluating investment projects due to Job.

**Table (16)**

**One way ANOVA test for the difference in responses about the use of capital budgeting techniques in evaluating investment projects due to Job**

Field	Sources	Sum of Squares	df	Mean Square	F value	Sig. (P-Value)
The use of capital budgeting techniques in evaluating investment projects	Between Groups	1.850	3	0.617	0.963	0.421
	Within Groups	23.055	36	0.640		
	<b>Total</b>	24.905	39			

Critical value of F at df «3,36» and significance level 0.05 equal 2.87

**4. Testing the differences in the responses about “the use of capital budgeting techniques in evaluating investment projects” due to Experience at significance level ( $\alpha= 0.05$ ).**

To test the hypothesis the Research used the one way ANOVA and the result illustrated in Table No.(17) which shows that the p-value equals 0.725 which is greater than 0.05 and the value of F test equals 0.441 which is less than the value of critical value which equals 2.87. That means there are no differences at significant level ( $\alpha= 0.05$ ) in the use of capital budgeting techniques in evaluating investment projects due to Experience.

**Table (17)**

**One way ANOVA test for the difference in responses about the use of capital budgeting techniques in evaluating investment projects due to Experience**

Field	Sources	Sum of Squares	df	Mean Square	F value	Sig. (P-Value)
The use of capital budgeting techniques in evaluating investment projects	Between Groups	0.884	3	0.295	0.441	0.725
	Within Groups	24.021	36	0.667		
	<b>Total</b>	24.905	39			

Critical value of F at df «3,36» and significance level 0.05 equal 2.87

## 5. Testing the differences in the responses about “the use of capital budgeting techniques in evaluating investment projects” due to classification of the firm at significance level ( $\alpha= 0.05$ ).

To test the hypothesis the Research used the one way ANOVA and the result illustrated in Table No.(18) which shows that the p-value equals 0.512 which is greater than 0.05 and the value of F test equals 0.681 which is less than the value of critical value which equals 3.25. That means there are no differences at significant level ( $\alpha= 0.05$ ) in the use of capital budgeting techniques in evaluating investment projects due to classification of the firm.

**Table (18)**

**One way ANOVA test for the difference in responses about the use of capital budgeting techniques in evaluating investment projects due to the classification of the firm**

Field	Sources	Sum of Squares	df	Mean Square	F value	Sig. (P-Value)
The use of capital budgeting techniques in evaluating investment projects	Between Groups	0.884	2	0.442	0.681	0.512
	Within Groups	24.021	37	0.649		
	<b>Total</b>	24.905	39			

Critical value of F at df «2,37» and significance level 0.05 equal 3.25

### **The Result of Testing The Fourth Hypothesis:**

So, it can be concluded that there are no differences in the responses about the use of capital budgeting techniques due to the following organizational factors (qualification, age ,job, experience, classification of the firm). However, there is a difference in the responses due to specialization. In general, we have sufficient evidence to accept the fourth hypothesis.

## **11. Conclusions & Recommendations:**

### **Conclusions:**

*The following conclusions are drawn from the study:*

1. The Palestinian public corporations in Gaza strip use the capital budgeting techniques in the range from 61 to 80% when evaluating investment projects.

2. The profitability index was found to be the most commonly used capital budgeting techniques in the Palestinian public corporations in Gaza strip while the net present value was found to be the least CBT used.
3. The Palestinian public corporations in Gaza strip do not use the weighted average cost of capital (whether adjusted or unadjusted) for determining the required rate of return from investment projects.
4. The Palestinian corporations in Gaza strip consider many factors before adopting any capital budgeting technique as a basis for comparing different investment projects and the availability of data and information for the company, followed by the preference of the CBT that concentrates on the cash flows and the management's conviction of the technique, was found to be the most important factor considered before adopting a technique of capital budgeting as a basis for evaluating proposed investment projects in the Palestinian public corporations in Gaza strip. In addition, the time value of money turned out to be the least important factor when adopting a capital budgeting technique as a basis for comparing different investment projects.
5. There are many obstacles that undermine the use of capital budgeting techniques by the Palestinian corporations in Gaza strip when evaluating investment projects and the unavailability of the necessary data and information was found to be the most important obstacle undermining the use of capital budgeting techniques in the Palestinian public corporations in Gaza strip followed by the uncertainty surrounding the use of CBT and the political and the economic situations in Gaza strip. In addition, the availability of effective alternatives for evaluating investment projects as well as the inefficiency of the managements of the corporations were found to have a relatively large negative impact on the use of capital budgeting techniques in the Palestinian corporations in Gaza strip. However, the existence of outside institutions for managing the investments was found to be the least important obstacle that undermines the use of capital budgeting techniques.

6. Average accounting return is the most used capital budgeting technique for assessing expansion in existing operations in the Palestinian corporations in Gaza strip. while the Profitability index is the most used capital budgeting technique for assessing general administrative projects and social projects. Whereas, Payback period is the most used capital budgeting technique for assessing capital investment projects operations and expansion in new operations. However, both payback period and profitability index were found to be the most used techniques for assessing foreign operations.
7. Internal rate of return is most often used for assessing expansion in new operations. While, net present value is most often used for assessing the foreign operations.
8. There are no differences at significant level ( $\alpha= 0.05$ ) in the responses of the sample about the use of capital budgeting techniques in evaluating investment projects in the Palestinian corporations in Gaza strip due to qualifications, jobs, experience, and classification of the firm. However, there are differences in the responses due to specialization.

## **Recommendations:**

*According to the results of the research, it suggests the following recommendations:*

1. To increase the use of the net present value for evaluating proposed investment projects as it is the only method that measures the addition to the stockholders' wealth.
2. To improve the management understanding of the results of the capital budgeting techniques analysis.
3. To give priority to the CBTs that consider the time value of money.
4. To exchange experiences among the Palestinian corporations in terms of the use of capital budgeting techniques.

5. To have a look on how corporations in developed countries deal with the issue of uncertainty when using the capital budgeting techniques.
6. To establish government administrative information centers and databases to assist the researchers to get the data and the information they need to conduct their researches.
7. To establish investment departments in the organizational structure of the corporations which do not have such departments. The main functions of the investment departments are to evaluate new investment projects and any expansions by the corporation.

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