

Using Budget Variances for Performance Evaluation: A Comparison Study between Libyan and Anglo- American Companies Operating in The Libyan oil sector

*Dr. Ramadan Kanan**

*Dr. Khalid Abu Zayed***

المخلص:

على المنظمات وضع ميزانية تقديرية لمواردها المحدودة مثل الوقت والمال والطاقة والمواد الخام والمرافق والخدمات والأصول والموارد البشرية من أجل تعظيم وتحسين الأرباح من استخدام هذه الموارد. الميزانيات التقديرية تسلط الضوء على المزايا والعيوب المحتملة بصورة مسبقة للإدارة وتجعل التخطيط دائماً كأولوية في طليعة نظر الإدارة. لذلك تعتبر الميزانيات التقديرية أداة مهمة تساعد المديرين على تحقيق أهداف المنظمة وتكون بمثابة خارطة طريق نحو فهم التخطيط والتحكم في العمليات وتقييم الأداء. الهدف من هذه الدراسة هو مقارنة الشركات الليبية والشركات الأنجلو أمريكية العاملة في قطاع النفط الليبي من حيث مدي استخدام انحرافات الميزانية التقديرية في تقييم أداء الموظفين. تم استخدام المنهج الوصفي الكمي وإطار هوفستد للثقافة (2005). وكذلك تم جمع البيانات من خلال 330 استبياناً قابلاً للاستخدام وتم تحليل العوامل اختبار T واختبار ANOVA لاختبار الفرضية. توصلت الدراسة

إلى أن الشركات الأنجلو أمريكية تستخدم انحرافات الميزانية التقديرية لتقييم أداء موظفيها بينما الشركات الليبية لا تستخدم انحرافات الميزانية التقديرية لتقييم أداء موظفيها.

الكلمات الرئيسية: الميزانيات التقديرية، تقييم الأداء، الجماعية والفردية، نظرية هوفستد للثقافة.

* - Faculty of Commerce and Economic Alkoms - Libya Elmergib University,
Ramadan@elmergib.edu.ly

** - Gulf College Muscat – Oman, kabuzayed@gulfcollege.edu.om

Abstract:

Organizations must budget their scarce resources such as time, money, energy, raw material, facilities, services, assets, and human resources in order to optimize and maximize utilities and profit from utilizing these resources. Budgets bring to light potential advantages and disadvantages to management in advance and make planning always at the forefront of management's minds as a priority. Therefore budgets are an important instrument that helps managers to achieve an organization's goals and serve as a road map towards understanding planning, controlling operations and performance evaluation. The purpose of this study is to compare Libyan companies and Anglo-American companies operating in Libyan oil sector in terms of using variances for performance evaluation. A quantitative approach was utilized and Hofstede (2005) framework employed. Data was collected by 330 usable Questionnaires and Factor analysis, T-test and ANOVA test were used to test the hypothesis. The study finds that Anglo-American companies use variances to evaluate employees' performance while Libyan companies do not use variances to evaluate employees' performance.

Keywords: Budgets, Performance Evaluation, Individualism-Collectivism, Hofstede framework.

Introduction

Budgets assist financial and non-financial managers in planning, controlling, coordinating, decisions making, evaluating performance, motivating employees and managers to work harder in order to achieve organization's goals and its functions. Budget and budgeting also include every aspect of management accounting

(Jones 2008; Langfield-Smith et al. 2005; Magner et al. 2006). A budget is a comprehensive financial plan that embraces all aspects and expectations of an organization in a quantitative form for the next accounting cycle (Kanan 2011). Kanan (2011) argue that one of main reason behind the failure of many seemingly healthy businesses is managements did not have a proper budget. More importantly, budgets do not help managers just in planning; they also assist in evaluations to compare what happened in the past with what has happens now. They also are used as benchmarks to guide the performance of managers and employees in organizations by measuring estimated performance “budgets” with an actual performance “actual” to discover variances from plans (Covaleski et al. 2003). Budgets also help management to allocate its scarce resources to units that maximize the rate of return on capital employed. In addition, budgets help employees; they tell them what management’s expectations are. Therefore, budgets communicate in both directions from bottom up and from top down. Lower-level managers and employees inform top management how its objectives, plans, and goals will be achieved. Then top management tries to reconcile between units by prioritising its objectives and communicating with each unit to arrive at a final picture of a budget (Hansen and Mowen, 2007).

Individualism-Collectivism

Hofstede & Hofstede (2005, p. 76) define individualism “Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family”. He (2005, p. 76) defined Collectivism “as its opposite pertains to societies in which throughout people from birth onward are integrated into strong, cohesive in-groups, which throughout people’s lifetimes continue to protect them in exchange for unquestioning loyalty.

The comparison was conducted between Libyan employees “Arabic” who classified as collectivistic society (Hofstede, 2005) and Anglo-American employees who classified as individualistic societies (United States, Canada, Australia and United Kingdom) who are working in the Libyan oil sector (Hofstede, 2005).

The differences between budget and actual amounts are called variances; variances can be either favourable or unfavourable (Edmonds et al. 2006, p. 315). Budgets provide quantitative information for performance evaluation even though budgets are not used as a means of performance evaluation in many instances (Otley 1978). Using a budget as a benchmark for evaluating performance is better than using past performance as a benchmark. This is because past performance includes substandard and miscued performance as well as past performance that might differ from expected performance (Horngren et al. 1996). In

addition, by evaluating recent year variances and comparing these with planned budget year allows managers to make sure that corrections has been incorporated into plan to avoid considerable variances in the next year (Weggeland et al. 2003).

For profit maximising organizations, investigations of unfavourable variances are designed to penalise workers whose performances are less than expected, while favourable variances might lead to rewarding employees whose performances are higher than expected (Covaleski et al. 2003). In this case management will take action. Budget action is when management attribute budgetary variances to a manager's area of responsibility (Collins et al. 1984). Budget performance evaluation is when management uses budget variances in performance evaluation of individuals (Collins et al. 1984). Garbutt (1992, p. 100) states that "The achievement of performance targets should logically lead to incentive rewards". Variances will be followed and reports will be sent to evaluate individuals' performances in individualistic societies. While in collectivist societies variances will not be related to individuals but to the group so there will be less attention to variances (Harrison et al. 1994; Merchant 1981; Ueno and Sekaran, 1992). In individualistic and low power distance cultures objections and frank discussions are preferred by individuals whereas in collectivistic and high power distance cultures indirect and politeness objections are preferred (Tsui 2001).

Methodology

Truth is absolute but our understanding of it is relative. In this sense, beliefs about the nature of reality and seeking knowledge and epistemology have different philosophical foundations for different researchers in terms of designing their questions and how they are answering these questions (Morgan 2007). This is a cross-sectional study and quantitative data (a questionnaire survey) was collected to answer study hypothesis. A questionnaires survey is considered as suitable and the most common method for data collection in cross-sectional studies when the sample target is too large in order to make generalizations to the rest of a population (Creswell 2009; Leedy et al. 2005; Zikmund 2000). The questionnaire in this study was designed to solicit information from people who are working in Libya and Anglo-American companies about their budgets and budgeting processes. The target population for this study is Libyan and Anglo-American (USA, Canada, UK, and Australia) companies operating in the Libyan oil sector.

The hypothesis of this study is Budget variances will be used more to evaluate performance of managers and employees by Anglo-American companies than by Libyan companies.

Questionnaire survey “Five likret scale” was used to collect information from managers and employees in different levels who are involved in budgeting processes working in Libyan and Anglo-

American companies operating in the Libyan sector. 115 questionnaires from Anglo-American companies and 215 questionnaires from Libyan companies working in different companies. The surveys were conducted in both English and Arabic languages.

Data Analysis

Questions were adopted from (Douglas and Wier, 2007; Dunk 1993; Harrison et al. 1994; Magner et al. 1995; Merchant 1981; O'Connor 1995; Wu 2005). After data screening missing data, outliers, and normality were checked. Internal consistency (Cronbach's alpha) was calculated for reliability (DeVellis 2003; Hair et al. 2006). Factor analysis also was used to decrease the number of variables to a lesser number of factors. Eight (8) items determine the extent of performance evaluation by achieving a budget's goal. The factor analysis confirmed that the underlying latent factor converged as assumed after deletion of 4 items (Performance3, Performance6, Performance7, and Performance8) due to low factor loadings (less than 0.5) (Table 1).

Table 1: results from factor analysis and reliability

Reliability- Cronbach's Alpha	.704	% Variance Explained	38.627%
KMO	.737	Bartlett's test	.000
Items			Standardised Regression Weights
My explanation of budget variances is always included in my performance report/review.			.624
I investigate favourable as well as unfavourable budget variances for my unit.			.519
I am evaluated on my ability to meet the budget for my unit. (Performance3)			deleted
I provide information on my unit's budget performance to my subordinates.			.743
I have to submit an explanation in written form about causes of large budget variances.			.642
We include actual information from earlier budget periods in the current budget period for comparison purposes. (Performance6)			deleted
Management dislikes units failing to meet their budgets. (Performance7)			deleted
Management judges performance only on the basis of attaining budget goals. (Performance8)			deleted

From the analysis the sampling adequacy was good (KMO=0.704). The percentage variance explained by the latent factor is 38.627%. This is regarded as a good indication that the items explain the underlying factor well. Thus four items adequately describe the latent factor evaluating performance based on budget variances. Cronbach's Alpha for this scale was 0.704 which falls within the criterion established for this study.

Table 2: Summary of t-test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	1.394	.239	6.584	328	.000
Company group		N	Mean	Std. Deviation	
Anglo American		115	3.45	.738	
Libyan		215	2.92	.681	

Levene’s test is not significant ($p=0.239$). Therefore the groups’ variances can be assumed as equal. The t-test indicates that there is a highly significant difference between the two company groups ($t_{(328)}=6.584, p=0.001$). Anglo-American companies have a greater inclination to use variances to evaluate workers’ performance ($M= 3.46, SD=0.74$) than Libyan companies ($M= 2.92, SD=0.68$) (Table 2).

Test of homogeneity of variances shows that the variances between cultural groups are equal (Levene’s test $=2.647, p =0.072$) (Table 3).

Table 3: Homogeneity, Welch and Brown-Forsythe tests-variances

Test of Homogeneity of Variances				Robust Tests of Equality of Means				
Levene Statistic	df1	df2	Sig.		Statistic ^a	df1	df2	Sig.
2.647	2	327	.072	Welch	25.411	2	101.693	.000
				Brown-Forsythe	20.811	2	128.866	.000

The ANOVA analysis (Table 4) indicates a highly significant difference between cultural groups ($F_{(2,327)} = 23.173, p=0.001$). Anglo-Americans perceive that variances are used to

evaluate performance ($M=3.55$, $SD=0.63$). Libyans in Anglo-American companies show slightly higher using of variances ($M=3.33$, $SD=0.84$), than Libyans in Libyan companies ($M=2.92$, $SD=.68$) but less than their Anglo-American colleagues (Table 4) (Figure 1).

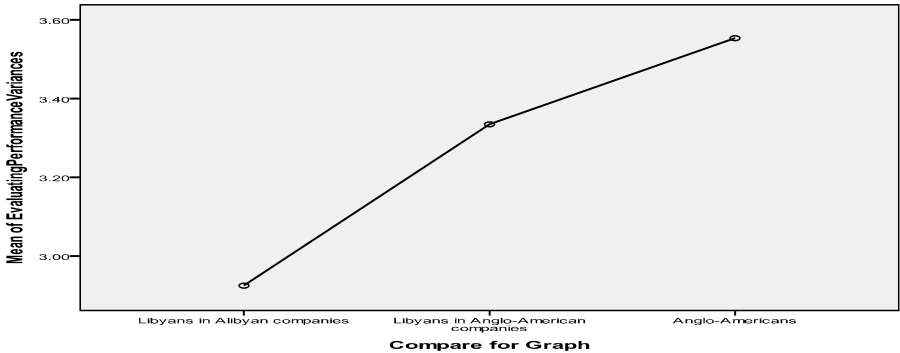


Figure 1: variances means by cultural group

Table 4: ANOVA-variances

ANOVA						Descriptive	N	M	SD
	Sum of Squares	df	Mean Square	F	Sig.	Libyans in Libyan-Coy	215	2.92	.681
Between Groups	22.705	2	11.353	23.173	.000	Anglo-Americans	65	3.55	.635
Within Groups	160.198	327	.490			Libyans in Anglo-Coy	50	3.33	.844
Total	182.903	329				Total	330	3.11	.745

Scheffe test was used because variances between cultural groups are equal. The results indicate that there is a highly significant difference between Libyans in Libyan companies and Anglo-Americans in Anglo-American companies, as there is

between Libyans in Libyan companies and Libyans in Anglo-American companies. However, there is no significant difference between Anglo-Americans and Libyans in Anglo-American companies (table 5).

Table 5: Scheffe post-hoc test-variances

(I) Comparisons among cultural groups	(J) Comparisons among cultural groups	Mean Difference (I-J)	Std. Error	Sig.
Libyans in Libyan-Com	Anglo-Americans	-.62898*	.09907	.000
	Libyans in Anglo-Com	-.41014*	.10989	.001
Anglo-Americans	Libyans in Anglo-Com	.21885	.13166	.253

Conclusion

The Hypothesis of the study Budget variances will be used more to evaluate performance of managers and employees by Anglo-American companies than by Libyan companies was supported. Anglo-American companies use variances to evaluate performance while Libyan companies do not use variances to evaluate employees’ performance. The results also show that there is no significant difference between Anglo-Americans and Libyans working in Anglo-American companies.

Limitations and suggestions for further research

One of the limitation of the study is in categorizing the group “Anglo-American companies” with respondents being employees from USA, UK, Canada, and Australia the differences that exist between cultures, epitomized by countries, was largely

ignored. This limitation could not be avoided because responses from one country would not have been sufficient for data analysis.

Data was also gathered from different activities in the oil sector including exploration, production, refinery, marketing and services. This may have affected the results because of the uniqueness of each activity in the oil sector but was not apparent. This limitation also could not be avoided because responses from one activity would not have been sufficient for data analysis. Further research is encouraged to examine the difference between Libyan companies and a single selected country of the Anglo-American group (USA, UK, Canada, and Australia). This would serve to triangulate the results of this study and achieve further insights. Further research is also needed to examine the difference in the oil and gas industry in terms of exploration, production, refinery, marketing or services only.

References

Covaleski, MA, Evans Iii, JH, Luft, JL & Shields, MD 2003, 'Budgeting Research: Three Theoretical Perspectives and Criteria for Selective Integration', *Journal of Management Accounting Research*, vol. 15, pp. 3-49.

Collins, F, Seiler, RE & Clancy, DK 1984, 'Budgetary Attitudes: The Effects of Role Senders, Stress and Performance Evaluation', *Accounting & Business Research*, vol. 14, no. 54, pp. 163-8.

Creswell, J 2009, *Research Design: Quantitative, Qualitative and Mixed Methods Approaches*, 3 edn edn, SAGE Publications London.

Douglas, P & Wier, B 2007, 'An investigation of ethical position and budgeting systems: Egyptian managers in US and Egyptian firms', *Journal of International Accounting, Auditing and Taxation*, vol. 16, no. 1, pp. 90-109.

Dunk, AS 1993, 'The effect of budget emphasis and information asymmetry on the relation between budgetary participation and slack', *Accounting Review*, vol. 68, no. 2, pp. 400-10.

Edmonds, TP, Edmonds, CD, Tsay, B-Y, Olds, PR & Schneider, NW 2006, *Fundamental Managerial Accounting Concepts*, 3rd edn, McGraw-Hill/Irwin, Boston.

Garbutt, D 1992, *Making budgets work : the control and use of the budgetary control process*, Chartered Institute of Management Accountants, London.

Hofstede, G, et al. 2005, *Cultures and Organizations Software of the Mind*, second edn, McGraw-Hill, New York.

Hansen, D & Mowen, M 2007, *Managerial Accounting*, 8th edn, Thomson/South-Western, Mason.

Harrison, GL, McKinnon, JL, Panchapakesan, S & Leung, M 1994, 'The Influence of Culture on Organizational Design and Planning and Control in Australia and the United States Compared with Singapore and Hong Kong', *Journal of International Financial Management & Accounting*, vol. 5, no. 3, pp. 242-61.

Horngren, CT, Datar, SM, Foster, G, Rajan, MV & Ittner, C 1996, *Cost Accounting: A Managerial Emphasis*, 10th ; annotated instructor's edn, Prentice Hall, Upper Saddle River.

Horngren, Charles T, Sundem, Gary L, Stratton, William, O 2005, *Introduction to management accounting*, 13th edn, Pearson Educational, Upper Saddle River.

Jones, TA 2008, 'Changes in Hotel Industry Budgetary Practice', *International Journal of Contemporary Hospitality Management*, vol. 20, no. 4, pp. 428-44, viewed item: DOI.

- Langfield-Smith, K, et al. 2005, *Management accounting : information for managing and creating value*, 4th edn, McGraw-Hill, Sydney.
- Leedy, PD & Ormrod, JE 2005, *Practical Research: Planning and Design*, 8th edn, Pearson/Merrill Prentice Hall, Upper Saddle River.
- Magner, N, Welker, RB & Campbell, TL 2006, 'The case for fair budgetary procedures', *Managerial Auditing Journal*, vol. 21, no. 4, pp. 408-19.
- Magner, N, Welker, RB & Campbell, TL 1995, 'The interactive effect of budgetary participation and budget favorability on attitudes toward budgetary decision makers: A research note', *Accounting, Organizations and Society*, vol. 20, no. 7-8, pp. 611-8.
- Merchant, KA 1981, 'The Design of the Corporate Budgeting System: Influences on Managerial Behavior and Performance', *The Accounting Review*, vol. 56, no. 4, pp. 813-29.
- Morgan, DL 2007, 'Paradigms Lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods', *Journal of Mixed Methods Research*, vol. 1, no. 1, pp. 48-76.
- Otley, DT 1978, 'Budget Use and Managerial Performance', *Journal of Accounting Research*, vol. 16, no. 1, pp. 122-49.
- O'Connor, NG 1995, 'The Influence of Organizational Culture on The Usefulness of Budget Participation By Singaporean-Chinese Managers', *Accounting, Organizations and Society*, vol. 20, no. 5, pp. 383-403.
- Ramadan kanan, 2011, *cross Cultural impact on the budgeting cycle: an 'Empirical comparison between anglo american and Libyan Companies operating in the Libyan oil sector' PhD thesis. USQ, Australia.*
- Tsui, JSL 2001, 'The impact of culture on the relationship between budgetary participation, management accounting systems, and managerial performance: An analysis of Chinese and Western managers', *The International Journal of Accounting*, vol. 36, no. 2, pp. 125-46.

Ueno, S & Sekaran, U 1992, 'The influence of culture on budget control practices in the USA and Japan: An empirical study', *Journal of International Business Studies*, vol. 23, no. 4.

Weggeland, R & Knapp, M 2003, 'Applying The budget system', in L Rea (ed.), *Handbook of budgeting*, Wiley, New York, vol. 5th, p. 1 v. (various pagination).

Wu, EC 2005, 'Convergence of Attitudes in Different Cultures Towards the Budgeting Process', *Journal of Business & Management*, vol. 11, no. 2, pp. 29-47.

Zikmund, W 2000, *Business Research Methods*, 6th edn, Harcourt College Publishers.