


**THE RELATIONSHIP OF ORGANIZATION AND TECHNOLOGY TO THE APPLICATION OF ACTIVITY-BASED COST ACCOUNTING SYSTEMS IN ENTERPRISES IN HANOI**

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ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p><b>Received</b> 08 May 2023</p> <p><b>Accepted</b> 04 August 2023</p>	<p><b>Purpose:</b> The article analyzes the relationship of organization and technology to the application of an activity-based cost accounting system in enterprises in Hanoi, providing more empirical evidence on the relationship between organizations and individuals. organization and technology to the application of an activity-based cost accounting system in enterprises in Hanoi.</p>
<p><b>Keywords:</b></p> <p>Organization; Technology; Activity-Based Cost Accounting System.</p>	<p><b>Theoretical framework:</b> This paper uses the The innovation diffusion theory, The resource theory, The theory of cost-benefit analysis.</p>
	<p><b>Design/Methodology/Approach:</b> The research method uses a questionnaire survey of accountants, chief accountants, business managers. After the survey results are available, perform data processing by statistical methods to determine the weight and frequency of selected factors, process the data on SPSS statistics 25 software, analyze the reliability of the data. factors as well as factor measurement criteria, and at the same time apply statistical methods to synthesize and compare to estimate the impact of the relationship of organization and technology on the application of the application of activity-based cost accounting systems in enterprises in Hanoi.</p> <p><b>Findings:</b> The research results show that the support of managers, the leader, the size of the organization, the ABC consultants, the cost, the variety and complexity of the product, and the relative advantage have a positive relationship with the job. applying an activity-based cost accounting system in enterprises in Hanoi.</p> <p><b>Research, practical &amp; social implications:</b> Based on the research results, the author has proposed recommendations to apply the activity-based cost accounting system in enterprises in Hanoi.</p> <p><b>Originality/Value:</b> This study fills the gap in The relationship of organization and technology to the application of activity-based cost accounting systems in enterprises in Hanoi.</p> <p>Doi: <a href="https://doi.org/10.26668/businessreview/2023.v8i8.3073">https://doi.org/10.26668/businessreview/2023.v8i8.3073</a></p>

**A RELAÇÃO DE ORGANIZAÇÃO E TECNOLOGIA COM A APLICAÇÃO DE SISTEMAS DE CONTABILIDADE DE CUSTOS POR ATIVIDADE EM EMPRESAS EM HANÓI**

**RESUMO**

**Objetivo:** O artigo analisa a relação entre organização e tecnologia para a aplicação de um sistema de contabilidade de custos baseado em atividades em empresas em Hanói, fornecendo mais evidências empíricas sobre a relação entre organizações e indivíduos.

**Estrutura teórica:** Este artigo usa a teoria da difusão da inovação, A teoria dos recursos, A teoria da análise custo-benefício.

**Design/Methodologia/Abordagem:** O método de pesquisa usa uma pesquisa de questionário de contadores, contadores principais, gerentes de negócios. Depois que os resultados da pesquisa estiverem disponíveis, execute o processamento de dados por métodos estatísticos para determinar o peso e a frequência de fatores selecionados, processe os dados no software SPSS statistics 25, analise a confiabilidade dos dados. fatores, bem como critérios de medição de fatores, e ao mesmo tempo aplique métodos estatísticos para sintetizar e comparar para estimar o

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impacto da relação de organização e tecnologia na aplicação da aplicação de sistemas de contabilidade de custos com base em atividade em empresas em Hanói.

**Resultados:** Os resultados da pesquisa mostram que o suporte de gerentes, o líder, o tamanho da organização, os consultores ABC, o custo, a variedade e complexidade do produto e a vantagem relativa têm uma relação positiva com o cargo.

**Pesquisa, prática e social implicações:** Com base nos resultados da pesquisa, o autor propôs recomendações para aplicar o sistema de contabilidade de custos com base na atividade em empresas em Hanói.

**Originalidade/Valor:** Este estudo preenche a lacuna na relação entre organização e tecnologia para a aplicação de sistemas de contabilidade de custos baseados em atividades em empresas em Hanói.

**Palavra-chave:** Organização, Tecnologia, Sistema de Contabilização de Custos por Atividade.

## RELACIÓN DE LA ORGANIZACIÓN Y LA TECNOLOGÍA CON LA APLICACIÓN DE SISTEMAS DE CONTABILIDAD DE COSTOS BASADOS EN ACTIVIDADES EN EMPRESAS DE HANOI

### RESUMEN

**Finalidad:** El artículo analiza la relación de la organización y la tecnología con la aplicación de un sistema de contabilidad de costos basado en actividades en las empresas de Hanoi, aportando más evidencia empírica sobre la relación entre las organizaciones y los individuos, la organización y la tecnología con la aplicación de un sistema de contabilidad de costos basado en actividades en las empresas de Hanoi.

**Marco teórico:** Este artículo utiliza la teoría de la difusión de la innovación, la teoría de los recursos, la teoría del análisis costo-beneficio.

**Diseño/Metodología/Enfoque:** El método de investigación utiliza una encuesta de cuestionario de contadores, contadores jefes, gerentes de negocios. Una vez que se disponga de los resultados de la encuesta, realizar el procesamiento de los datos mediante métodos estadísticos para determinar el peso y la frecuencia de los factores seleccionados, procesar los datos en el software SPSS statistics 25, analizar la fiabilidad de los datos, así como los criterios de medición de los factores y, al mismo tiempo, aplicar métodos estadísticos para sintetizar y comparar para estimar el impacto de la relación entre la organización y la tecnología en la aplicación de la aplicación de los sistemas de contabilidad de costos basados en la actividad en las empresas de Hanoi.

**Hallazgos:** Los resultados de la investigación muestran que el apoyo de los gerentes, el líder, el tamaño de la organización, los consultores de ABC, el costo, la variedad y complejidad del producto, y la ventaja relativa tienen una relación positiva con el trabajo.

**Investigación, práctica & social implicaciones:** Basándose en los resultados de la investigación, el autor ha propuesto recomendaciones para aplicar el sistema de contabilidad de costos basado en actividades en las empresas de Hanoi.

**Originalidad/Valor:** Este estudio llena la brecha en la relación de la organización y la tecnología con la aplicación de los sistemas de contabilidad de costos basados en actividades en las empresas de Hanoi.

**Palabra clave:** Organización, Tecnología, Sistema de Contabilidad de Costos Basado en Actividades.

### INTRODUCTION

Traditional cost accounting is based on indirect allocation criteria in case a business produces many types of products which can result in incorrect product costs. Therefore, at present, companies of developed capitalist countries have ignored traditional cost accounting methods and applied modern cost accounting methods such as: activity-based costing ( Activity Based Costing - ABC), cost accounting according to the "target cost" method.

Different from the traditional method, ABC method collects all indirect costs in the production process which are collected on the general cost accounts of financial accounting, and then allocates the costs according to this activity. into each product or service that creates

that activity according to appropriate allocation criteria such as number of machine hours, direct labor hours, etc. This indirect cost is allocated to the production cost. along with direct material costs and direct labor costs. Other costs such as selling expenses, administrative expenses are considered as period costs that are not allocated to products or are allocated to products according to direct worker's labor time or costs. direct workers. If we allocate, we will have the entire cost target.

In today's economy, businesses are facing fierce competition in the market. Therefore, it is required that they constantly change and improve their capacity to manage production and business activities, update their knowledge to improve the competitiveness of enterprises. The application of modern management tools is very necessary for businesses, cost information is one of the important information in all types of businesses from production, commerce, and services. The traditional costing system was concluded to have many limitations, instead, an activity-based costing system was shown to more accurately reflect the traditional costing system and is an accounting system. most modern costing of the 21st century. Establish a set of organizational and technological groups that influence the adoption of activity-based cost accounting and provide solutions to help businesses apply use a more efficient performance-based costing system.

This study aims to examine the relationship of organization and technology to the application of the activity-based cost accounting system in enterprises in Hanoi, thereby offering some recommendations. It is recommended to improve the application of the activity-based cost accounting system in enterprises in Hanoi.

## **LITERATURE REVIEW**

### **Theoretical Model**

#### **The Innovation Diffusion Theory**

The theory explains how innovation is communicated over time, across channels, among members of society, and used. Rogers (1995, p.11) defined innovation as an idea, object, or practice considered new by an individual or organization. Innovation has five characteristics: relative advantage, compatibility, complexity, observability, and testability. Those characteristics can affect the adoption of innovation. Although activity-based costing has been discussed since 1985 (Zarbo et al., 1990), it is still considered by practitioners as the new accounting system (Brown et al., 2004). Therefore, in studying the problems of applying an

activity-based costing system, innovation diffusion theory is one of the foundations for identifying the current system's advantages and benefits.

#### The Resource Theory

This theory refers to the remarkable capabilities of firms to build their competitive advantages (Wernerfelt, 1984). While orthodox economic tools tend to drive markets, traditional strategy concepts are resource positioning analysis. The application of resource theory in the ABC system explains the influence of resources on human and financial resources. The support of senior management and leading people impacts adoption of the ABC system.

#### The Theory of Cost-Benefit Analysis

This theory studies decision-making behavior based on the benefits received and the costs associated with the project that have been spent (Stuart, 2012). Therefore, this theory explains the consideration of enterprises when adopting the new system. The comparison of benefits and costs between implementing the ABC accounting system and the traditional cost accounting system will be an essential basis for businesses to decide whether to apply or not.

#### **The Influence of Organizational Factors**

Most studies on adopting computer-aided software engineering consider it an organizational decision to adopt (Orlikowski, 1993). Organizational factors include senior management support, internal support, organizational size, and consultant support (Baird, 2004). It is the process and environment-related factors within an organization.

The support of senior management (CEO, CFO, etc.) is an essential indicator of the ability to adopt innovation more quickly in the enterprise (Alavi, 1993; Prescott & Conger, 1995). Adoption of new technology is hindered when there is a lack of management support (Rai & Howard, 1992; Everest & Alanis, 1993). If approved, senior management involvement and support help secure resources for new technology adoption. Adopting new technology can be expensive and does not bring immediate benefits, so get management support with a firm commitment from top management to explore the technology. According to Premkumar & Potter (1995), senior management support for ABC adoption will reduce project risk because the ability to access resources and solve problems across organizational boundaries increase when senior management explicitly supports the project.

Leaders help promote projects and facilitate organizational communication (McGowan & Klammer, 1997; Brown et al., 2004). They are the pioneers in the organization who will introduce and create awareness of the need to use new technology (Premkumar & Potter, 1995).

Organizational size influences the adoption of new technologies in general and activity-based costing in particular (Brown et al., 2004). Larger firms have more ABC adoption (Krumwiede, 1998). One reason is that large companies have more access to ABC design and implementation (Van Nguyen & Brooks, 1997). In addition, large companies often have more contact and communication channels, necessary infrastructure (Bjørnenak, 1997), and discretionary resources (Booth & Giacobbe, 1998) to adopt innovations better.

Cohen (1999) finds that companies increasingly use outside experts or consultants to solve problems. Bjørnenak (1997) found that all companies adopting ABC used consultants. Expert opinion has a profound influence on the choice of ABC technology to be adopted (Anderson, 1995). It is a source of innovative information and an active ABC-applied dissemination channel.

### **The Influence of Technology - Related Factors**

The activity-based costing system was born to overcome the limitations of the traditional cost accounting system - the inaccurate cost information of each product and unreliable enough to provide managers (Douglas, 2013). There have been many studies to determine the influence of technology in ABC applications, such as those of Clarke et al. (1997), Van Nguyen & Brooks (1997), Gosselin (1997), Booth & Giacobbe (1998), Brown et al. (2004).

Empirical research by Bjørnenak (1997) found a relationship between overhead costs and ABC adoption. As overheads account for many product costs, the ABC system becomes more suitable for businesses (Mitchell, 1994). However, the study of Van Nguyen & Brooks (1997) and Booth & Giacobbe (1998) did not find a significant effect of cost on ABC adoption.

There is inconsistency in the relationship between product diversity and complexity and ABC adoption. According to Cooper & Kaplan (1988), when products are diversified and more complex, it is more appropriate to apply ABC because the cost distortions arising from traditional cost systems increase. Empirical research by Bjørnenak (1997), Krumwiede (1998), and Booth & Giacobbe (1998) also came to the same conclusion. However, the study by Clarke et al. (1997) showed the opposite conclusion, while Van Nguyen & Brooks (1997) analysis did not find a relationship between product diversity and complexity with ABC application.

Activity-based cost accounting systems have many potential benefits over traditional accounting systems (Cobb et al., 1992; McGowan, 1998; Brown et al., 2004). Relative advantages in applying ABC include the perception of the superiority of the ABC system compared to the current cost accounting system, such as providing high-quality information, allowing for better decision-making, and updating. Research by Anderson (1995) has shown a positive association between perceived relative advantage and ABC application.

In short, an overview of studies on the relationship between organization and technology with ABC application shows that there have been studies on the influence of organizational factors (management support, leaders, size of organization, consultants) and technology factors (overall costs, product variety, and complexity, relative advantage). However, the research results are not consistent.

## **METHODOLOGY**

Research methods used include survey through questionnaires, survey subjects include accountants, chief accountants, business managers. Apply ABC, Manager's support, Leader, Organization size, ABC consultants, cost, Product variety, complexity, Relative advantage measured on a five-level Likert scale Very good, good, average, not good, weak. The 5-level Likert scale is familiarly used in many studies, so the author also quantifies each factor according to five levels. After the survey results are available, perform data processing by statistical methods to determine the weight and frequency of selected factors, process the data on SPSS statistics 25 software, analyze the reliability of the data. factors as well as factor measurement criteria, and at the same time apply statistical methods to synthesize and compare to estimate the impact of the relationship of organization and technology on the application of the accounting system. cost based on activity in businesses in Hanoi

The scope of research is enterprises in Hanoi with different business lines. Research data is collected in the form of face-to-face interviews and email interviews with accountants, chief accountants, business managers. The survey results collected 256 questionnaires. After eliminating the invalid questionnaires due to many blank cells, the author chose to use 239 questionnaires.



## RESULTS AND DISCUSSION

### Check the Scale

The results of evaluating the reliability of the scale by Cronbach's Alpha show that the scales have a reliability greater than 0.6 and the correlation coefficient of the total variable is greater than 0.3. All scales satisfy the conditions for EFA exploratory factor analysis. The reliability of the scales is summed up in the table below.

Table 1: Scale test results

No.	Variable	Symbol	observed variables	Cronbach's Alpha	Corrected Item-Total Correlation
1	Application of ABC	ABC	4	.802	.565
2	Support of senior management	MS	4	.743	.472
3	Leaders	LD	3	.727	.424
4	Organizational size	SZ	3	.690	.415
5	ABC consultants	AC	3	.659	.356
6	Cost	CO	3	.876	.756
7	Product variety and complexity	VC	4	.795	.534
8	Relative advantage	RA	5	.776	.480

Source: Prepared by the authors (2023).

### EFA Analysis

Factor analysis was performed with Principle Component extraction and Varimax rotation for the dependent observed variable. The results show that the coefficient KMO = 0.754 (condition > 0.5), Significance level, and Barlett test = 0.000 (meet condition < 0.05) show that EFA analysis is appropriate. The total variance extracted is 63.002% > 50%, and factor loading factors are all greater than 0.5, so they are satisfactory. The official scale after EFA processing includes 7 independent variables with 25 observed variables as proposed.

Table 2: EFA analysis

Rotated Component Matrix <sup>a</sup>							
	Component						
	1	2	3	4	5	6	7
RA3	.774						
RA2	.760						
RA5	.759						
RA4	.659						
RA1	.608						
VC2		.830					
VC4		.770					
VC1		.682					
VC3		.645					
CO3			.888				
CO2			.884				
CO1			.852				
MS4				.794			
MS3				.738			

MS2				.732			
MS1				.665			
SZ1					.736		
SZ3					.725		
SZ2					.697		
LD2						.828	
LD1						.813	
LD3						.586	
AC1							.827
AC2							.757
AC3							.590

Source: Prepared by the authors (2023).

### Regression Analysis

Table 3. Statistical results of factors

ANOVAa					
Model	Sum of Squares	df	Mean Square	F	Sig.
1	.760 <sup>a</sup>	.577	.564	.54370	1.877

a. Predictors: (Constant), VC, RA, LD, AC, CO, MS, SZ

b. Dependent Variable: ABC

Source: Prepared by the authors (2023).

Adjusted R-squared reflects the influence of the independent variables on the variation of the dependent variable, in this case factors such as Manager's support, Leader, Organization size, ABC consultants, cost, Product variety, complexity, Relative advantage affect 57.7% to the application of activity-based cost accounting system in enterprises in Hanoi. The Durbin-Watson coefficient is 1.877, in the range from 1.5 to 2.5, so there is no first-order sequence autocorrelation.

In order to check whether this regression model is suitable with the collected data set and has application significance, the author continues to test the model's fit through ANOVA test as follows:

Table 4: Test of model fit (ANOVA model)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.163	7	13.309	45.022	.000 <sup>b</sup>
	Residual	68.285	231	.296		
	Total	161.448	238			

Source: Prepared by the authors (2023).

The model's F-statistic has a Sig value. = 0.000 < 0.05 shows that the model fits the data set and can be generalized. VIF coefficients are all less than 2, so there is no multicollinearity between components that do not appear in the research model.



Regression results showing the level of influence of organization and technology on the application of activity-based cost accounting in enterprises in Hanoi are shown in the table below:

Table 5: Multiple regression results

Model		Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.243	.433		.561	.000		
	MS	.192	.161	.170	1.496	.000	.848	1.179
	LD	.130	.155	.124	1.550	.000	.941	1.262
	SZ	.140	.155	.136	2.717	.000	.722	1.385
	AC	.159	.169	.107	2.298	.000	.847	1.181
	CO	.180	.138	.214	4.683	.000	.877	1.241
	RA	.122	.168	.115	1.322	.000	.867	1.153
	VC	.254	.156	.299	3.655	.000	.694	1.441

Source: Prepared by the authors (2023).

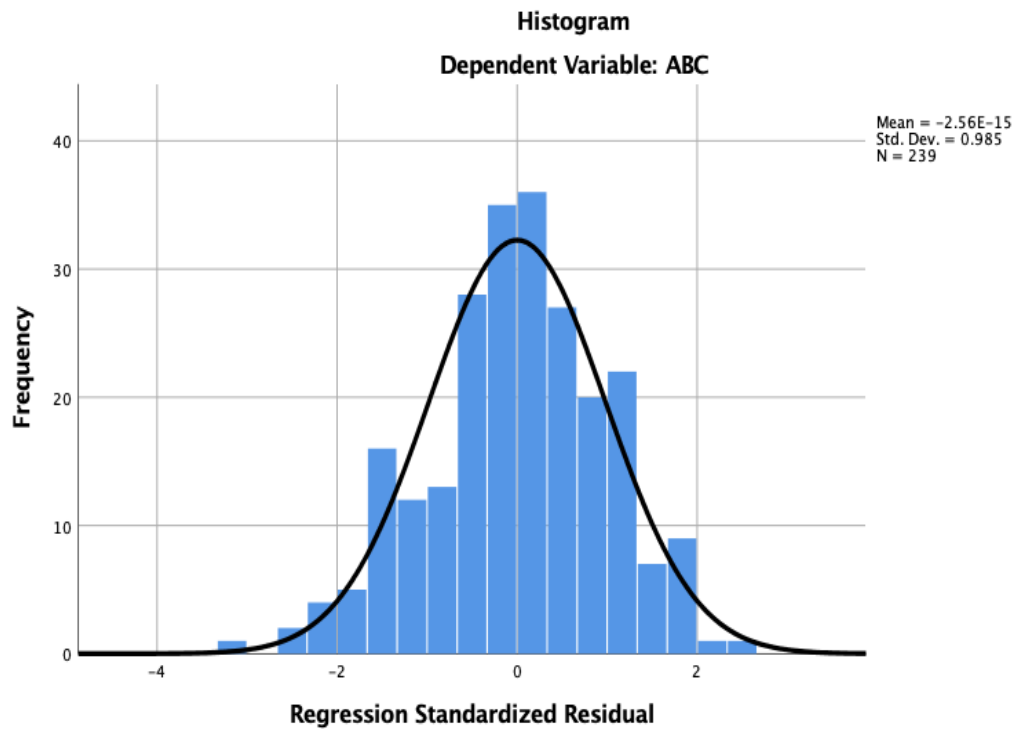
- sig test value for each independent variable < 0.05: all variables are significant in the model.
- Beta coefficients are all positive: all variables have the same effect on the dependent variable

The regression model is written as follows:

$$ABC = 0.243 + 0.170MS + 0.124LD + 0.136SZ + 0.107AC + 0.214CO + 0.115RA + 0.299VC + E$$

- VIF coefficients are all < 2: no multicollinearity occurs.

Figures 1. Normalized residual frequency plot



Source: Prepared by the authors (2023).

## CONCLUSION

Based on the results of quantitative research on the influence of organization and technology on the application of activity-based cost accounting systems in enterprises in Hanoi, some conclusions can be drawn. the following conclusion:

The multiple linear regression equation extracted by the standardized Beta coefficient shows that the standardized Beta coefficients of the factors are: Manager's support (0.170), Leader (0.124), Size organization (0.136), ABC consultants (0.107), cost (0.214), Product variety and complexity (0.115), Relative advantage (0.299). In which, Cost and relative advantage are the two factors that have the greatest impact on the application of an activity-based cost accounting system in enterprises in Hanoi.

From the results of the study on the influence of organization and technology on the application of an activity-based cost accounting system in enterprises in Hanoi, the author makes some recommendations to improve the application of the activity-based cost accounting system in enterprises in Hanoi as follows:

Cost is a factor that greatly affects the application of activity-based cost accounting system in enterprises in Hanoi. Enterprise overheads account for a large proportion of total production costs, which leads to the inaccuracy of traditional volume-based pricing. Therefore,

when applying the activity-based costing system, it is considered as the correct allocation method for businesses. Good cost management helps businesses increase profits in the period.

Relative advantage is the factor that has the greatest influence on the application of activity-based cost accounting in enterprises in Hanoi. The application of an activity-based cost accounting system in enterprises will take a lot of time, resources as well as costs. However, the application of an activity-based cost accounting system in enterprises brings a lot of long-term benefits to enterprises, not only bringing economic benefits but also social benefits.

## REFERENCES

- Alavi, M. (1993). Making CASE an organizational reality: Strategies and new capabilities needed. *Information Systems Management*, 10(2), 15-20. DOI: [10.1080/10580539308906923](https://doi.org/10.1080/10580539308906923)
- Anderson, S. W. (1995). A Framework for Assessing Cost Management System Changes: The Case of Activity Based Costing Implementation at General Motors, 1986-1993. *Journal of Management Accounting Research*, Vol. 7, p1-51. 51p. <http://hdl.handle.net/1721.1/1637>
- Baird, D. (2004). *Thing knowledge: A philosophy of scientific instruments*. Univ of California Press.
- Bjørnenak, T. (1997). Diffusion and accounting: the case of ABC in Norway. *Management accounting research*, 8(1), 3-17. <https://doi.org/10.1006/mare.1996.0031>
- Booth, P., & Giacobbe, F. (1998). The impact of demand and supply factors in the diffusion of accounting innovations: the adoption of Activity-Based Costing in Australian Manufacturing Firms. In *Management Accounting Conference, Sydney*.
- Brown, D. A., Booth, P., & Giacobbe, F. (2004). Technological and organizational influences on the adoption of activity-based costing in Australia. *Accounting & Finance*, 44(3), 329-356. <https://doi.org/10.1111/j.1467-629x.2004.00118.x>
- Clarke, J. J. (1997). *Oriental enlightenment: The encounter between Asian and Western thought*. Psychology Press.
- Cobb, I., Innes, J., & Mitchell, F. (1992). Activity based costing: problems in practice. (*No Title*).
- Cohen, A. (1999). Are Consultants Worth It?. *Sales & Marketing Management*, 151(9), 32-39.
- Cooper, R., & Kaplan, R. S. (1988). Measure costs right: make the right decisions. *Harvard business review*, 66(5), 96-103. [https://www.academia.edu/download/55841894/588\\_3930.pdf](https://www.academia.edu/download/55841894/588_3930.pdf)
- Douglas, M. (2013). *Essays on the Sociology of Perception* (Vol. 8). Routledge.
- Everest, G. C., & Alanis, M. (1993). Survey of CASE user experiences. *Computer-Aided Software Engineering: Issues and Trends for the 1990s and Beyond*, IDEA Group Publishing, Harrisburg, USA, 227-246.

- Gosselin, M. (1997). The effect of strategy and organizational structure on the adoption and implementation of activity-based costing. *Accounting, organizations and society*, 22(2), 105-122. [https://doi.org/10.1016/S0361-3682\(96\)00031-1](https://doi.org/10.1016/S0361-3682(96)00031-1)
- Krumwiede, K. R. (1998). The implementation stages of activity-based costing and the impact of contextual and organizational factors. *Journal of management accounting research*, 10, 239. Available at SSRN: <https://ssrn.com/abstract=117855>
- McGowan, A. S, and T. P. Klammer, 1997. Satisfaction with activity-based cost management implementation, *Journal of Management Accounting Research* 9, 217-237.
- McGowan, A. S. (1998). Perceived benefits of ABCM implementation. *Accounting horizons*, 12(1), 31.
- Mitchell, W. (1994). The dynamics of evolving markets: The effects of business sales and age on dissolutions and divestitures. *Administrative Science Quarterly*, 575-602. <https://doi.org/10.2307/2393772>
- Orlikowski, W. J. (1993). CASE tools as organizational change: Investigating incremental and radical changes in systems development. *MIS quarterly*, 309-340. <https://doi.org/10.2307/249774>
- Premkumar, G., & Potter, M. (1995). Adoption of computer aided software engineering (CASE) technology: an innovation adoption perspective. *ACM SIGMIS Database: the DATABASE for Advances in Information Systems*, 26(2-3), 105-124. <https://doi.org/10.1145/217278.217291>
- Prescott, M. B. and S. A. Conger, 1995, Information technology innovations: a classification by IT locus of impact and research approach, *DATA BASE Advances* 26, 20-41. <https://doi.org/10.1145/217278.217284>
- Rai, A., & Howard, G. S. (1992). Making it work: Tips for implementing data center innovations. *Information Strategy: The Executive's Journal*, 9(2), 5-12.
- Rogers, E. M. (1995). Lessons for guidelines from the diffusion of innovations. *The Joint Commission journal on quality improvement*, 21(7), 324-328.
- Stuart, C. (2012). Value rhetoric and cost reality. *Managing Organizational Ecologies: Space, Management, and Organizations*, 129-138
- Van Nguyen, H., and A. Brooks, 1997, An empirical investigation of adoption Issues relating to activity-based costing. *Asian Accounting Review* 3, 1-18. <https://doi.org/10.1108/eb060679>
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180. <https://doi.org/10.1002/smj.4250050207>
- Zarbo, R. J., Johnson, T. L., & Kini, S. R. (1990). Abc-immunoperoxidase staining of cytologic preparations: Improvement of specificity. *Diagnostic cytopathology*, 6(2), 134-138. <https://doi.org/10.1002/dc.2840060214>