



THE RELATIONSHIP BETWEEN USING PREDICTIVE BUDGETS AND FINANCIAL PLANNING EFFECTIVENESS IN JORDANIAN MANUFACTURING COMPANIES

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Abstract

This study aimed to investigate the relationship between using predictive budgets (PB) and the effectiveness of financial planning. In Jordanian Manufacturing Companies (JMCs). The researcher using the descriptive analytical approach to collect and analysing the data, and testing the hypothesis. Sixty-one items were used to measure the relationship between predictive budgets and financial planning effectiveness, divided into six parts, each part is specified for one of the research variables. A stratified random sampling method was adopted in this research. The research population is consisting of Jordanian manufacturing companies, with registered capital a Jordanian Dinar 50,000 or above (approx. US\$ 70,000). According to this parameter, the total population of the study found 399 companies, and the sample size was 196 companies. Each company received one questionnaire. The questionnaires were directed to the highest financial officer in each company. Valid questionnaires for the study were 191, and 5 questionnaires were incomplete. The percentage of the valid questionnaires was 97.44%. Subsequently, the total respondents are 191 officers from Jordanian manufacturing companies within the criteria of the research. Pearson correlation results proved that there is a significant positive relationship between using the predictive budgets and financial planning effectiveness in Jordanian manufacturing companies

Keywords: Predictive budgeting, Financial planning, Planning effectiveness, Jordan



INTRODUCTION

Manufacturing sector is considered the 2nd economic sector in Jordan where services sector occupied the first rank. The main contribution of manufacturing sector is supporting Jordanian economy be exports. Main products of manufacturing sector are, minerals, pharmaceutical products, and textiles and garments. Manufacturing sector occupied the 86th place of largest export economy in the world in 2015. The manufacturing sector plays a major role in contributing to the consolidation of the pillars of economic and social development in Jordan. It is considered as one of the main pillars in economic growth, in addition to its vital role in employment, attracting quality investments, accessing global markets and showing the image and identity of Jordanian products. The manufacturing sector portion is about a quarter of the national economy (25% of the gross domestic product). This contribution could be raised up to reach 40% according to its direct contribution to the various economic sectors. The manufacturing sector also employs about 251 thousand people, most of whom are Jordanians, working in approximately 18 thousand industrial facilities distributed over all governorates of the Jordan, approximately constituting about 21% of the total Jordanian workforce. This percentage increases to reach about 28% of the total volume of employment in the sector. Wages and compensation they receive estimated to be more than one and a half billion dinars, through which they are sponsoring about one-fifth of Jordan's population (Jordan Chamber of Industry, 2021).

Manufacturing sector also contributes to strengthening and stabilizing the Jordanian dinar exchange rate, by supplementing Jordanian official foreign exchange reserves with more than \$9 billion annually. The result of its acquisition of more than 90% of the total national exports, which achieved a growth of nearly 10% during the year 2019 and reached about 140 countries around the world. The exported products confirming the quality and international specifications of industrial products, in addition to the industry's acquisition of more than 70 % of the investments flowing into Jordan during the past decade. Therefore, it is considered one of the attractive sectors for investment (Companies Controller Directorate, 2019; Jordan Chamber of Industry, 2021).

Manufacturing sector as a part of Jordanian economy has been affected by surrounded political crises occurred in its neighbor countries, namely, Syria, Iraq, and Egypt. Which have a deep impact on Jordanian economic growth including industries. This encourages the Jordanian manufacturing companies to apply the bets-in-class financial management models including financial planning.

Most of Jordanian manufacturing companies suffer from misuse of its available resources in an optimal manner. This is requiring solutions to guide them to utilize its resources

to optimize the usage of it and to reduce the waste in an effective manner (Al-Afzal & Abdel-Nasser, 2002). Hence, the idea of Predictive Budgets (PB) as a future financial planning tool is to guide planning and performance, control, and evaluation in directing company's resources towards optimal utilization, the predictive budgets is considered as a crucial tool to help companies in reflecting its strategies in quantitative way, and to manage their resources in an efficient way (Nguyen et al., 2018). To fulfil the concept of control component accurately, organizations have to compare the actual costs to the estimated costs as a part of monitoring process, in order to determine the differences between actual and estimated performance. In other meaning, to analyze the gaps and digging behind the causes of inefficiency in estimating operation levels and revenues deviations resulting from unpredictability. The circumstances affecting the future revenue changes and production costs (Agarwal et al., 2015). Octariani argues that the predictive budgeting has a positive impact on budget quality and planning process in general, which will enrich the organizational experience and practices in preparing and managing their budgets (Octariani et al., 2017). In view of the importance of applying predictive role of budgeting in Jordanian manufacturing companies, this research come to illustrate the importance of using predictive budgeting to increase the effectiveness of financial planning in Jordanian Manufacturing companies (JMCs). On the other hand, the research is trying to answer the question that, if contemporary accounting thinking and practices are demonstrating in lack of using this tool. Also to know the extent to which the outputs of the financial systems are used to achieve the objectives of budgets planning process, and increasing its effectiveness to control the deviations extracted, and evaluate the performance of the operation in order to preserve the resources of the enterprise and ensure its continuity towards sustainability and growth (Olayan, 2009).

Problem statement

Most of researches in Jordan, there is very limited researches spot the light on the roles of budgets. These studies discussed the budgets from control and audit perspectives (Al-Afzal & Abdel-Nasser, 2002; Al-Alaween, 2000; Al-Ramahi & Mahmoud, 2017; Gouda & Al-Attar, 2019; Hanan & Kahala, 1997; Hanini & Badran, 2013; A. Judah & Al-Attar, 1997; Olayan, 2009; Rahahleh & Ashour, 2019; Rashid & Mahdi, 1993; Shaqour et al., 2018; Tarawneh, 2005). The results of these researches evident that, the predictive role of budgeting is not adopted. Most of Jordanian manufacturing companies are suffering from difficulty of formulating its strategies and its future financial forecasting because they do not realize the importance of using predictive budgets (Tarawneh, 2005). Jordanian manufacturing companies still adopt the traditional budgets concept, where it is concern about its costs and expected cash flows for the next

planning periods, and budgets still using for accounting and auditing purposes only (Olayan, 2009). The principle of estimating the accurate recourses to be allocated to product cost, products improvement, investing in new entities or new product lines is not applied. Thus, most of these companies are not comply with adopting a systematic approach to apply predictive budgeting as well as correcting deviations through the use of system outputs as an indicator of future avoidance.

Availability of required information is very vital factor to prepare solid and accurate predictive budget (Al-Najjar, 2006). Jordanian manufacturing companies have weakness in providing adequate information which is necessary to be used as inputs to prepare predictive budgets which at the end, used as an input for financial planning. Furthermore, there is a weak awareness about the importance of predictive budgets impact on the productivity, minimizing waste, and employing organization's resources towards optimal utilization (R. M. Judah, 2015). The researcher assumes that, there is a significant relationship between the capabilities of financial staff and preparing budgets on predictive basis. The research will examine the relationship between staff skills and knowledge and using the PB (Al-Najjar, 2006).

The importance of this research stems from the fact that, most of Jordanian manufacturing companies are not aware of the importance of using predictive budgets as an efficient tool in financial planning effectiveness. Hence the importance of this research is to explore the relationship between predictive budgets and effectiveness of financial planning. Financial planning helps companies to make feasible investments and set clear quantified objectives and monitor their performance. In addition, it provides the companies with accurate information regarding deviations or the gaps between planned objectives and actual progress and take the corrective actions on the right time. In other meaning, it will work as KPIs tracker for both core and supportive units. Furthermore, it enables the company to overcome the gaps it faces, namely, the utilization and efficient usage of available resources and minimizing waste, and comparing actual costs with estimated costs and rectification errors and increased effectiveness of the financial performance.

After reviewing of many literatures in the field of predictive budgets and financial planning in Jordan (Al-Afzal & Abdel-Nasser, 2002; Al-Alaween, 2000; Hanan & Kahala, 1997; Hanini & Badran, 2013; A. Judah & Al-Attar, 1997; Olayan, 2009; Rahahleh & Ashour, 2019; Rashid & Mahdi, 1993; Tarawneh, 2005) the researcher found that most of these studies concentrate on using the budgets for control proposes, but none of them discussed in depth the importance of internal enablers those may support the application of predictive budgets. The significance of this research is to spot the light on these enablers as stated in research questions and hypothesis. Study will conduct further investigation and concentration of each of

them including the willing of top management to use PB, as well as its commitment to use PB's outputs in financial planning process. Existence of determinants will be examined in addition to explore to how extent companies adopt scientific approach in preparing their PB. Lastly, the study will explore the readiness (capabilities) of financial staff and their abilities to prepare proper PB.

This research is will fill the gaps were not covered by the previous studies because it tries to detect the relationship between its five independent variables (UPB, CPB, DPB, USA, and ASK) and the dependent variable FPE in Jordanian manufacturing companies. This distinguishes the present study from previous studies since it is studding the relationship between enablers of adopting PB and FPE in Jordanian manufacturing companies. Previous studies have presented results in different circumstances in developed and developing countries and in different industries; however, the present study focused on the manufacturing sector in Jordan. The study also studied a set of factors those affect adopting PB and its effect on FPE, when most of the previous researches hit one or two factors only, for example, see (Al-Najjar, 2006; R. M. Judah, 2015; Rahahleh & Ashour, 2019; Tarawneh, 2005). Most of these studies concentrate on the monitoring and controlling role of budgeting.

Research Questions:

Mainly it could be recognized that, the problem of this research is limited to answer the following questions:

1. What is the relationship between desire of using predictive budgets (UPB) and financial planning effectiveness (FPE) in Jordanian manufacturing companies?
2. What is the relationship between commitment to use system outputs of predictive budgets (CPB) and financial planning effectiveness (FPE) in Jordanian manufacturing companies?
3. What is the relationship between determinants of using predictive budgets (DPB) and financial planning effectiveness (FPE) in Jordanian Manufacturing Companies?
4. What is the relationship between using scientific approach in preparing predictive budgets (USA) and financial planning effectiveness (FPE) in Jordanian Manufacturing Companies?
5. What is the relationship between the availability of knowledge and skills (AKS) of the financial staff to prepare predictive budgets and financial planning effectiveness (FPE) in Jordanian manufacturing companies?

Research Objectives

1. To examine the relationship between desire of using predictive budgets (UPB) and financial planning effectiveness (FPE) in Jordanian manufacturing companies.

2. To examine the relationship between commitment to use system outputs of predictive budgets (CPB) and financial planning effectiveness (FPE) in Jordanian manufacturing companies.
3. To examine the relationship between determinants of using predictive budgets (DPB) and financial planning effectiveness (FPE) in Jordanian Manufacturing Companies.
4. To examine the relationship between using scientific approach in preparing predictive budgets (USA) and financial planning effectiveness (FPE) in Jordanian Manufacturing Companies.
5. To examine the relationship between the availability of knowledge and skills (AKS) of the financial staff to prepare predictive budgets and financial planning effectiveness (FPE) in Jordanian manufacturing companies.

LITERATURE REVIEW

According to the globalization and strong competition, most of companies facing a lot of economic and financial issues, and difficulties in its resource's management according to expansion, acquisitions and mergers. In order that, company try to adopt different strategies and applying different tools to enable them from achieving their objectives (Ali & Azraq, 2010). Predictive budgeting is considered one of the most important tools those could be used to fulfil this goal. Through the predictive budgeting, the company can apply the planning process and make the right decisions regarding its investment opportunities, and concrete the follow-up and monitoring of its performance, and taking the corrective actions in the proper time by comparing the actual performance with the planned one. Although researchers who tend to use budget-developed approaches instead of the traditional one has made huge efforts to promote and consolidate this concept, many researches have proven that many of the organizations in question do not prefer to completely dispense with the traditional method, but rather tend to develop and improve it widely (Nguyen et al., 2018).

Wade's study (2017) in Algeria aimed to shed light on the effects of the discretionary budget management system on the behaviours of Algerian managers, whether functional or non-functional. Especially, by assuming that the extent of the actual application of the basic determinants of this system positively and negatively affects their behavioural orientations. The results of this study showed that there are strong behavioural effects for various of these necessary determinants in the discretionary budget management system and thus came to confirm the previous theoretical assets, but in a different field of research, which gives these results great importance because they allow Algerian economic institutions to understand the

behaviours of their managers, and thus the possibility of directing them towards achieving its organizational goals (Wada, 2017).

Planning is one of the most important managerial function in any company, Radhi & Hijazi defined the planning as a determination in advance what company should achieve, how to achieve that and when (Rahahleh & Ashour, 2019). That means the company should clearly define its objectives and develop different scenarios to achieve them, and expect the most potential risks may appear during implementation, and develop a systematic approach to deal with it including protective and remedial actions to be taken. Using predictive budgets make company obliged to adopt and practice the planning process on continuous basis (Drury, 2013), this could be achieved by the commitment of company to make the necessary analysis and develop alternative scenarios and set a SMART objective. Zaltsman, in 2008 studied the role of monitoring and evaluation in the budgetary process to examine the impact of information availability on develop the budgetary system in Chile's restaurants in the United States. The researcher examined two factors in the study, the first is purpose of use performance information and the second is multiplicity of performance considerations on the resource's allocation within the organization. The study concluded that, there is a lack of clarity between budgeting system and the performance (Zaltsman, 2008).

Financial planning effectiveness

Effective financial planning can provide the solid ground for coordination of available resources within the organization, and optimizing its utilization (Chienwittayakun & Mankin, 2015). Planning now a days, obtaining more importance as a result of changing business and economic environments, in addition to the rapid changes in technology, regulations, and external environment complications. In addition to other factors such as, foggy vision of international economics, changing in workforces' trends, increasing the demand on capital, and finally, the challenges related to internal environment like, operational efficiency, organizational structures, and workforce diversities.

Factors affecting financial planning effectiveness:

Factors that affect financial planning could be grouped into two categories: human factors, and technical factors. Human factors include all factors related to individuals within the organization, their impact depends on the application of a set of issues including, selection of qualified employees with appropriate competence and experience to ensure the achievement of the planned goals. Learning and development that contributes to supporting the skills and knowledge of employees is very important too (Abdul-Rahman & Aziz, 2017). Technical factors

are considered as the process of integrating and linking the financial planning process to modern technical factors. This leads to improving the effectiveness and ability of implementing financial planned objectives, as well as reducing losses that may be exposed to the institution, and supporting the process of obtaining profits (Wokas & Gerungai, 2019).

Kalab (2015) determined some factors affecting the financial planning effectiveness: production capacity, resources of company in terms of machines and labours, credit policies, funding policies These are the policies that the company follows in financing my financial needs, such as a policy. Also, he indicated other factors such as, borrowing, retained earnings financing, and capital raising, dividends distribution, on other side, he founds that, degree of efficiency to meet the increasing of customer demands. Lastly, the researcher stated that, economic factors such as expected economic situation of inflation, recession and level of income can affect the effectiveness of financial planning (Kalab, 2015).

In a study aimed to identify the reality of financial planning in the Palestinian manufacturing industry in the Gaza Strip, and to highlight the role that financial planning plays in the development and growth of these companies, Judah indicated some factors affecting financial planning. These factors include weak-availability of internal resources for financial planning, the external elements for financial planning were not available. Lack of commitment in industrial companies to adopt scientific phases of financial planning also was highlighted. Furthermore, researcher argues that, industrial companies were not obligated to apply common financial planning tools. Lack of commitment by industrial establishments to conduct financial analysis of their accounting data additionally was indicated. Finally, researcher found significant differences between financial planners in industrial establishments that affect the reality of financial planning within those companies, and they are attributed to the variable of personality characteristics (job, academic qualification, academic specialization, years of experience (R. M. Judah, 2015).

RESEARCH METHODOLOGY

Research Design

The Correlational Causal-comparative approach was used in this research design. Research questions, hypotheses, sample size, variables, and statistical significance, as well as common aspects of data analysis and data interpretation (for example, Pearson Correlation Coefficient, Descriptive Statistics, Inferential Statistics, Visual Expressions of Data (Umstead & Mayton, 2018). This research is consisting of two main parts, the first part discusses all the theories and literature framework will be covered to cover the theoretical part of the research. In this part the researcher spots the light on the theoretical framework and the literature review and

past studies. The second part will be field study; in this research, in order to satisfy the listed objectives, both primary and secondary data are utilized. The primary data are collected using structured questionnaire as the main tool, where as the study relies on the analytical and descriptive approach in the second part to examine the context of application of predictive budgets in Jordanian manufacturing companies in Jordan as a financial planning tool.

Population and sample

A stratified random sampling method was adopted in this research. Research population is consisting of Jordanian manufacturing companies, within large and medium size firms their turnover falls in the range of Jordanian Dinar 100,000 or greater (approx. US\$ 140,000), according to this parameter, the total population of the study found 399 companies (Companies Controller Directorate, 2019) The growing importance of research have forced researchers to look for an efficient method to determine the sample size needed in an accurate way that represent the given population (Krejcie & Morgan, 1970). According to Krejcie and Morgan, and for the population of 399 companies, with confidence interval of 0.05% and confidence level of 0.95% the sample size will be 196 companies which represents 49 % of the population.

Data gathering procedure

The researcher will collect the data by following the best practices and procedures provided in research making. The researcher will communicate with the targeted companies by email and other social media to inform them about the study and explain the purpose or it, then a cover-letter will be sent with the questionnaire to the top management to facilitate the communication between researcher and targeted respondents and get permission on questionnaire distribution, as well as allowing the staff to share the need information for study purposes. The questionnaires will be sent to the respondents electronically by email, and through google forms, the link will be sent to them through WhatsApp or alternative social media tool as well as emails, so it will be easy to response even through using their cell phones since the questionnaire link is shared with them.

Data processing and analysis

Since the research follows correlational causal-comparative design, the aim is to examine causal and effect relationship between independent variables paired with one continuous dependent variable which is financial planning effectiveness (Hanafi & Fadilah, 2017). The collected data by the questionnaire is analysed using the software package SPSS version 26. It is commonly used in the social sciences and in the business researches. Several

analyses are used such as demographic characteristics, descriptive statistics including mean and standard deviation, linearity and normality test. Several tests are utilized to test the collected data such as reliability tests (Cronbach Alpha), regression test, and correlation test. (Hanafi & Fadilah, 2017). To answer the research questions and test the hypothesis of the research, quantitative and descriptive analysis will be used to compute and measure the response of the respondents on the study variables. The descriptive method is used in analysing and describing the numerical result of the responses of the respondents on the variables by using SPSS. The following tests and techniques will be used:

RESULTS

Overview of Data Collected

According to the population of the study which is 399 of Jordanian manufacturing companies, 196 questionnaires were distributed to 196 companies, each company received one questionnaire. The questionnaires directed to the highest financial officer in each company as shown in table1. Valid questionnaires for study were 191, and 5 questionnaires were incomplete. The percentage of valid questionnaire was 97.44%, thus, the incomplete questionnaires percentage is 2.55%. Subsequently, the total respondents are 191 officers from Jordanian manufacturing companies within the criteria of the research. The researcher used adopted stratified random sampling technique in the study. The respondents to the sample embraced staffs who are the highest financial job in the company's structures including CFOs, Financial managers, chief accountants. This part of respondents' demographic profiles is divided into five questions (registered capital, number of employees, educational level, work experience, and job title).

Table 1 Summary of Frequency for Demographic Profile

Registered capital (JD)	Frequency	Percent
50K - 99K	62	32.5
100K – 149K	24	12.6
150K – 199K	25	13.1
200K – 249K	36	18.8
250K and above	44	23.0
Total	191	100.0
Number of Employees		
0-100 employees	101	52.9
101-500 employees	72	37.7
501-1000 employees	12	6.3
above 1000 employees	6	3.1
Total	191	100.0

Educational Level		
Diploma	11	5.8
Bachelor	113	59.2
MSc	56	29.3
PhD	11	5.8
Total	191	100.0
Work Experience		
1 - 3 years	34	17.8
4 - 6 years	47	24.6
7 - 10 years	45	23.6
11 - 15	36	18.8
16 - 20 years	19	9.9
21 and above	10	5.2
Total	191	100.0
Job title		
Accountant	30	15.7
Chief Accountant	47	24.6
Financial Manager	94	49.2
CFO	20	10.5
Total	191	100.0

Table 1...

Variable's reliability test

Reliability means the repeatability and stability of item measure the variables in scientific research, or the ability of testing a product to give the same outputs under the same circumstances. On another meaning it measure the consistency and reliability if the measurement repeated for different times. Reliability analysis is used to check the consistency of the scale and defined by the volume of systematic variation in the scale used (Meyyappan et al., 2017). The reliability test was conducted for each variable to cover the research sample of 191. The result of Cronbach Alpha found is 0.891 which show that the extent of study variables is very strong. results were obtained is summarized in table 2 below.

Table 2 Reliability Test

Variable	Cronbach's Alpha	N of Items
Desire to use preparing predictive budgets	0.913	11
Using predictive budgets outputs	0.905	11
Determinants of using predictive budgets	0.817	10
Using scientific approach in preparing predictive budgets	0.886	11
Availability of knowledge and skills of financial staff	0.950	10
Financial Planning Effectiveness	0.877	8

Descriptive Statistics

Table 3 Descriptive statistics

Variables	Mean	Std. Deviation
Desire to use preparing predictive budgets	3.9814	.54971
Using predictive budgets outputs	4.0124	.51765
Determinants of using predictive budgets	3.8995	.48920
Using scientific approach in preparing predictive budgets	4.0381	.48932
Availability of knowledge and skills of financial staff	3.5408	.85299
Financial Planning Effectiveness	4.1257	.52979

Valid N (listwise) 191

FPE variable “Financial Planning Effectiveness with the mean of 4.1257 is the highest, where AKS variable “availability of knowledge and skills of financial staff with a mean of 3.3508 the lowest among study variables. Desire to using predictive Budgets variable. The fourth variable Using scientific approach in preparing predictive budgets with mean of 4.0381 is ranked in second place, second variable using the predictive budgets output is ranked in the third place with a mean of 4.0124 and desire to use predictive budgets and determinant of using predictive budgets in places four and five respectively.

Hypotheses testing

The principle idea behind hypothesis testing is to decide if research data sample is either typical or the opposite when comparing to the population supposing hypothesis researcher developed about the population is true (Emmert-Streib & Dehmer, 2019). Hypothesis testing is a crucial procedure of empirical researches to be conducted by the researcher and evidence to prove the validity of hypothesis. The hypothesis is the main tool to answer research questions. Therefore, both well understanding of the subject literature and basic statistical concepts are required (Banerjee et al., 2009). In the following sections, the results of testing each hypothesis are discussed and explained.

H1: There is a significant relationship between desire of using PB and financial planning effectiveness in Jordanian manufacturing companies.

Table 4 represents the results of correlation between the first variable (desire of using PB) and the variable (financial planning effectiveness). It shows that there is a significant

statistical relationship between these variables where $p = 0.001$ (p value less than 0.05). The hypothesis thus is accepted by researcher

Table 4 Correlation relationship of H1

Variable		UPB	FPE
UPB	Pearson Correlation	1	.746**
	Sig. (2-tailed)		.000
	N	191	191
FPE	Pearson Correlation	.746**	1
	Sig. (2-tailed)	.000	
	N	191	191

** . Correlation is significant at the 0.01 level (2-tailed).

H2: There is significant relationship between commitment to use system outputs of predictive budgets (CPB) and financial planning effectiveness in Jordanian manufacturing companies.

Table 5 exemplifies the results of correlation done between the second variable, commitment to use system outputs of predictive budgets (CPB), and the FPE variable (financial planning effectiveness) show that there is a significant statistical relationship between these variables $p = 0.000$ (p value less than 0.05). therefore, the hypothesis is accepted by researcher.

Table 5 Correlation relationship of H2

Variable		FPE	CPB
FPE	Pearson Correlation	1	.757**
	Sig. (2-tailed)		.000
	N	191	191
CPB	Pearson Correlation	.757**	1
	Sig. (2-tailed)	.000	
	N	191	191

** . Correlation is significant at the 0.01 level (2-tailed).

H3: A significant relationship exists between determinants of using of predictive budgets and financial planning effectiveness in Jordanian Manufacturing Companies

Table 6 represents the results of correlation between the first variable (desire of using PB) and the variable (financial planning effectiveness). It shows that there is a significant

statistical relationship between these variables where $p = 0.001$ (p value less than 0.05). The hypothesis thus is accepted by researcher

Table 6 Correlation relationship of H3

Variable		FPE	DPB
FPE	Pearson Correlation	1	.543**
	Sig. (2-tailed)		.000
	N	191	191
DPB	Pearson Correlation	.543**	1
	Sig. (2-tailed)	.000	
	N	191	191

** . Correlation is significant at the 0.01 level (2-tailed).

H4: There is a significant relationship between using scientific approach in preparing predictive budgets and financial planning effectiveness in Jordanian Manufacturing Companies.

The results of correlation between the fourth variable USA (Using scientific approach in preparing predictive) and the variable FPE (financial planning effectiveness) is illustrated in table 7. It shows that there is a significant statistical relationship between these variables where $p = 0.001$ (p value less than 0.05). The hypothesis thus is accepted by researcher.

Table 7 Correlation relationship of H4

Variable		FPE	USA
FPE	Pearson Correlation	1	.774**
	Sig. (2-tailed)		.000
	N	191	191
USA	Pearson Correlation	.774**	1
	Sig. (2-tailed)	.000	
	N	191	191

** . Correlation is significant at the 0.01 level (2-tailed).

H5: There is a significant relationship between availability of knowledge and skills of the financial staff and financial planning effectiveness in Jordanian manufacturing companies.

The correlation results between the fifth variable AKS (Availability of knowledge and skills of the financial staff) and the variable FPE (financial planning effectiveness) is shown in

table 8. It indicates that the relationship between these variables is statistically significant, where $p = 0.001$ (p value less than 0.05). Therefore, the hypothesis is accepted by researcher.

Table 8 Correlation relationship of H5

Variable		FPE	AKS
FPE	Pearson Correlation	1	.477**
	Sig. (2-tailed)		.000
	N	191	191
AKS	Pearson Correlation	.477**	1
	Sig. (2-tailed)	.000	
	N	191	191

** . Correlation is significant at the 0.01 level (2-tailed).

Additional correlation test

To investigate more about the factors those may affect to how context the predictive budgets could be adopted, the researcher conducted additional correlation tests, to investigate the relationship between company size (categorized by registered capital) and each variable of the study. The relation between the variables of the study and the capital of the companies included in this study is tested as the following: For all variables in this section, cross tabulations measures were done to identify the relationship is existed according to the correlation results. results show a significant positive statistical relationship between study variables and the size of the company according to registered capital.

RECOMMENDATIONS

In the light of the results and conclusions of the study, the researcher concluded the recommendations that may enhance the role of prediction of budgeting in Jordanian manufacturing companies. Firstly, Jordanian manufacturing companies are recommended to enhance its financial planning effectiveness. Jordanian manufacturing companies should allocate further resources to support adopting the predictive budgets. The need for the senior management to be convinced of the feasibility of adopting predictive budgets and the importance of using it. A good effort should be done to deploy the predictive budgets concepts and culture among the company and on all levels. Furthermore, the Predictive Budgets should prepare periodically to be used to chart and predict the financial future of the company. Additionally, it is recommended that, companies should put clear instructions in place for preparing predictive budgets. As well. It is important that, enhance employees' participation in

preparing predictive budgets to ensure their implementation to increase financial planning efficiency.

Jordanian manufacturing companies must pay more attention to the limitations those may decrease the adopting of predictive budgets budget system, and employ it in the financial planning in the companies. Also, it is recommended to isolate the external limitation as much as possible for using the budget planning system. On another hand, it is recommended by the government and decision makers in Jordan to maintain the corporate laws in Jordan, hence most of companies indicated that, the corporate law limits the use of predictive budgets. Jordanian manufacturing companies are recommended to keep the clear policies and procedures are put in place by management to implement the predictive budget system and existing of limitations for the adapting budget system.

With regard to the behavioral aspects of the process of preparing predictive budgets and the availability of information within the company and its exchange, the researcher recommends the need to take into account the behavioral aspects when preparing planning budgets, by working on training and qualifying financial staff to prepare predictive budgets by involving them in training courses that develop their skills and knowledge to increase their abilities to prepare predictive budgets in a creative way. Also, it is recommended that, Jordanian manufacturing companies should pay more attention to engage all concerned departments in all managerial levels with the process of preparing for predictive budgets. Management in Jordanian manufacturing companies are recommended to compensate the participants in predictive budgets process by rewards and other motivation approaches to encourage them to participate and produce high-quality predictive budgets a continuous basis. Jordanian manufacturing companies strongly recommended to rewrite the job descriptions for financial staff to include the required skills and duties for preparing the predictive budgets in job descriptions. This process recommended to be started at the time of announcing the job and during recruitments and selection process. Moreover, performing part or parts of predictive budgets should be part of annual objectives in appraisal system for involved people.

Researcher also recommends the Jordanian manufacturing companies conduct restructuring for their organizational structure especially, the financial departments to include a separate part to be dedicated for financial planning including predictive budgets.

On the same, Jordanian manufacturing companies are recommended to work on better harmonization between accounting system used in the company and predictive budget preparation process. Jordanian manufacturing companies are recommended to work on reducing the internal obstacles. These obstacles including but not limited to, Clarity of policies and procedures are in place by management to implement the predictive budget system, the

limitations for the adapting budget system, budget stabilization system, and accounting system applied in the company. The integration between budgeting system and the accounting system in a way that allows the use of information and access to the data by the budget department easily and conveniently is also recommended.

SCOPE FOR FURTHER STUDIES

The studies which concentrate on the predictive budgets are very limited in Jordan, but rather, in the Middle East over all. According to that situation researcher suggests to conduct more studies to spot the light on this vital aspect. As per the study conclusions, there is a lot of opportunities to investigate the factors those affect the adopting of predictive budgets in Jordan. To bridge the gaps in financial planning and the prediction role of predictive budgets, researcher suggest the following areas to be targeted by future studies. These areas include but not limited to, the relationship between corporate strategies and financial strategies, determinant of activating the predictive role of budgets, and do more investigation about the impact of using predictive budgets on the effectiveness of financial planning in different sectors in Jordan. Furthermore, future studies can concentrate on factors those may sharpen financial staff capabilities to prepare predictive budgets. Integration between accounting systems and predictive budgets also is a rich area to be targeted by future studies. Additionally, future studies can investigate the using of predictive budgets in other sectors in Jordan, such as, banking, insurance, agriculture, tourism, and more. Future studies also can discuss the impact of using predictive budgets on aspects like, innovation, creativity, motivation, and leadership styles.

LIMITATIONS OF STUDY

There are three types of limitations govern this study:

1. Geographical limitation: study covers industrial companies in Jordan
2. Sectoral limitations: study focus on manufacturing sector
3. Size limitations: only companies with registered capital of Jordanian Dinar (JD) 50,000 and above are covered by this study.

CONCLUSION

The relationship between adopting the predictive budgets and financial planning effectiveness is very important issue to be investigated in changing era and globalization competitiveness. According to the international competitiveness, it is very crucial that, manufacturing companies overall the word including Jordanian manufacturing sector, must

adopt concrete financial planning approaches, and invest in the enablers of financial planning to strengthen its competitive position. Predictive budgets are the new fashion to go beyond traditional budgeting approach.

Jordan manufacturing companies should pay more attention to the factors those may hinder the application of predictive budgets. Since overcoming these obstacles will have positive impact on financial planning effectiveness. The study highlighted the most affecting factors on financial planning effectiveness. The study proves that, more desire of using the predictive budgets, more effective financial planning. This belongs to important sub-factors including, uses the system of predictive budgets for all parts of the company on operational and administrative levels, allocating necessary resources to adopt predictive budgets, and linking between predictive budgets and performance evaluation. Moreover, it is very important to deploy predictive budgets targets culture and explain it to sections officials in all managerial levels. The study also shows that it is important to prepare predictive budgets on periodic basis, as well as developing company's policies and procedures to support adopting the predictive budgets.

The study reveals that, there is a significant relationship between financial planning effectiveness (FPE) and the commitment of management to use the outputs of predictive budgets (CPB) in financial planning, this requires integration in company' accounting systems and financial planning and forecasting systems. Study also reveals that, this dimension was supported by sub-factors including: commitment to use outputs as tool for correcting the deviations, use the budget system to monitor performance effectiveness. Study showing that, predictive budgets outputs are used by Jordanian manufacturing companies to assess the resources utilization efficiency as well as the feasibility of performance. In this variable, the study showed the positive relationship between analyzing deviations between planned and actual performance and financial planning effectiveness. Furthermore, the study proved that, taking remedial actions to correct deviations and prevent their recurrence in the future, and following-up the actions by management have a significant relationship with financial planning effectiveness.

Jordanian manufacturing companies are facing some issues those may limit the adopting of predictive budgets as highlighted by the study. The clarity of policies and procedures are in place by management to implement the predictive budget has a significant positive relationship with financial planning effectiveness. The study proved that there is a negative relationship between existing of internal limitations for using the budget stabilization system and financial planning effectiveness, typically, this could apply to the external limitations. It is noted that from the study, the effectiveness of financial planning is significantly affected by existing of accounting system, and computerized budget system used in the company. Lastly in

this variable, study found significant positive relationship between nature and size of the company and adopting predictive budgets.

The study reveals that, there is a significant positive relationship between using the scientific approach of preparing predictive budgets and financial planning effectiveness. The study shown that, the most used scientific method is automated accounting system which provide needed information to prepare predictive budgets, then the full access to the information needed to prepare predictive budgets by the financial staff in the company, and the adherence by the management to objectives as per predictive budget, are supporting this relationship.

The study showing that, the weakest relationship is between the variable AKS and financial planning effectiveness. This refers to the shortage of competent staff to work on predictive budgets into Jordanian manufacturing companies, as well as lack of training employees in the field of budget preparation to ensure efficiency of staff working on preparing predictive budgets, in addition to lack of clarity in job descriptions, the required qualifications and skills to prepare predictive budgets are not clearly specified. Also, study reveal that, there is a weakness in transferring knowledge of PB among staff in the company as well as the lack of rewarding staff who contribute to the PB preparing process

Finally, study shows that there is a high interest by Jordanian manufacturing companies to increase the effectiveness of financial planning. It shows also the companies have all necessary resources to adopt financial planning and achieve planned objectives. Furthermore, the study concluded that, Jordan manufacturing companies develop financial plans on periodic bases. There integration between financial plans and strategic plan is little weak in Jordanian manufacturing companies as a result of lack of strategic plan existence.

Study shows that Jordanian manufacturing companies are agreed upon using financial planning helps in cost reduction, invest new opportunities, and companies' resources utilization. In general, Jordanian manufacturing companies should keep focus on adopting the predictive budgets to enhance the financial planning effectiveness.

REFERENCES

- Abdul-Rahman, A., & Aziz, A. M. A. (2017). *Preparing planning budgets and their impact on financial planning, Doctoral dissertation*. Sudan University of Science and Technology.
- Agarwal, S., Amromin, G., Ben-David, I., Chomsisengphet, S., & Evanoff, D. (2015). Financial literacy and financial planning: Evidence from India. *Journal of Housing Economics*, 27(4), 4–21. <https://doi.org/10.1016/j.jhe.2015.02.003>
- Al-Afzal, M., & Abdel-Nasser, N. (2002). *Factors determining the relationship between participation in preparation of budgets and work satisfaction and the organization a comparative accounting research between companies - Iraqi and Jordanian Industrial Contribution*. University of Jordan.
- Al-Alaween, A. (2000). *Evaluation of planning budgeting systems in Jordanian public shareholding industrial companies*. Al Al-Bayt University, Jordan.

- Al-Najjar, M. (2006). *Factors Affecting the Efficiency of Using Budgets as a Planning and Control Tool at the Palestinian Universities in Gaza Governorates*. Islamic University.
- Al-Ramahi, N. M., & Mahmoud, N. (2017). Using planning budgets to improve planning, control and performance evaluation in Jordanian public shareholding industrial companies. *Accounting Thought*, 21(1), 197–216.
- Ali, A., & Azraq, M. (2010). *The role of planning budgets in evaluating the financial performance of companies*. University of Science and Technology.
- Banerjee, A., Chitnis, U. B., Jadhav, S. L., Bhawalkar, J. S., & Chaudhury, S. (2009). Hypothesis testing, type I and type II errors. *Industrial Psychiatry Journal*, 18(2), 127.
- Chienwittayakun, J., & Mankin, D. (2015). Strategic management planning process (SMPP) as an organisation development intervention (ODI) to align values, goals and objectives and improve employee teamwork, engagement and performance: a case study of a family-owned business in Thailand". *Journal Vision Action Outcome*, 2(1), 74–92.
- Companies Controller Directorate. (2019). *Ministry of Industry*. Annual Report. <https://portal.ccd.gov.jo/searchcriteria>
- Drury, C. M. (2013). *Management and cost accounting*. Springer.
- Emmert-Streib, F., & Dehmer, M. (2019). Understanding statistical hypothesis testing: The logic of statistical inference. *Machine Learning and Knowledge Extraction*, 1(3), 945–961.
- Gouda, A. H., & Al-Attar, K. (2019). The extent to which planning budgets are applied in banks operating in Jordan and its impact on profitability. *Journal for Research and Studies*, 25(1).
- Hanafi, M. A. O., & Fadilah, P. (2017). Quantitative Data Analysis: Choosing Between SPSS, PLS and AMOS in Social Science Research. *International Interdisciplinary Journal of Scientific Research*, 3(1), 14–25.
- Hanan, R., & Kahala, J. (1997). *Management Accounting: Monitoring and Evaluation approach*. Thakafa Pub. House.
- Hanini, E., & Badran, B. (2013). The Role of the Budgets in Improving the Planning, Control and Decision Making in the Shareholding Agricultural Companies in Jordan. *Al Najah University Researches Journal*, 27(1), 25–56.
- Jordan Chamber of Industry. (2021). *Jordan Chamber of Industry*. jci.org.jo
- Judah, A., & Al-Attar, K. (1997). *The extent of application of planning budgets in banks operating in Jordan and its impact on profitability*.
- Judah, R. M. (2015). *The Reality of Financial Planning in National Industry Institutions: An Applied Study on the Manufacturing Industry Sector in the Gaza Strip*. Sudan University of Science and Technology, Sudan.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Meyyappan, K., Wu, Q., Vujosevic, M., Hill, C., & Parrott, R. (2017). *Reliability test induced failures vs field performance: Contact fretting perspective*. 102–108.
- Nguyen, D. H., Weigel, C., & Hiebl, M. R. W. (2018). Beyond budgeting: review and research agenda. *Journal of Accounting and Organizational Change*, 14(3), 314–337. <https://doi.org/10.1108/JAOC-03-2017-0028>
- Octariani, D., Akram, A., & Animah, A. (2017). The Effect of Implementation of Good Governance, Performance Based Budgeting, and Human Resources to Budget Qualities,. *Prosiding Strengthening Local Communities Facing the Global Era*, 1(1).
- Olayan, Z. (2009). *The Importance Of Using Planning Budgets In Planning, Control And Performance Evaluation In Jordanian Shareholding Companies*. Middle East University.
- Rahahleh, N., & Ashour, B. (2019). The Role of Budgeting in Improving Financial Performance in Telecommunication Sector in Jordan. *Arabic Journal of Management*, 39(2).
- Rashid, & Mahdi. (1993). *The validity of the accounting data for the purposes of monitoring and evaluating performance in selected industrial projects*. Yarmouk University Publishing.
- Shaqour, A. F., Harb, O. F., & Mustafa, A. S. (2018). The role of discretionary budgets in improving the efficiency of the accounting system and improving financial performance in the industrial sector in Jordan. *Arab Journal of Management*, 38(4), 45–54.
- Tarawneh, G. A. (2005). *Assessing Predictive Budget Systems and its Role in Management Effectiveness of the Petra Region Authority*. Al-Bayt University, Jordan.
- Umstead, L. K., & Mayton, H. (2018). *Using Correlational and Causal-Comparative Research Designs in Practice: Exploring Relations Among Client Variables*. In *Making Research Relevant*. Routledge.

Wada, S. (2017). *The impact of the discretionary budget system on the behavior of managers in the Algerian economic institutions - a study of a group of Algerian economic institutions*. Université de M'sila.

Zaltsman, T. A. (2008). *The Role of Monitoring and Evaluation in the Budgetary Process: Insights from a Study of Chile's Performance-Based Budgeting System*.