

**Strategic cost planning through the elaboration of contingency theory.**

**Extracted from Ph.D. thesis titled:**

**Using the contingency theory for strategic cost management and supporting an intelligent budget confronts budgetary collusions, moral hazards, and budgetary slacks**

**Submitted By**

**Mahmoud Mohamed Zain**

[Mahmoud.zain@nub.edu.eg](mailto:Mahmoud.zain@nub.edu.eg)

"Associate Lecturer of Accounting at Faculty of Business Administration - Nahda University"

**Under supervision of**

**Prof. Mohamed Mostafa El Gebaly**  
Professor of cost accounting, Faculty of commerce,  
Beni Suef Univeresity

**Prof. Nagaty Ebrahim Abdelaleim**  
Professor of cost accounting, Faculty of  
commerce, Beni Suef Univeresity

## Abstract

**Research Purpose:** Using the contingency theory main assumption stating that there is no universal optimal respond to any given situation, in the field of strategic cost planning through the investigation of the most common contingent factors and also the most common strategic management accounting techniques to conclude the development of the strategic management accounting techniques through the application of the contingency theory.

**Research design/Methodology:** The research is prepared using deductive research methodology, through the literature review of the management accounting literature in the field of management accounting. And also a questionnaire has been conducted to validate the assumptions of the research.

**Research Originality:** It's clear from the literature review that, the contingency theory has been introduced long time ago but the originality of the research arises from the linkage attempt between contingency theory and strategic cost planning. Generally, to propose the concept of relativity of the success of any strategic cost management technique used in any business organization.

**Research Findings:** The research has concluded that any strategic cost management technique is only successful if it is appropriate to the very specific business environment it is to be applied in. Not only the business environment, but also every other contingent factor can affect the effectiveness and efficiency of the application of that management accounting technique. Strategic cost management function can be disabled due to the huge uncertainty exists in the modern economy. Accordingly, in order to be effective and efficient it has to take the contingent factors into consideration to have a proactive scenarios of the possible situations that the organization might face in order to be responsive, effective, and efficient.

**Keywords:** Strategic cost management, Management accounting, Strategic cost planning, Contingency theory.

## **Introduction:**

Strategic management accounting plays a prominent role in providing the information needed to make long-term strategic decisions. Given the intense competition that exists between the different organizations and the openness of global markets to each other, and as a result of the rapid development of information technology and in response to the changing needs of customers, this necessitated a request for more accurate information. And more quickly to make the right strategic decisions at the right time to stay competitive.

Organizations have become focused on the quality of their products and classifying their operations into multiple activities to obtain more accurate information on the costs of their products. As a result, it was necessary to move away from the traditional management accounting methods and follow the strategic management accounting methods. Most researchers began to pay attention to the need to change the nature of the information provided by accounting and the skills possessed by the accountant and change the role he plays in order for enterprises to achieve a sustainable competitive advantage, and many attempts have emerged to link developments in the field of accounting on the one hand and strategic management on the other. Some called these attempts Strategic Accounting, and some called them Accounting for Strategic Positioning, but despite the writings that appeared in the accounting literature in this field, there is still a state of disagreement on a specific definition of strategic cost management.

### **1. The validity of contingency theory:**

Studies have proved once again that environmental factors and other contingent factors such as technology, size, structure, etc., do have great impact on accounting systems. (Khandwalla, 1972) was one of the first scholars and researchers in the field of accounting to study the effect of the external environment on management control practices. According to Khandwalla, the design of AISs (Accounting Information Systems) depends on the intensity of competition faced by the firm.

Moreover, it was also found that different types of competition impacted the accounting information differently. For instance, price, marketing, or product competitions have different impacts on the use of accounting information in manufacturing firms. When there is a high level of dynamism, there will be a greater rate and possibility of change, and this will require frequent control reports that should include not only financial information but also non-financial information.

In addition, the focus will be more on forecasts than on past actual results in such a changing environment. In the case of heterogeneity, when many product markets are being served, there will be a need for the decentralized control system with partially independent responsibility centers. However, when the environment is that of severe competition or market hostility, a more sophisticated AIS is required – one that includes non-financial information (Emmanuel et al., 2004). (Waterhouse and Tiessen, 1978) have noted that the environment has two dimensions that impact the Accounting information system – the simple-complex dimension and the static-dynamic dimension. These ideas have been further elaborated in the studies of Hayes (1977). Thus it is true to say that the contingency theory is a powerful theory that impacts the approach of accounting researchers to a large extent.

## **2. The practicality of contingency theory:**

(Rayburn and Rayburn, 1991), in their study of the contingency theory and its impact of new accounting technologies in uncertain hospital environments, used the contingency model to assess the impact of a new accounting technology – Diagnosis-related Group (DRG) systems in US hospitals – on various aspects of management accounting, contingent on the nature of the hospital. According to their finding, accountants from public (non for profit) and private for-profit hospital accountants reported more of an increase in the use of financial data for control than proprietary hospital accountants. explain that this could be due to the greater use of centralized financial controls and policies in the case of proprietary hospitals compared to the not-for-profit area prior to Diagnosis-related Group.

Likewise, Cadez and Guilding (2008), in their study, have found that there is no universally suitable or appropriate strategic management accounting system, and factors such as company size and strategy have an effect on the application of strategic management accounting (Cadez and Guilding 2008). These findings show that the contingency theory finds practical application in the accounting context.

### **3. Strengths of Contingency Theory: Impact of Other Factors:**

Apart from the environmental factors, other factors such as technology, size, culture, corporate strategy, etc., also impact accounting system design, and hence they also prove the contingency theory right in the context of accounting.

Researchers have linked different organizational structural arrangements with particular types of workflows. This has been extended later to include the accounting information system designs. Accountants have always recognized that “the nature of the production process determines the amount of cost allocation rather than cost apportionment that can take place” (Emmanuel et al. 1998). Moreover, they also found that it was difficult to have a high level of accuracy in the case of process production compared to costing unity and small batch production because a greater proportion of the costs are incurred jointly by a mix of final products. This leads to a technological constraint on AIS design as a direct outcome of product interdependence.

(Piper, 1978) has linked the complexity of the task as a contingency factor to financial controls. According to him, the complexity of the task faced by an organization is relevant to defining an appropriate financial control structure. His study based on four retail organizations reveals that task complexity affected the financial control structure adopted through the intervening variable of the organizational structure. In this context, task complexity was defined by the range of products sold, the diversity of the range, and seasonal variations in the type of outlet. Organizational size is another factor that can affect control arrangements. (Williamson, 1964) holds that when an organization expands, it will impact the accounting system as well. When it is of medium size, the organization will work on a functional basis. However, when it expands through diversification, there is increased exposure to more diverse product market

environments, and the activities of the organization get reorganized into semi-autonomous divisions. This calls for the accounting system to be so designed as to measure and compare divisional performances using similar accounting measures as those used to measure overall firm performance. Control systems have also been shown to differ by industry type. Controls in the manufacturing sector have a large number of standard cost centers that rely extensively on detailed variance analysis. In contrast, costs in nonmanufacturing industries tend to be mostly of a discretionary nature.

#### **4. Strategic cost management through contingency theory:**

Strategic management accounting plays a major role in providing the necessary information to make long-term strategic decisions. Due to the intense competition that exists between organizations in the current era of the openness of global markets and as a result of rapidly developing information technology in response to changing customer needs. This has called for a request for information that is more accurate and more quickly to make the right strategic decisions at the right time to stay ahead of the competition.

Organizations have become focusing on the quality of their products and classifying their operations into multiple activities to obtain more accurate information about the costs of their products. Consequently, it was necessary to move away from the traditional management accounting methods and follow the strategic management accounting methods that have contributed to the development of organizations strategic position (Mintzberg, 2011).

Most researchers began to pay attention to the necessity of changing the nature of information provided by accounting and the skills that the accountant possesses. Accordingly, changing the role the management accountants play in order to achieve sustainable competitive advantage for enterprises, and there have been many attempts to link developments in the field of accounting on the one hand and strategic management on the other hand. Some have called these attempts strategic accounting, and some have called it accounting for strategic positioning, but despite the writings that have appeared in the accounting literature in this field, there is still a state of disagreement over a specific definition of strategic management accounting (Chandler, 2009).

(Al-Shishiny, 2013) demonstrated the importance and role of both strategic management accounting methods and contingency factors in enhancing and increasing the competitiveness of enterprises. Each method of strategic management accounting increases the organization's capabilities to achieve its strategic objectives in light of the size and type of risks that The organization is exposed to it and the extent to which the organizations respond to the outcomes of the strategic management accounting methods. The appropriate strategic management accounting technique is determined according to the situations or events that the organization is going through, as the planning and control of operations focuses on the need to allocate and control the organization's resources efficiently and effectively as a result of changes in the contemporary business environment resulting from the increase in information technology developments.

Communications, manufacturing, and globalization of markets, which are the things that lead to the emergence of various risks facing enterprises, whether in keeping pace with these changes or in how to deal with these variables in light of the situational factors experienced by the enterprise that determine its financial or market status. Therefore, many enterprises seek to reach a consensual approach or framework between the methods of strategic cost management systems in the light of situational factors.

(Watts and Zimmerman, 1986) in their Positive Accounting theory, have argued that the most important criteria for a theory's success is the value of the theory to users. (Malmi and Granlund, 2005) argued that, contingency theory, by way of practical applications, has proved itself to be a successful applicable theory. A complete theory must contain four elements: logical consideration of contingent factors (variables, constructs, concepts); their relationships; the underlying psychological, economic, or social dynamics that justify the selection of the factors and the proposed causal relationships; and finally, the conditions that place limitations on the propositions generated from a theoretical model (Malmi and Granlund 2005). Generally, in studies involving the contingency theory and strategic cost management, the findings are very general and broad, partly self-evident, and have very little practical value. There is a need to advance from this stage to be able to argue that as uncertainty increases, certain forms of strategic cost management systems used in a certain

way would provide better decision-making support or, more likely, achievement of goal congruence. This would make it more practical. Currently, one may say that the contingency theory in accounting is a theory but an incomplete one that needs to be developed further to increase its explanatory power.

### **5. Contingency theory contribution to strategic cost management:**

Nowadays the context of business is constantly changing. Organizations are forced to seek effective methods and techniques to manage their competitive advantage, financial and non-financial performance and at the same time to increase the value added for stakeholders. Competitive strategy oriented to external context, effective and efficient organizational structure and strategic cost management (SCM) information allows companies to strive to success. Assurance of competitive advantage is highly based on decision making process of managers by using SCM information. The first time concept of SCM was mentioned in 1989 by Shank in USA. It constitutes three fundamental conceptions of costs drivers, value chain and strategic positioning. The new economy is facing huge challenges of intensified competition, demanding companies to use information of strategic decisions. Therefore, it is a must to know whether the current accounting system is consistent with the context and if it is ready to provide useful information.

The present research aims to make generalizations about the potential usage of SCM techniques in the modern economy. In this research contingency theory was applied with the Cartesian approach. Three contingency factors were examined, such as the competition intensity, strategy and company size, on the use of instruments of SCM, such as Activity based costing and management, Target costing, Life cycle costing and Benchmarking. The literature about SCM is extensively growing (Miculescu, Miculescu, 2014) argued that, SCM research explaining the factors that are expected to impact on the usage of different levels of SCM techniques is widespread (Haldma, Laats, 2002; Hoque, 2003; Chenhall, 2003; Chapman, 2006; El Kelety, 2006; Jankala, 2007; Pock, 2007; Hyvonen, 2008; Strumickas, 2011; Abugalia, 2011; Zsolt, 2012; Islam, Hui, 2012; Ojra, 2014; Ayadi, Affes, 2014).

(Shank, 1989) assumed that SCM may be defined as the managerial use of cost information explicitly directed at strategic management. (Shank, Govindarajan, 1993) mentioned that SCM combines important aspects of managing costs in value chain. (Cooper, Slagmulder, 1998) argued that SCM is the adoption of cost management techniques in the way that they improve strategic position and costs conscience of the company. (Hoque, 2003) argued that SCM provides cost information for strategic decisions. (El Kelety, 2006) has concluded that SCM is a philosophy, an attitude and a set of techniques with the aim of making a contribution to shaping the future of the company. (Anderson, 2007) claimed that SCM is deliberate decision making, aimed to aligning the firm's costs structure with its strategy and optimizing the enactment of the strategy.

(Miculescu, 2014) has defined SCM as a bundle of techniques and activities used by management in activities of planning and controlling short and long-term decisions, allowing to increase the value of products and to decrease costs. The analysis of various concepts disclosed different aspects of phenomena.

Fundamental goal of SCM is to create rational way or method to make strategic decisions which help to form, communicate, improve and control the organizational strategy, ensuring competitive advantage (Anderson, 2007). SCM concept is getting more attention in strategic management accounting literature. SCM is a set of techniques implemented by corporate's management to design value-creating information related to costs drivers in value chain for making strategic decisions and constantly aligning them with organization's strategy in a highly uncertain business environment. Three of the five SCM practices (ABC, ABM, BMKING) got means above the midpoint of the measurement scale where "not all-used to a large extent" definitions were used. The main reasons why companies are still not using SCM techniques highlights the following obstacles: hyperbolized role of financial accounting, a lack of knowledge of techniques essence, a lack of knowledge about overheads in the production process, computer-based resources, and benefit/cost scarcity. Companies which use SCM techniques noted that their size do not impact SCM usage. Companies are using more SCM techniques because of focus on intensified competition and because they have a strategy.

## **6. Strategic cost management and intensity of competition:**

SCM is particularly appropriate in companies that operate in highly competitive environments (Ojra, 2014). (Hoque, 2003) noted that greater competition creates a strong need to focus on costs and value chain. (ElKelety, 2006) argued that the maintenance or improvement of competitive position in terms of intensified rivalry requires more efforts and activities in the areas of market planning, R&D, quality. Greater competition makes a higher need for companies to find ways to differentiate their products or among competitors (Guilding, Cadez, 2008). Therefore, as an organization's environment becomes intense, SCM techniques are needed to facilitate improved strategic decision making.

## **7. Strategic cost management and organizational strategy:**

In accordance to (Chandler, 1962) strategy is the determination of the basic long-term goals and the objectives of an organization, and the adoption of courses of actions and the allocation of resources for carrying out these goals. (Porter, 1980)

proposed three forms of generic strategies: 1) cost leadership strategy is the organization's ability to produce and market a comparable product at a lower price than its competitors. It focuses on lower production cost, high market share, standardized products, economies of scale and tight cost control (Hoque, 2003);

2) product differentiation strategy is the organization's ability to produce and market for unique and superior quality products. This strategy focuses on product uniqueness, brings brand quality, emphasis on marketing and research and has superior after-sale service (Hoque,2003);

3) focus strategy which concentrates on a defined buyer group, product line or geographic market and quick response. SCM which is tailored to support strategy can enhance competitive advantage and superior performance. (Aydi, Affes, 2014) stated that ABC can be useful for calculating more accurate costs to help managers to find activities where there may be cost reductions.

**Descriptive statistics for demographic variables: -**

A descriptive statistical analysis has been carried out, including frequencies, percentages, means, standard deviation, and coefficient of variation, for all characteristics of the sample, independent and dependent variables. These descriptive statistics are based on ordinal Likert scale.

**Table 1 Descriptive statistics for the field of experience: -**

Description	Frequency	Percentage
Academic	106	38.2 %
Professional	171	61.8 %
Total	277	100%

It can be concluded from table 1 that the professional Management accountants in the manufacturing organizations represents 61.8% of the sample while the academics represent 38.2% of the sample.

**Table 2 Descriptive statistics for the Period of experience: -**

Description	Frequency	Percentage
Less than 5 years	74	26.7 %
Between 5 years and 10 years	111	40.1 %
More than 10 years	92	33.2 %
Total	277	100 %

It can be concluded from table 6.10 that 26.7% of the population participated in the questionnaire have an experience period less than 5 years, 40.1% of the population participated in the questionnaire have an experience period between 5 years and 10 years, and 33.2% of the population participated in the questionnaire have an experience more than 10 years.

**Reliability and intrinsic validity for research variables:****Table 3 Descriptive statistics for the Contingency theory contribution to strategic cost management**

No.	Statements	MEAN	SD	CV	Rank
1	Uncertainty can cause budget failure.	4.69	0.555	11.83	1
2	The managers usually face a lot of uncertainty over the results expected in a future period	4.56	0.633	13.88	3
3	Efficient spending decisions should be based on a strategic vision.	3.90	0.999	25.62	10
4	Contingent factors affects strategic management techniques used by the organization	3.91	1.056	27.01	11
5	congruence between the budgeted data and strategic goals is necessary for an efficient budget.	4.02	0.917	22.81	8

6	Inaccurate or unreasonable assumptions can cause budget failure.	4.36	0.565	12.96	2
7	Procurement strategy is highly dependent on the customer needs.	4.00	1.016	25.40	9
8	Customer needs can change rapidly due to the technological advances.	4.11	0.907	22.07	7
9	The amount of raw materials acquired by an organization is affected by the organization's market share.	4.26	0.643	15.09	4
10	Pricing strategies are affected by the degree of rivalry and competition.	4.13	0.772	18.69	6
11	Procurement strategy is a long term – strategic issue – requires strategic decisions.	4.29	0.744	17.34	5
Total		4.4917	0.49155	10.94	--

According to Descriptive statistics in table 3, it can be concluded that:

- The most five homogeneous variables are: Uncertainty can cause budget failure, Inaccurate or unreasonable assumptions can cause budget failure, the managers usually face a lot of uncertainty over the results expected in a future period, the amount of raw materials acquired by an organization is affected by the organization's market share, and Procurement strategy is a long term – strategic issue – requires strategic decisions. With coefficient of variation (11.83), (12.96), (13.88), (15.09), and (17.34) respectively.
- On the other hand, the most five heterogeneous variables are: Contingent factors affects strategic management techniques used by the organization, Efficient spending decisions should be based on a strategic vision, Procurement strategy is highly dependent on the customer needs, congruence between the budgeted data and strategic goals is necessary for an efficient budget., and Customer needs can change rapidly due to the technological advances. With coefficient of variation (27.01), (25.62), (25.40), (22.81), and (22.07) respectively.
- While the value of total weighted mean for the contingency theory contribution to strategic cost management is (4.4917), with coefficient of variation (10.94), therefore we have a totally agree direction to the contingency theory contribution to strategic cost management dimension.

### **Factor Analysis: -**

#### **Exploratory factor analysis for research constructs:**

The researcher used (EFA) to explain the relationships among several difficult correlated variables for each research construct to produce a few conceptually meaningful, relatively independent factors to get the percent of variance accounted for by each specific factor or component, relative to the total variance in all the variables as the following:

## The contingency theory contribution to strategic cost management

Table 4 KMO and Bartlett's Test of Sphericity:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	1307.791
	df	55
	Sig.	.000

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy, KMO, for sampling adequacy, should be greater than 0.50 or equal.
- Bartlett's test of sphericity indicates whether your correlation matrix is an identity matrix, which would indicate that your variables are unrelated. The significance level gives the result of the test. Very small values (less than 0.05) indicate that there are probably significant relationships among variables.

Table 5 Rotation Sums of Squared Loadings

No	Factors	Eigen values $\lambda$	% of Variance	Cumulative %
1	1 <sup>st</sup> factor	4.321	39.283	39.283
2	2 <sup>nd</sup> factor	1.523	13.848	53.131

According to Descriptive statistics in table 5, it can be concluded that:

- Eigen values represent the amount of variance accounted for by a factor by sum of squared loadings for a factor at the optimum value greater than one.
- The "% of Variance" gives the percent of variance accounted for by each specific factor or component, relative to the total variance in all the

variables while the optimum value for Cumulative Rotation Sums of Squared Loadings (0.50) at least.

- Patients' Rights Charter constructs represents (53%) from the Total Variance Explained.

**Table 6 Rotated Component Matrix**

No.	1 <sup>st</sup> factor		2 <sup>nd</sup> factor	
	Variables	factor loadings	variables	factor loadings
1	Efficient spending decisions should be based on a strategic vision.	0.821	Uncertainty can cause budget failure.	0.800
2	Procurement strategy is highly dependent on the customer needs.	0.819	The managers usually face a lot of uncertainty over the results expected in a future period	0.784
3	Contingent factors affects strategic management techniques used by the organization	0.808		
4	congruence between the budgeted data and strategic goals is necessary for an efficient budget.	0.792		
5	The amount of raw materials acquired by an organization	0.689		

	is affected by the organization's market share.			
6	Pricing strategies are affected by the degree of rivalry and competition.	0.623		
7	Customer needs can change rapidly due to the technological advances.	0.584		
8	Inaccurate or unreasonable assumptions can cause budget failure.	0.560		
9	Procurement strategy is a long term – strategic issue – requires strategic decisions.	0.406		

According to Descriptive statistics in table 6, it can be concluded that:

- This table (called the Pattern Matrix for varimax rotations) reports the factor loadings for each variable on the components or factors after rotation
- Each number represents the partial correlation between the item and the rotated factor at minimum correlation coefficient from (0.30) to (0.50).

**References:**

Abugalia, M. S. (2011). The influence of business environment on the effectiveness of management accounting practises: evidence from Libyan companies. University of Huddersfield Business school.

Ayda, F., Affes, H. (2014). Contextual factors impact on the use of new management accounting practices: An empirical analysis in the Tunisian context. *Journal of research in international business and management*, 4, 45-55.

Anderson, S. W. (2007). Managing costs and cost structure throughout the value chain: research on strategic cost management. *Handbook of management accounting research* (2007 ed.).

Burns, T., Stalker, G. M. (1961). *The management of innovation*. Oxford: Oxford University press, Lighting source.

Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting, Organizations and Society*, 28, 127-168.

Chenhall, R. H., Chapman, C. S. (2006). Theorising and testing fit in contingency research on management control systems. *Methodological accounting reserach-theories*.

Cooper, R., Slagmulder, R. (1998). What is strategic cost management. *Journal management accounting*, 79, 14.

Cadez S and Guilding C 2008, An Exploratory Investigation of an Integrated Contingency Model of Strategic Management Accounting, *Accounting Organization and Society*, 33, p. 836-863

Chen, Shimin 2008, Measures in Capital Budgeting: A Contingency Approach Analysis, *Behavioral Research in Accounting*, Volume 20, Number 1, p. 13-29

Drury, C 2004, *Management and Cost Accounting*, Cengage Learning EMEA, 2004

Emmanuel, RC; Otley TD and Merchant, K 1998, Accounting for management control, Cengage Learning EMEA, 1998

El Kelety, I. (2006). Towards a conceptual framework for strategic cost management: the concept, objectives and instruments. Chemnitz Univ.

Fisher, J. (1995). Contingency-based research on MCS: categorization by level of complexity. Journal of accounting literature, 14, 24-53.

Free. Shank, J. K. (1989). Strategic cost management: new wine, or just new bottles? Journal of management accounting research, 1, 19 p.

Gerdin. J. Greve, J. (2004). Forms of contingency fit in management accounting research . Accounting, Organizations and Society, 29, 303-326.

Guilding, C., Cadez, S. (2008). Strategy and SMA: an investigation of organizational configurations. Manchester Bussiness school seminar.

Gerdin J and Greve J 2004, Forms of Contingency fit in Management Accounting Research— A Critical Review, Accounting, Organization and Society, 29, p. 303-326

Gordon LA and Miller D 1976, A Contingency Framework for the Design of Accounting Information Systems, Accounting, Organizations and Society, 1976, p. 59-70.

Hayes D 1977, The Contingency Theory of Management Accounting. Accounting Review, 1977, p. 22-39

Hyvonen, J. (2008). Linking management accounting and control systems, strategy, information technology, manufacturing technology and organizational performance of the firm in contingency framework. University of Oulu.

Hoque, Z. (2003). Strategic management accounting. Malaysia: Pearson Australia Group Pty Ltd.

Haldma, T., Laats, K. (2002). Influencing contingencies on management accounting practices in Estonian manufacturing companies. Tartu Univ.

Islam, J., Hui, H. (2012). A review of literature on contingency theory and managerial accounting. Journal of business review, 6, 15, 5159-5164.

Jankala, S. (2007). Management control systems in the small business context. Linking effects of contextual factors with MCS and financial performance of small firms. University of Oulu.

Khandwalla, P. N. (1972). The effect of different types of competition on the use of accounting controls. *Journal of accounting research*, p. 10.

Khandwalla, P. N. (1977). The design of organizations. New York: Harcourt Brace Social research, 1, 71-77.

Khandwalla PN 1972, The Effect of Different Types of Competition on the Use of Management Controls, *Journal of Accounting Research*, 1972, p. 275-285.

Langfield-Smith, K. (1997). Management control systems and strategy: A critical review. *Accounting, Organizations and Society*, 22, 207-232.

Libby, T., Waterhouse, J. H. (1996). Predicting change in management accounting systems. *Journal of management accounting reserach*, 8, 13.

Merchant, K. A. (1998). Modern management control systems. New Jersey: Prentice Hal.

Malmi, T and Granlund, M 2005, In Search of Management Accounting Theory, AFAANZ (The Accounting and Finance Association of Australia and New Zealand) Publication.

Piper J 1978, Determinants of Financial Control Systems for Multiple Retailers–Some Case Study Evidence, Unpublished paper, University of Loughborough, 1978.

Pock, T. (2007). Contingency-based design of management control systems. University of St. Gallen.

Porter, M. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. New York:

Rayburn MJ and Rayburn LG 1991, Contingency Theory and the Impact of New Accounting Technology in Uncertain Hospital Environments, *Accounting, Auditing & Accountability Journal*, 1991, Volume 4, Issue

Riahi-Belkaoui A 2002, Behavioral management accounting, Greenwood Publishing Group, 2002

Shank, J. K., Govindarajan, V. (1993) Strategic cost management: the new tool for competitive advantage. New York: Schuster Inc.

Strumickas, M. (2011) Balancing model of management accounting system. University of Kaunas technology.

Waterhouse JH and Tiessen PA 1978, A Contingency Framework for Management Accounting Systems Research, Accounting, Organizations and Society, 1978, p. 65-76.

Wickramasinghe, D., Alawattage, C. (2007) Management accounting change: approaches and perspectives. Oxon.

Watts RL and Zimmerman JL 1986, Positive Accounting Theory, Prentice Hall, Englewood Cliffs, NJ

Williamson O. 1964, The Economics of Discretionary Behavior: Managerial Objectives in the Theory of the Firm, Prentice-Hall Publishers, Englewood Cliffs, N.J.

Woodward J 1965, Industrial Organization: Theory and Practice, Oxford Publishers, London.

Zsolt, M. (2012) The effect of contingency factors on the use of manufacturing practices and operations performance. Corvinus University.