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Factors affecting the implementation of responsibility accounting in public hospitals: Empirical evidence from Vietnam

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ABSTRACT

Amid ongoing financial reforms and increasing autonomy among public service units in Vietnam, the implementation of Responsibility Accounting (RA) in public hospitals has become a critical mechanism for enhancing financial efficiency, managerial accountability, and overall service quality. However, in practice, the adoption of RA remains limited and fragmented. This study aims to investigate the key determinants influencing the application of RA in Vietnamese public hospitals. Drawing on a comprehensive theoretical foundation Agency Theory, Contingency Theory, Diffusion of Innovations Theory, and Fayol's Management Theory the proposed research model incorporates eight independent variables: management decentralization, unit size, financial management characteristics, level of information technology adoption, managerial and accounting qualifications and awareness, legal environment, and financial autonomy. A mixed-method research design was adopted, and empirical data were gathered through 257 valid survey responses from public hospitals across the country. Linear regression analysis indicated that the majority of these factors significantly affect RA implementation, with financial management characteristics, decentralization, and financial autonomy emerging as the most influential predictors. The study contributes to both theory and practice by providing empirical evidence on the institutional and organizational factors that facilitate RA adoption. Furthermore, it offers actionable policy recommendations to strengthen the strategic integration of RA within the public healthcare sector in Vietnam.

Contribution/Originality: This study is one of the few empirical investigations into Responsibility Accounting in Vietnamese public hospitals, combining multiple theoretical perspectives and mixed methods to identify key institutional and managerial factors that influence RA implementation in a context where research is still limited.

1. INTRODUCTION

In the context of deepening global integration, public organizations especially those in the healthcare sector are under increasing pressure to enhance governance and internal efficiency. To meet these evolving demands, organizations must adopt robust management tools that promote evidence-based decision-making and optimal resource allocation. Among these tools, Responsibility Accounting (RA) has gained recognition as a key mechanism for strengthening managerial accountability and improving operational performance.

RA forms a critical part of financial control systems, providing timely and relevant information to support planning, decision-making, and performance evaluation (Atkinson, Banker, Kaplan, & Young, 1997; Garrison, Noreen, & Brewer, 2008; Horngren & Foster, 1987; Schweikart, 1986). Its emphasis on decentralized management, responsibility centers, and performance metrics has led to widespread adoption across various industries, including

manufacturing, banking, and healthcare (Lin & Yu, 2002; Nyakuwanika, Mupamhadzi, & Mabwe, 2012; Pajrok, 2014). RA has been recognized as a foundational element in building transparent, accountable, and results-oriented public institutions.

In Vietnam, however, the adoption of RA remains limited. Despite its formal introduction via Circular No. 53/2006/TT-BTC, the regulatory guidance lacks specificity, and practical application across public organizations particularly in healthcare has been uneven. Most previous studies have either concentrated on the private sector or addressed RA only in narrow organizational contexts, leaving a gap in the understanding of RA implementation within complex, decentralized public systems.

Recent policy shifts including Decree No. 60/2021/ND-CP on financial autonomy, the adoption of IPSAS-compliant accounting frameworks (Circular No. 24/2023/TT-BTC), and the issuance of Vietnamese Public Sector Accounting Standards (VPSAS) have significantly reshaped the financial governance landscape of public hospitals. These reforms not only mandate greater transparency and accountability but also create a favorable environment for institutionalizing performance-based financial tools like RA.

Yet, despite these enabling conditions, structural and organizational barriers continue to impede the effective implementation of RA in public hospitals. Issues such as fragmented authority, limited managerial capacity, and inconsistent regulatory interpretation pose persistent challenges.

This study addresses a notable research gap by systematically investigating the key factors that influence the implementation of RA in Vietnamese public hospitals. By integrating multiple theoretical lenses and employing a mixed-method approach, the study contributes novel empirical insights into the institutional, managerial, and technical determinants of RA adoption. The findings aim to inform both academic discourse and policy design, offering practical recommendations to support the development of more accountable and performance-driven public healthcare systems in Vietnam.

2. RESEARCH METHOD

To develop a comprehensive understanding of the factors influencing the implementation of Responsibility Accounting (RA) in Vietnamese public hospitals, this study adopts a mixed-methods approach that integrates both qualitative and quantitative techniques. The combination of these methods enhances the validity, depth, and generalizability of the findings.

The study was conducted in two sequential phases: an initial qualitative phase to explore the research context and refine the theoretical model, followed by a quantitative phase to empirically test the proposed hypotheses. This design is particularly suitable in the Vietnamese context, where RA remains a relatively new and underexplored concept, requiring both contextual insights and empirical validation.

The qualitative phase consisted of two components. First, a comprehensive review of relevant theoretical frameworks including Agency Theory, Contingency Theory, Diffusion of Innovations Theory, and Fayol's Management Theory was undertaken. Second, semi-structured interviews were conducted with key stakeholders, including hospital directors, chief accountants, and heads or deputy heads of finance departments across public hospitals in Vietnam. All interviews were recorded, transcribed, and analyzed using thematic analysis, following the procedure outlined by Braun and Clarke (2006) to identify key themes and refine the initial research model.

Based on insights gained from the qualitative phase, a structured questionnaire was developed and reviewed by domain experts. The instrument included multiple items measured on five-point Likert scales, capturing constructs identified from both theory and interview data. A nationwide survey was conducted between January and December 2024, resulting in 257 valid responses from public hospitals across 54 provinces and cities.

Data were coded and analyzed using SPSS. The analysis involved several steps: internal consistency of measurement scales was assessed using Cronbach's alpha; construct validity was evaluated through exploratory factor

analysis (EFA); and multiple linear regression analysis was employed to examine the relationships between the independent variables and the level of RA implementation.

By integrating qualitative exploration with quantitative testing, this methodological design strengthens both the credibility and practical relevance of the study, offering a nuanced understanding of RA adoption in Vietnam's public healthcare system.

3. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

3.1. Theoretical Framework

This research draws on four established theoretical foundations to explore the factors that affect how Responsibility Accounting (RA) is implemented in public hospitals. These include Agency Theory, Contingency Theory, the Diffusion of Innovations Theory, and Fayol (1949) Classical Management Theory. Together, they provide a well-rounded perspective on how both internal dynamics and external conditions shape organizational behavior, decision-making processes, and the adoption of accounting innovations.

Agency Theory, introduced by Jensen and Meckling (1976), examines the dynamics between principals—such as hospital administrators or government authorities and agents, including department leaders and financial officers. The theory indicates that when principals and agents have different goals and access to information, conflicts can arise. These issues are particularly pronounced in decentralized organizations where responsibilities are delegated without strong oversight. Responsibility Accounting (RA) helps address these challenges by clearly defining accountability, supporting performance assessment, and encouraging alignment between personal and institutional objectives. This theoretical perspective emphasizes the significance of decentralization, managerial capability, and organizational design all of which are considered key factors in this study.

Contingency Theory suggests that there is no universally optimal management accounting system; instead, the effectiveness of such systems depends on how well they fit the specific context in which an organization operates (Chenhall, 2003; Otley, 1980). Empirical studies (e.g., (Chapman, 1997; Malmi & Granlund, 2009; Waterhouse & Tiessen, 1978)) have used this theory to explain why different organizations adopt different accounting practices. In the context of RA, implementation depends on both internal characteristics such as organizational size, financial autonomy, technological infrastructure, and human capacity and external conditions like legal and institutional environments. This theory supports the research model's dual classification of influencing factors into internal and external categories.

Diffusion of Innovations Theory, introduced by Rogers (1962) explains how new ideas and technologies are adopted over time. Within this framework, RA is considered an accounting innovation. The theory identifies four dimensions influencing innovation adoption: relative advantage, communication channels, time, and social systems. Attewell (1992) emphasized that factors such as organizational size, innovation champions, and structural attributes (e.g., centralization and hierarchy) influence innovation diffusion. In the field of management accounting, Dunk (1989) applied this theory to explain the slow uptake of new practices. In this study, RA is viewed as an organizational innovation, with factors such as managerial awareness, technological readiness, and organizational complexity influencing its adoption.

Fayol (1949) Classical Management Theory provides foundational principles on organizational design and control. Fayol (1949) proposed 14 principles of management, such as division of work, authority and responsibility, centralization, and the scalar chain, remain relevant to modern organizational systems. These principles directly relate to the structure and operational dynamics necessary for implementing RA. For instance, management decentralization, job specialization, and hierarchical reporting structures are critical for designing effective responsibility centers. While Fayol (1949) theory does not directly address accounting systems, it offers a conceptual basis for understanding how organizational design can support accountability mechanisms like RA.

Together, these theories inform the research model by highlighting how structural, behavioral, and contextual variables shape the implementation of RA. They also justify the inclusion of specific independent variables such as decentralization, unit size, financial autonomy, IT application, managerial and accountant competencies, and the legal environment.

3.2. Literature Review

Responsibility Accounting (RA) has attracted significant research attention globally, with various studies examining its adoption across organizational types. This section synthesizes prior research related to key factors influencing the implementation of RA, particularly within the public sector context.

3.2.1. Management Decentralization

Decentralization refers to the delegation of authority and responsibility across organizational units. Warren, Reeve, and Duchac (2005) define decentralization as the division of a business into functional areas with managerial autonomy, which enhances accountability. According to Cao (2020), decentralization necessitates effective management tools such as RA. Empirical studies by Belkaoui (1981); Anderson (1995); Atkinson et al. (1997); Cadez and Guilding (2008) and Fowzia (2011) consistently affirm the strong association between decentralization and the effectiveness of RA implementation, particularly in organizations with layered managerial structures.

3.2.2. Organizational Size

Organizational size has been widely recognized as a determinant of management control practices. Otley, Broadbent, and Berry (1995) assert that larger organizations are more likely to adopt complex control mechanisms, including RA. Ahmad (2014) and Cao (2020) emphasize that large-scale organizations typically possess superior resources and administrative infrastructure, allowing for more sophisticated management accounting systems. Luther, Kennedy, and Harris (2008) further highlight that large enterprises require a greater volume of information processing, thereby justifying the integration of advanced RA systems. Studies by Rajan (2011) and Al-Shomaly (2013) confirm that organizational scale positively correlates with RA adoption.

3.2.3. Managerial and Accounting Staff Qualifications and Awareness

Human capital has a profound impact on RA implementation. Belkaoui (1981) posited that managerial awareness and competence are central to the success of RA systems. Nawaiseh, Obeidat, and Hunaiti (2014) demonstrate this relationship in the context of Jordanian industrial firms. Similarly, Nyakuwanika (2012) found that managerial training in finance and accounting facilitates the understanding and application of RA. Holmes and Nicholls (1989) support this by linking educational background to RA adoption.

In addition, the competence of accounting staff is essential. Haldma and Lääts (2002), Alomiri (2003) and Ismail and King (2007) found a positive association between accounting staff qualifications and the success of management accounting implementation. Nawaiseh et al. (2014) further argue that insufficient expertise among accounting personnel hinders the application of RA practices.

3.2.4. Information Technology (IT) Application

The level of IT application significantly influences the success of management accounting systems. Ravichandran, Lertwongsatien, and Lertwongsatien (2005) emphasize not just infrastructure, but the integration of IT into decision-making. Ross, Beath, and Goodhue (1996) and Pérez-Aróstegui, Martínez-López, and Gázquez-Abad (2015) demonstrate that high-speed, interconnected systems improve the quality and efficiency of internal controls. Chang (2001) and Choe (2004) confirm that advanced IT capabilities enhance the accuracy and responsiveness of RA processes by enabling real-time data sharing and decentralized reporting.

3.2.5. Organizational Characteristics

Organizational characteristics such as activity complexity, internal control structure, and hierarchical design play a pivotal role in RA design and application (Fowzia, 2011; Nowak, 2000; Venkatrathnam & Reddy, 2008). Ly (2018) and Bui (2019) highlight that these attributes must be thoroughly assessed to ensure alignment between RA mechanisms and organizational needs.

3.2.6. Legal Environment

The regulatory environment, comprising accounting legislation, official circulars, and public finance policies, plays a significant role in shaping the practical implementation of RA. According to Bui (2019) and Nguyen (2015), overly rigid financial reporting requirements can reduce flexibility and hinder access to essential data, thereby limiting the effectiveness of RA systems. Similarly, Ly (2018) points out that the impact of legal provisions on RA depends largely on how clearly they are written and how consistently they are enforced; such mandates can either facilitate or constrain the integration of RA practices within public institutions.

3.2.7. Identified Research Gap

Although prior research offers valuable perspectives on the use of Responsibility Accounting (RA) in profit-driven organizations, its application within public hospitals remains underexplored. Unlike private firms, public hospitals are guided by the goal of delivering social value rather than maximizing profits. Moreover, they operate within a distinct set of institutional and financial limitations that shape their management and accounting practices in unique ways. Therefore, this study addresses a critical gap by examining factors influencing RA adoption specifically in Vietnamese public hospitals.

4. RESEARCH MODEL, RESEARCH DATA, RESEARCH VARIABLES IN THE MODEL

4.1. Introduction of the Influencing Factors in the Model

Based on theoretical foundations, a review of relevant literature, and insights obtained through qualitative interviews with accounting and financial professionals, this study identifies eight key factors that are likely to influence the implementation of responsibility accounting (RA) in Vietnamese public hospitals. These include:

Management Decentralization: This factor reflects the degree to which authority and responsibility are distributed across different management levels within an organization. In decentralized structures, effective coordination and control mechanisms such as RA are essential to ensure accountability and performance evaluation.

Organizational Size: Organizational size can influence the complexity of administrative systems and the need for formalized management accounting practices. In the context of Vietnamese public hospitals, size is typically measured by the number of hospital beds and operational scope. Hospitals are classified as follows:

Special-class hospitals: >1,000 beds, with national coverage.

Class I: 500–1,000 beds, provincial level.

Class II: 200–500 beds, district level.

Class III: <200 beds, local or sub-district level.

Commune health stations: Minimal or no inpatient capacity.

Larger hospitals generally require more sophisticated information and control systems, making RA more applicable and beneficial.

Financial Management Characteristics: Unlike private enterprises, public hospitals operate primarily to deliver healthcare services, not to maximize profit. Their financial structures are based on a mix of state budget allocations and service-based revenues. In addition, public hospitals operate under close supervision from government authorities and are required to adhere to a range of legal and financial regulations. These institutional characteristics present

distinct challenges and contextual conditions that influence how Responsibility Accounting can be implemented in practice.

Level of Information Technology (IT) Application: This variable measures the extent to which the hospital utilizes digital technologies, such as information systems, accounting software, and data analytics tools, in its operations. A higher level of IT integration enables timely data collection, processing, and reporting improving the feasibility and effectiveness of RA.

Managerial Qualifications and Awareness: This refers to the educational background, technical competence, and awareness of managers regarding their roles in decision-making, planning, and accountability. Managers with high levels of professional knowledge and strategic insight are more likely to appreciate the value of RA and support its implementation effectively.

Accountants' Qualifications and Awareness: The technical skills, educational attainment, and understanding of RA principles among accounting staff are crucial for the accurate preparation, interpretation, and reporting of financial and managerial information. Skilled accountants ensure the integrity and reliability of RA systems.

Legal Environment: This encompasses laws, policies, and regulations that govern accounting and financial management practices in the public sector. A clear, consistent, and supportive legal framework enhances the transparency, accountability, and enforceability of RA systems.

Level of Financial Autonomy: This reflects the hospital's capacity to cover operational and investment costs independently. According to Decree No. 60/2021/NĐ-CP, public service units in Vietnam are classified based on their financial autonomy into four categories: (1) *Fully autonomous in both operating and capital expenditures*; (2) *Autonomous in operating expenditures only*; (3) *Partially autonomous in operating expenditures*; (4) *Fully state-funded for operating expenditures*. The degree of financial autonomy influences the hospital's decision-making flexibility and its need for formal internal accountability mechanisms like RA.

4.2. Description of Variables and Research Hypotheses

Based on a combination of prior empirical findings and insights obtained through expert interviews, this study proposes a research model examining the factors influencing the implementation of Responsibility Accounting (RA) in Vietnamese public hospitals. The model includes one dependent variable and eight independent variables, as described below:

Dependent Variable: Ability to implement Responsibility Accounting (RA) – measured by the extent to which RA is deployed in managerial and operational processes within public hospitals.

Independent Variables: (1) Management Decentralization (MA); (2) Organizational Size (SU); (3) Financial Management Characteristics (FMC); (4) Level of Information Technology Application (IT); (5) Managerial Qualifications and Awareness (QAM); (6) Accountants' Qualifications and Awareness (QAA); (7) Legal Environment (LE); (8) Level of Financial Autonomy (LFA).

Based on existing literature and the specific context of public hospitals in Vietnam, each of these variables is expected to have a positive impact on how responsibility accounting is adopted and applied in practice.

Research hypotheses

H_1: Management decentralization has a positive effect on the implementation of RA in public hospitals in Vietnam.

H_2: Organizational size has a positive effect on the implementation of RA in public hospitals in Vietnam.

H_3: Financial management characteristics have a positive effect on the implementation of RA in public hospitals in Vietnam.

H_4: The level of information technology application has a positive effect on the implementation of RA in public hospitals in Vietnam.

H_5: Managerial qualifications and awareness have a positive effect on the implementation of RA in public hospitals in Vietnam.

H_6: Accountants' qualifications and awareness positively influence the implementation of RA in public hospitals in Vietnam.

H_7: The legal environment has a positive effect on the implementation of RA in public hospitals in Vietnam.

H_8: The level of financial autonomy has a positive effect on the implementation of RA in public hospitals in Vietnam.

The independent variables, dependent variables, and observed variables are presented in the table below:

Table 1 presents the measurement scales and observed variables used in the study, including the definitions and classifications of dependent and independent variables.

Table 1. Measurement scales and variables.

Variables	Content of the scale/variable	Type of variable
RA	**Ability to apply RA in public hospitals in Vietnam**	**Dependent variable**
RA1	The organization has established clearly defined responsibility centers.	Observed variable
RA2	The organization prepares budgets aligned with its responsibility centers.	Observed variable
RA3	The organization collects and processes financial and operational data by responsibility center.	Observed variable
RA4	The organization conducts periodic performance evaluations for each responsibility center.	Observed variable
RA5	The organization has implemented a comprehensive system of rewards and disciplinary measures tied to performance responsibilities.	Observed variable
RA6	The organization has established a formal responsibility accounting system.	Observed variable
MD	Management decentralization	Independent variables
MD1	The organization is formally structured into distinct functional departments.	Observed variable
MD2	The functions and responsibilities of each department are clearly defined and documented.	Observed variable
MD3	Each department manager is explicitly assigned specific functions and responsibilities.	Observed variable
MD4	The accountability of managers and staff is based on their clearly assigned responsibilities.	Observed variable
MD5	The costs and revenues of each department are recorded and monitored separately.	Observed variable
MD6	Department managers are responsible for reporting the performance outcomes of their respective units.	Observed variable
SU	Size of the unit	Independent variables
SU1	The average number of hospital beds is measured as the natural logarithm of the average bed count.	Observed variable
SU2	The average total workforce, measured as the natural logarithm of the average number of employees.	Observed variable
SU3	The organization's capacity to cover operational costs when implementing a Responsibility Accounting system.	Observed variable
FMC	Financial management characteristics	Independent variables
FMC1	Departments within the organization operate with clear separation and independent functions.	Observed variable
FMC2	Organizational activities are functionally specialized and conducive to the implementation of Responsibility Accounting.	Observed variable
FMC3	Resources human, financial, and performance outcomes—can be distinctly attributed to each department or unit.	Observed variable
FMC4	Departmental activities are closely monitored in terms of cost control and operational efficiency.	Observed variable
FMC5	Departmental outputs are measurable and can be directly linked to accountability responsibilities.	Observed variable
FMC6	The organization is capable of preparing and allocating budgets at the departmental level.	Observed variable
FMC7	Specific regulations exist for preparing detailed financial and performance reports by department and project.	Observed variable
FMC8	Accountability mechanisms are in place to evaluate costs and operational efficiency at the departmental level.	Observed variable
IT	Level of information technology application	Independent variables

Variables	Content of the scale/variable	Type of variable
IT1	The organization has implemented modern software systems to support managerial and administrative activities.	Observed variable
IT2	The application of information technology facilitates faster, more efficient, and streamlined operations.	Observed variable
IT3	The organization's medical examination and treatment IT systems are integrated with its financial management systems.	Observed variable
QAM	Qualification and awareness of the manager	Independent variables
QAM1	Senior managers are aware of the benefits associated with implementing Responsibility Accounting (RA).	Observed variable
QAM2	Senior managers express a clear demand or intention to implement RA within the organization.	Observed variable
QAM3	Senior managers possess in-depth knowledge of RA principles and practical implementation methods.	Observed variable
QAM4	Senior managers have received formal training in risk assessment and its application in organizational settings.	Observed variable
QAM5	Senior managers are assigned responsibilities that align with their areas of expertise and qualifications.	Observed variable
QAA	Qualification and awareness of the accountants	Independent variables
QAA1	Most accounting staff hold at least a bachelor's degree or higher academic qualification.	Observed variable
QAA2	Accounting staff possess domestic or international professional certifications (e.g., CPA, ACCA, CMA).	Observed variable
QAA3	Accounting staff have received training and possess knowledge related to Responsibility Accounting (RA).	Observed variable
QAA4	Accounting staff are aware of the managerial and operational benefits associated with implementing RA.	Observed variable
QAA5	Accounting staff are knowledgeable about legal regulations governing the implementation of RA in the organization.	Observed variable
LE	Legal environment	Independent variables
LE1	Existing legal regulations comprehensively address all aspects related to Responsibility Accounting (RA).	Observed variable
LE2	Legal provisions concerning RA are clearly written and easy to interpret for practical implementation.	Observed variable
LE3	The system of legal documents provides comprehensive and specific guidance for implementing RA in the organization.	Observed variable
LE4	Government regulatory agencies actively support and facilitate the implementation of RA in organizations.	Observed variable
LE5	The legal framework is stable yet flexible enough to accommodate changes in the organization's accounting system.	Observed variable
LE6	Internal regulations within the organization support and promote the implementation of RA.	Observed variable
LE7	Internal rules and procedures are appropriately designed to facilitate RA implementation across departments.	Observed variable
LFA	Level of financial autonomy	Independent variables
LFA1	The organization's level of financial autonomy is classified according to Decree No. 60/2021/ND-CP (Levels 1 to 4).	Observed variable
LFA2	The organization has the authority to make independent decisions regarding the management and allocation of its financial resources.	Observed variable
LFA3	The organization's use of financial resources is subject to close supervision by government regulatory agencies.	Observed variable
LFA4	The organization has the autonomy to restructure its internal organizational framework.	Observed variable
LFA5	The organization has the authority to independently make decisions related to the recruitment, assignment, and management of personnel.	Observed variable

4.3. Data Collection and Processing

4.3.1. Data Collection

Based on Bollen (1989) the guideline for determining the minimum sample size in structural equation modeling is a ratio of at least five observations per estimated variable. In this study, a total of 42 observed variables were

identified (corresponding to 42 survey items), resulting in a minimum sample size requirement of 210 respondents ($42 \times 5 = 210$).

Following a pilot survey, the questionnaire was revised to enhance clarity, optimize structure, and ensure content validity. The final questionnaire consisted of 42 items, each measured on a five-point Likert scale, ranging from: (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly agree.

The survey was conducted within public hospitals across Vietnam. To ensure data reliability and representativeness, approximately 300 questionnaires were distributed to targeted respondents, primarily unit managers and accountants individuals with professional experience and direct involvement in financial and managerial processes. A total of 257 valid responses were collected and retained for data analysis.

4.3.2. Data Processing

4.3.2.1. Statistical Tools and Software

The data collected from the survey were processed and analyzed using IBM SPSS Statistics version 26.0, a widely adopted statistical software for social science and management research. SPSS was selected due to its robust capabilities in data cleaning, reliability testing, factor analysis, and regression modeling methods that are well-aligned with the research objectives and the structure of this study.

The data were analyzed through a multi-stage process. First, Cronbach's Alpha was used to assess the internal consistency of each construct. This was followed by Exploratory Factor Analysis (EFA) to examine the validity and underlying factor structure of the measurement scales. Finally, multiple linear regression was applied to explore how the independent variables influence the dependent variable namely, the extent to which Responsibility Accounting (RA) is implemented in public hospitals. This analytical strategy was selected to ensure the robustness of the empirical model and to allow for rigorous testing of the research hypotheses.

4.3.2.2. Reliability Testing of Measurement Scales

To evaluate the internal consistency of the measurement scales, Cronbach's Alpha coefficients were calculated for all constructs included in the research model. This method is widely recognized in social science research for assessing the reliability of Likert-scale items.

The results showed that all constructs exceeded the commonly accepted reliability threshold (Cronbach's Alpha ≥ 0.7), indicating strong internal consistency among the observed items. No indicators were excluded during this process, and all corrected item-total correlations fell within acceptable limits.

These findings confirm that the questionnaire used in this study is both statistically reliable and methodologically robust, providing a strong foundation for subsequent analyses, including construct validation through Exploratory Factor Analysis (EFA) and hypothesis testing via regression models.

4.3.2.3. Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) was conducted to examine construct validity and uncover the underlying factor structure of the observed variables. The analysis employed Principal Component Analysis as the extraction method, combined with Varimax rotation to enhance the interpretability of the factor loadings.

Before conducting factor analysis, two statistical tests were applied to evaluate the suitability of the dataset. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.792, exceeding the recommended threshold of 0.6, while Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 5095.572$, df = 861, $p < 0.001$). These results confirm that the data are appropriate for factor analysis. The detailed results are presented in Table 2.

Table 2. KMO and Bartlett's Test of Sampling Adequacy

KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy.		0.792
Bartlett's test of sphericity	Approx. chi-square	5095.572
	df	861
	Sig.	0.000

Following this, the factor extraction process yielded eight components with eigenvalues greater than 1, based on the Kaiser criterion. Together, these components accounted for 62.66% of the total variance, indicating a satisfactory level of explanatory power for social science research. The summary of extracted components and explained variance is shown in Table 3.

Table 3. Total variance explained.

	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
Component	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	5.882	14.005	14.005	5.882	14.005	14.005	4.421	10.527	10.527
2	4.397	10.469	24.474	4.397	10.469	24.474	3.912	9.314	19.840
3	3.419	8.140	32.615	3.419	8.140	32.615	3.735	8.892	28.733
4	3.194	7.605	40.220	3.194	7.605	40.220	3.615	8.607	37.340
5	2.778	6.614	46.834	2.778	6.614	46.834	3.079	7.330	44.670
6	2.665	6.345	53.179	2.665	6.345	53.179	2.902	6.910	51.580
7	2.284	5.437	58.616	2.284	5.437	58.616	2.393	5.698	57.278
8	1.700	4.048	62.664	1.700	4.048	62.664	2.262	5.386	62.664
9	0.877	2.087	64.751						
10	0.821	1.955	66.706						
11	0.787	1.873	68.579						
12	0.770	1.832	70.412						
13	0.740	1.762	72.174						
14	0.712	1.695	73.868						
15	0.671	1.599	75.467						
16	0.650	1.547	77.013						
17	0.609	1.450	78.464						
18	0.597	1.423	79.886						
19	0.579	1.377	81.264						
20	0.540	1.285	82.548						
21	0.511	1.216	83.764						
22	0.499	1.187	84.952						
23	0.485	1.156	86.108						
24	0.476	1.133	87.241						
25	0.442	1.053	88.294						
26	0.421	1.002	89.296						
27	0.407	0.970	90.265						
28	0.397	0.945	91.210						
29	0.384	0.915	92.125						
30	0.355	0.845	92.970						
31	0.343	0.817	93.787						
32	0.336	0.801	94.588						
33	0.302	0.719	95.307						
34	0.288	0.685	95.992						
35	0.267	0.636	96.628						
36	0.260	0.619	97.247						
37	0.244	0.581	97.828						
38	0.237	0.565	98.393						
39	0.209	0.498	98.891						
40	0.191	0.454	99.345						
41	0.155	0.370	99.715						
42	0.120	0.285	100.000						

Note: Extraction method: Principal component analysis.

To interpret the component structure, a rotated component matrix was generated. The results showed that each group of observed variables loaded strongly on a distinct factor, with most loadings above 0.7 and no problematic cross-loadings. This indicates that each construct has satisfactory convergent and discriminant validity. The full component loadings are provided in Table 4.

Table 4. Rotated component matrix (Varimax rotation).

Construct/ Variable	Component							
	1	2	3	4	5	6	7	8
MD1			0.786					
MD2			0.719					
MD3			0.784					
MD4			0.778					
MD5			0.761					
MD6			0.803					
SU1							0.812	
SU2							0.932	
SU3							0.894	
FMC1	0.740							
FMC2	0.759							
FMC3	0.693							
FMC4	0.771							
FMC5	0.710							
FMC6	0.717							
FMC7	0.709							
FMC8	0.714							
IT1								0.858
IT2								0.773
IT3								0.857
QAM1				0.808				
QAM2				0.820				
QAM3				0.837				
QAM4				0.779				
QAM5				0.830				
QAA1					0.736			
QAA2					0.837			
QAA3					0.757			
QAA4					0.748			
QAA5					0.758			
LE1		0.774						
LE2		0.777						
LE3		0.756						
LE4		0.723						
LE5		0.722						
LE6		0.674						
LE7		0.676						
LFA1						0.790		
LFA2						0.695		
LFA3						0.729		
LFA4						0.771		
LFA5						0.719		

Note: Extraction method: Principal component analysis.
Rotation method: Varimax with Kaiser normalization.
a. Rotation converged in 6 iterations.

The factor structure obtained aligns well with the theoretical model and the proposed research constructs, including: Financial Management Characteristics (FMC); Legal Environment (LE); Management Decentralization (MD); Managerial Qualifications and Awareness (QAM); Accountants' Qualifications and Awareness (QAA); Financial Autonomy (LFA); Organizational Size (SU); Information Technology Application (IT). These findings

confirm the robustness of the measurement scales and justify their use in subsequent regression analysis and hypothesis testing.

4.3.2.4. Regression Analysis

To examine the effects of the proposed independent variables on the implementation of Responsibility Accounting (RA) in public hospitals, a multiple linear regression analysis was conducted using the Enter method in SPSS. The dependent variable was the ability to implement RA, while the independent variables included: Management Decentralization (MD), Organizational Size (OS), Financial Management Characteristics (FMC), Information Technology Application (IT), Managerial Qualifications and Awareness (QAM), Accountants' Qualifications and Awareness (QAA), Legal Environment (LE), and Financial Autonomy (LFA).

The results, as shown in Table 5, indicate that the overall regression model is statistically significant, with an R^2 value of 0.702 and an Adjusted R^2 of 0.692. This implies that approximately 69.2% of the variance in RA implementation can be explained by the set of independent variables. The Durbin-Watson statistic was 2.038, suggesting no serious autocorrelation in the residuals.

Table 5. Model summary – multiple linear regression.

Model summary[b]					
Model	**R**	**R square**	**Adjusted R square**	**Std. error of the estimate**	**Durbin-Watson**
1	0.838[a]	0.702	0.692	0.480	2.038

Note: a. Predictors: (Constant), LFA, SU, QAA, QAM, MD, LE, FMC, IT
b. Dependent Variable: RA

The detailed regression coefficients are presented in Table 6. All independent variables were found to have a positive and statistically significant effect on RA implementation ($p < 0.01$ for all predictors). Notably, Management Decentralization ($\beta = 0.386$) and Financial Management Characteristics ($\beta = 0.300$) exhibited the strongest standardized effects, followed by Information Technology ($\beta = 0.252$) and Managerial Qualifications and Awareness ($\beta = 0.239$).

Table 6. Coefficients of the regression model standardized effects.

Coefficients[a]								
	Unstandardized coefficients		**Standardized coefficients**			**Collinearity Statistics**	
Model	**B**		**Std. error**	**Beta**	**t**	**Sig.**	**Tolerance**	VIF
1	(Constant)	-2.324	0.277		-8.379	0.000		
	MD	0.393	0.036	0.386	10.793	0.000	0.940	1.064
	SU	0.122	0.041	0.103	2.952	0.003	0.988	1.012
	FMC	0.259	0.032	0.300	8.185	0.000	0.898	1.113
	IT	0.200	0.030	0.252	6.749	0.000	0.860	1.163
	QAM	0.197	0.031	0.239	6.283	0.000	0.833	1.201
	QAA	0.201	0.033	0.214	6.042	0.000	0.959	1.042
	LE	0.161	0.032	0.181	4.953	0.000	0.904	1.106
	LFA	0.197	0.036	0.194	5.506	0.000	0.970	1.031

Note: a. Dependent Variable: RA

The Variance Inflation Factor (VIF) values for all predictors were well below 10, ranging from 1.012 to 1.201, indicating that no multicollinearity issues were present in the model. These results confirm that the theoretical model proposed in this study is empirically supported. All eight research hypotheses (H1–H8) were accepted, reinforcing the significance of the identified factors in facilitating the implementation of Responsibility Accounting in the context of Vietnamese public hospitals.

5. DISCUSSION

The findings from the multiple regression analysis provide robust empirical evidence supporting the theoretical model proposed in this study. All eight hypothesized factors were found to have statistically significant and positive effects on the implementation of Responsibility Accounting (RA) in Vietnamese public hospitals, confirming the multidimensional nature of RA adoption in the public healthcare sector.

Among the independent variables, Management Decentralization (MD) showed the strongest influence ($\beta = 0.386$, $p < 0.001$), underscoring the critical role of a well-structured organization and effective delegation of authority in supporting RA implementation. This finding aligns with earlier studies (Belkaoui, 1981; Fowzia, 2011), which suggest that decentralization facilitates the creation of responsibility centers and enhances overall accountability within institutions.

The second most influential factor was Financial Management Characteristics (FMC) ($\beta = 0.300$, $p < 0.001$). This finding reflects the unique nature of public hospitals, where complex budgeting structures, performance-based cost control, and interdepartmental coordination require robust financial practices. This result aligns with the assumptions of Contingency Theory, which posits that organizational characteristics must be compatible with management tools to ensure effectiveness (Chenhall, 2003).

Information Technology Application (IT) ($\beta = 0.252$, $p < 0.001$) also played a significant role. Modern IT systems facilitate real-time data processing and reporting, making RA implementation more practical and efficient. This supports the logic of the Diffusion of Innovations Theory (Rogers, 1962), which emphasizes the enabling role of technological infrastructure in adopting new management practices.

The competencies and awareness of both managers (QAM) ($\beta = 0.239$) and accountants (QAA) ($\beta = 0.214$) were also significant. These findings reinforce the arguments of Belkaoui (1981) and Nawaiseh et al. (2014), who stated that human capital is essential for the successful adoption of RA systems, especially in professional environments such as healthcare.

The role of the Legal Environment (LE) ($\beta = 0.181$) was slightly lower but still significant, indicating that regulatory clarity and consistency are necessary for standardizing RA practices across public institutions. Meanwhile, organizational size (SU) ($\beta = 0.103$) and financial autonomy (LFA) ($\beta = 0.194$) also contributed positively to RA implementation, suggesting that both operational capacity and budgetary independence are enablers of decentralized financial accountability systems.

Taken together, the regression results provide strong support for the proposed research model and reinforce the usefulness of integrating Agency Theory, Contingency Theory, and the Diffusion of Innovations Theory in examining RA within the public healthcare sector. The high adjusted R^2 value (0.692) suggests that the selected variables, as a group, offer a solid explanatory basis for understanding the factors driving RA implementation in this context.

These results contribute not only to theoretical understanding but also carry meaningful implications for practice. For policymakers, hospital leaders, and financial managers, the findings offer guidance on how a structured approach to Responsibility Accounting can be used to strengthen internal accountability and improve the efficiency of resource management.

6. CONCLUSION AND IMPLICATIONS

6.1. Conclusion

This study investigates the factors influencing the implementation of Responsibility Accounting (RA) in public hospitals in Vietnam. Based on a comprehensive literature review, expert interviews, and quantitative analysis of survey data, the research identifies eight key factors management decentralization, organizational size, financial management characteristics, information technology application, qualifications and awareness of managers and

accountants, legal environment, and financial autonomy that significantly affect the adoption and effectiveness of RA systems.

The results of the multiple regression analysis reveal that management decentralization and financial management characteristics exert the strongest impact on RA implementation, followed by technological readiness and human resource competencies. These findings confirm the theoretical model grounded in Agency Theory, Contingency Theory, and the Diffusion of Innovations Theory, and demonstrate that RA adoption is not solely a technical matter but rather an outcome shaped by structural, technological, legal, and human factors.

The study contributes to the growing body of knowledge on public sector accounting, particularly in transitional economies such as Vietnam, where managerial reforms and accountability mechanisms are increasingly emphasized in healthcare service delivery.

6.2. Managerial and Policy Implications

The findings of this study have several important implications for public hospital administrators and policymakers. First, it is essential to strengthen management decentralization through clearly defined structures and a coherent delegation of authority, enabling departments to assume ownership of their performance and accountability.

Second, improving financial management practices such as budgeting by responsibility centers, cost control, and output evaluation is fundamental to the successful application of RA. Third, the development and integration of modern information systems can significantly enhance the efficiency of RA implementation by enabling timely, accurate, and department-specific reporting. Fourth, there is a need to invest in human capital through training programs that enhance awareness and expertise in RA among both managers and accounting staff. Fifth, the legal framework surrounding public sector financial management should be refined to provide clearer, more adaptable regulations that support RA rather than act as constraints. Finally, increasing the financial autonomy of public hospitals empowers them to make more proactive and effective decisions, fostering an environment where RA can be more fully operationalized.

6.3. Limitations and Future Research Directions

Although this study offers meaningful contributions, it is not without limitations. The research was conducted solely within the context of Vietnamese public hospitals, which may limit the generalizability of the findings to other countries or sectors.

Additionally, the use of a cross-sectional survey design restricts the ability to draw causal inferences regarding the relationships among variables. Future research could address these limitations by expanding the scope of analysis to include other types of public service units or cross-country comparisons, thereby enhancing external validity. Moreover, longitudinal studies could provide deeper insights into how RA practices evolve over time and how internal and external factors interact dynamically. Qualitative research approaches, such as case studies or interviews, could also be employed to explore implementation challenges, contextual barriers, and success factors in greater depth.

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Transparency: The author states that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
Data Availability Statement: The corresponding author can provide the supporting data of this study upon a reasonable request.
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