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The Impact of Joint Audit in Achieving Competitive Advantage for Jordanian Audit Offices

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Abstract

This study aimed to identify the impact of joint audit in achieving competitive advantage (cost advantage, quality advantage, time advantage, market share and flexibility) for Jordanian audit offices. The study population consists of all licensed auditors in Jordan. According to the Jordanian Association of Certified Public Accountants (JACPA), there were approximately 650 licensed auditors in Jordan as of 2023. To achieve the main objective of the study, 300 questionnaires were distributed, of which 261 were analyzed, representing 87% of the total distributed questionnaires. For data analysis and hypothesis testing, the Statistical Package for the Social Sciences (SPSS) was used. The study found a positive impact of joint audit practices on achieving competitive advantage in Jordanian audit firms. It was shown that the five dimensions examined (cost advantage, quality advantage, time advantage, market share, and flexibility) have significant positive relationships with joint audit practices. Based on the study's findings, the researchers recommend further future research focusing on stakeholders outside audit firms, such as examining how clients perceive the value and effectiveness of joint auditing.

Keywords: Joint Audit, Competitive Advantage, Jordanian Audit Offices.

Introduction

The global financial crisis, which began in the United States in 2008 due to the collapse of the American subprime mortgage market and the bankruptcy of Lehman Brothers, is considered one of the worst crises in modern economic history. This crisis had a profound impact on various financial markets, leading to a global economic recession. The failure of auditors to predict this crisis raised significant concerns about the independence of audit firms and their level of expertise and competence to provide an impartial assessment of the financial situation of the companies they audit. Consequently, this failure highlighted the urgent need to enhance auditing standards and financial oversight to ensure the transparency and integrity of financial reports. In the aftermath of this crisis, global bodies responsible for regulating the auditing profession began taking concrete steps to find serious solutions aimed at strengthening the ability of audit firms to detect cases of financial manipulation and fraud, and to prevent corporate bankruptcies. These efforts include revising the legislation and regulatory rules related to the auditing profession, in addition to strengthening the disclosure and transparency requirements for these firms. To address this crisis, the European Commission, in its 2010 Green Paper, proposed the idea of adopting a joint audit approach, which aims to improve the quality of the audit process by involving more than one audit firm in reviewing a client company's accounts. This approach can provide a diversity of expertise and skills, reducing the risks of bias and errors in financial evaluations. The joint audit approach also plays a significant role in reducing the dominance of a few major audit firms in the market by encouraging competition and diversifying the services offered to client companies, leading to increased client satisfaction with the performance of audit firms. Joint auditing also supports the establishment of what is called the 'second tier' of auditing firms, and thus it may enhance the effectiveness of communication among auditors in a way that raises the quality of the auditing process compared to previous traditional methods. Due to its ability to save time and reduce financial burdens, we can say that joint auditing plays a vital role in enhancing the competitive advantage of auditing offices by strengthening professional links between auditing firms, especially after the significant progress made in addressing the issues left by the recent global crisis. Therefore, this study aims to provide a clear scientific and cognitive contribution by demonstrating the impact of joint audit in achieving competitive advantage for Jordanian audit offices.

Study Problem

Auditing in a joint auditing environment is more practical given the large scale of operations in auditing offices operating in Jordan. This is because the business scope has significantly expanded, leading to more accurate and faster processing of financial data, while reducing the cost and time required to complete the auditing process. Accordingly, competitive advantage is considered a set of characteristics that auditing offices possess, providing them with a competitive edge over other stakeholders. However, the real challenge facing these offices lies not only in providing services but also in their ability to meet the constantly changing needs of clients in the auditing field. Through our review, we identified a gap in understanding the depth of the relationship between joint auditing and competitive advantage, at both the theoretical (academic) and practical levels. This has prompted us to study this relationship in the auditing offices operating in Jordan, as a tool to encourage these offices to implement joint auditing to achieve competitive advantage, which manifests in cost, quality, time, market share, and flexibility, in order to determine the relationship and its impact. Thus, the study's problem lies in understanding the impact of joint auditing in achieving competitive advantage for Jordanian audit offices. Given the above, the study seeks to answer the following questions:

- The main question: Is there an impact of joint audit in achieving competitive advantage for Jordanian audit offices?

  The following sub-questions emerge from the main question:
  a) Is there an impact of joint audit in achieving a cost advantage for Jordanian audit offices?
  b) Is there an impact of joint audit in achieving a quality advantage for Jordanian audit offices?
  c) Is there an impact of joint audit in achieving a time advantage for Jordanian audit offices?
  d) Is there an impact of joint audit in achieving the market share of Jordanian audit offices?
  e) Is there an impact of joint audit in achieving flexibility for Jordanian audit offices?

Study Objectives

This study aimed to determine the impact of joint audit in achieving competitive advantage for Jordanian audit offices. This is done by achieving the following objectives:

- Explaining the impact of joint audit in achieving a competitive advantage for Jordanian audit offices.

  The following sub-objectives emerge from the main objective:
  a) Explaining the impact of joint audit in achieving a cost advantage for Jordanian audit offices.
  b) Explaining the impact of joint audit in achieving a quality advantage for Jordanian audit offices.
  c) Explaining the impact of joint audit in achieving a time advantage for Jordanian audit offices.
  d) Explaining the impact of joint audit in achieving the market share of Jordanian auditing offices.
  e) Explaining the impact of joint audit in achieving flexibility for Jordanian audit offices.

Study Importance

The importance of the study comes from two main aspects:

- **Practical importance:** The importance of this study lies in highlighting the impact of joint audit in achieving competitive advantage for Jordanian audit offices. By involving two offices in the audit process, joint auditing helps reduce costs, expedite the completion of tasks, and enhance the accuracy and quality of audit operations. Additionally, joint auditing can increase the market share of audit offices by improving their reputation and boosting clients' trust in their services.
- **Theoretical importance:** This study represents a significant scientific contribution to academic libraries, both in Arab and foreign countries, as it focuses on examining the impact of joint audit in achieving competitive advantages for auditing offices in Jordan. It is distinguished as one of the first research efforts to clearly uncover this effect, thereby enriching the existing knowledge on the vital role joint auditing can play in enhancing the competitiveness of Jordanian auditing firms. By addressing this topic with precision and detail, the study adds a new dimension to the academic discourse on the strategic tools available to auditing offices, aimed at achieving success and distinction in the marketplace.

Hypotheses of the Study

– Main hypothesis H01: There is no effect of joint audit in achieving the competitive advantage of Jordanian audit offices.

Five sub-hypotheses branch out from this hypothesis, as follows:

a) The first sub-hypothesis (H01.1): There is no effect of joint audit in achieving a cost advantage for Jordanian audit offices.
b) The second sub-hypothesis (H01.2): There is no effect of joint audit in achieving the quality advantage for Jordanian audit offices.
c) The third sub-hypothesis (H01.3): There is no effect of joint audit in achieving the time advantage for Jordanian audit offices.
d) The fourth sub-hypothesis (H01.4): There is no effect of joint audit in achieving the market share of Jordanian audit offices.
e) The fifth sub-hypothesis (H01.5): There is no effect of joint audit in achieving flexibility for Jordanian audit offices.

Research Framework

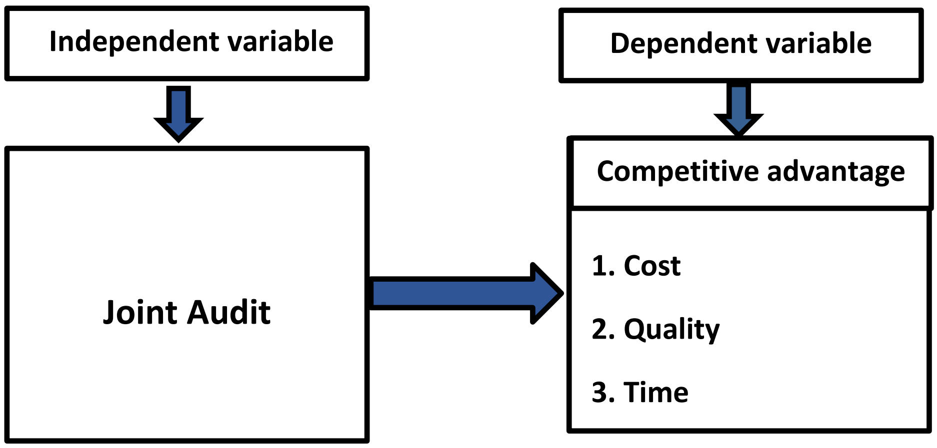

Figure1: Prepared by researchers based on the study (Okab, 2013).

Literature Review

Previous Studies were Arranged Chronologically from Newest to Oldest

The study by Nusseir et al (2024), aimed to investigate the impact of joint auditing, including (the allocation and distribution of audit work, competition, expertise and competence, professional performance, and the timing of report issuance), on the quality of the financial report of Jordanian certified public accountants. To achieve its objectives, this study utilized a quantitative research design employing a survey methodology. The study population consisted of all Jordanian certified public accountants practicing auditing in 2023, totaling 650 according to the Jordanian Association of Certified Public Accountants' website. Data were collected using a questionnaire designed to gather information on the study variables. The results revealed a positive impact of adopting the joint auditing method (allocation and distribution of audit work, competition, expertise and competence, professional performance, and timing of report issuance) on the quality of the Jordanian certified public accountant's report. This study contributed to current research by enriching theoretical literature and providing further knowledge on joint auditing in the Jordanian context.

The study by Alassuli (2023), sought to illustrate the effect of combining the joint external audit approach with the external auditor's viewpoint on information asymmetry in 228 industrial companies listed on the Amman Stock Exchange, covering the period from 2015 to 2019. The study used the annual financial data of (46) companies representing the study sample and relied on the descriptive and analytical approach. The study discovered that employing the joint external audit approach positively impacted the perception of the external auditor in Jordan. On the flip side, it was discovered that this method had an adverse impact on information asymmetry within these companies. The researcher suggested carrying out additional studies to evaluate the effects of implementing a standardized external auditing system on the Jordanian external auditor's perspective and its influence on information asymmetry in Jordanian industrial firms. This study contributed to the current research by enriching the theoretical literature and providing more knowledge about the potential application of joint auditing in the Jordanian environment.

The study by Khersiat (2020), seeks to show how joint auditing improves the detection of financial fraud by considering factors like management understanding, board of directors, related party relationships, industry and financial company comparisons, financial outcomes, and operational processes as perceived by Jordanian certified public accountants. The data gathered from a questionnaire was analysed using the statistical analysis program (SPSS) in the study. The findings from the study indicated that joint auditing does not have any effect on improving the detection of financial fraud. The researcher suggested using single auditing rather than joint auditing to uncover financial fraud, as joint auditing can lead to conflicts among auditing firms, impacting the quality and independence of the auditing process. This study contributed to the current research by enriching the theoretical literature and providing more knowledge about joint auditing in the Jordanian environment.

The study by Holm & Thinggaard (2016), aimed to clarify the first theoretical paper on joint auditing processes and predicts that the audit fees for joint audits will be lower than those for individual audits. However, this prediction depends on the group of audit firms participating in the joint audit and their technological efficiency, as well as the associated responsibilities. This paper is the first to empirically test these predictions. The results indicate the presence of fixed coordination costs in joint audit processes. This study contributed to the current research by providing additional knowledge about joint auditing processes and supported the analytical aspect.

The study by Okab (2013), focused on identifying the role of electronic auditing in achieving competitive advantages and supporting the external auditing strategy used by auditing firms in Jordan. This was done by testing a set of hypotheses addressing the role of electronic auditing in achieving dimensions of competitive advantages within auditing firms and supporting auditing strategies. The study found that the use of electronic auditing contributes to achieving competitive advantages in Jordan, including cost reduction, quality, flexibility, and market share. Additionally, the use of electronic auditing supports the external auditing strategy. This study was utilized in formulating the elements of the dependent variable for building the current study model.

Theoretical Literature

First: Joint Audit

The concept of joint auditing has emerged, according to the joint auditing approach, as a topic that sparked controversy at the professional level. This debate later transitioned into the academic realm of oversight and auditing, despite the fact that the term "joint auditing" and the execution of the audit process have been well-established globally, regionally, and locally for decades. The concept and definitions of joint auditing have been discussed in many sources and studies as follows:

Joint auditing is a process in which two independent audit firms audit a specific company, with the auditing tasks divided between them. Additionally, each firm monitors the work of the other firm, and ultimately, a joint audit report is issued, signed by both firms (AlJajawy & shakir, 2022).

Joint auditing is considered one of the external auditing methods, involving two or more independent auditors who participate either mandatorily or voluntarily to carry out audit procedures. The process begins with joint planning between the auditors, during which the work is coordinated and tasks are divided among them. The audit is then conducted in an integrated manner, accompanied by periodic mutual reviews. At the end of the process, the auditors issue a joint report that expresses a unified opinion on the accuracy of the financial statements of the entity being audited. They bear joint responsibility for the audit process and for everything included in the report before all relevant parties and stakeholders (Aqab & Toubal, 2022).

It also represents a modern form of auditing and aims to provide reasonable assurance that the financial statements are free from material misstatements. This is achieved by having two separate and independent audit offices audit the financial statements, cooperating in a joint effort and issuing a single report that bears both their signatures. They share joint responsibility for the audit process and the contents of the report (Alamory et al., 2023).

In a joint audit process, two separate audit firms collaborate to form an opinion on a client's financial statements, sharing collective responsibility for the issued audit opinion. Joint audits have been proposed as a solution to address perceived independence issues among auditors, aiming to improve overall audit quality and enhance competition in the audit market (Hima et al., 2024).

The importance of joint auditing lies in the following points (Omer et al., 2019)

- Enhancing the effectiveness of coordination, collaboration, and planning in the auditing process.
- Achieving high performance quality among auditors, particularly in their skills.
- Overcoming the difficulties and challenges faced by individual audit systems.
- Reducing the costs associated with lost expertise resulting from mandatory auditor rotation and lowering overall auditing costs.
- Strengthening the independence of external auditors and ensuring a high level of quality in the auditing process by improving the services provided to the audited entity.

Additionally, the significance of joint auditing is derived from its ability to create new investment opportunities for companies that rely on joint auditors to review their financial statements. It contributes to improving the efficiency of the three stages of planning in the auditing process by providing a reasonable level of assurance regarding the quality of the audit to the management of client companies. Furthermore, joint auditing enhances the credibility and reliability of the financial data of these companies, leading to an increase in their stock value, maximizing their market value, and consequently reducing the legal risks they may face in the future (Samra et al., 2022).

Joint auditing aims to achieve several important objectives (Saleh, 2021):

- Utilizing Accumulated Skills and Diverse Experiences: Leveraging the accumulated skills and diverse experiences of the joint audit team members by utilizing each firm's strengths to enhance the efficiency and effectiveness of the audit process.
- Reducing Market Concentration: Mitigating the phenomenon of audit market concentration and preventing it from being limited to certain firms, while utilizing local audit firms to perform audit tasks.
- Supporting Auditor Independence: Strengthening the independence of auditors and ensuring a higher quality level in the audit process.
- Cross-Verification of Procedures: Allowing each auditor to verify the procedures and work performed by the other auditor, thereby providing a single joint audit report signed by both, who share legal and ethical responsibility for the audit results.

Additionally, other objectives of joint auditing include (Al-Saray & Ghader, 2023):

- Higher Market Valuation: Leading to an increased market valuation.
- Enhancing Auditor Independence: Aiming to enhance auditor independence by eliminating material pressures between the auditor and the client, as audit fees are distributed between the two firms according to specific standards or rules.
- Lower Audit Costs: Reducing the costs associated with joint auditing as well as the fees for private audits if performed by large audit firms.

Joint auditing may be mandatory by law or optional, stemming from the company management's desire or the auditor's own preference. It can differ in terms of the mix of audit firms involved. Thus, joint auditing can be classified into the following categories (Mohamed, 2022):

Joint Auditing Based on Degree of Obligation

- Mandatory Joint Auditing: In this case, the company is required to engage two or more external auditors to audit its financial statements. This practice is applied in sectors that are highly sensitive and impactful on the economy and are directly monitored by state institutions such as the central bank.
- Optional Joint Auditing: This refers to companies that choose to implement joint auditing without any legal obligation. The usual goal is to enhance confidence in reports and address issues related to the size of operations and the numerous branches of the audited company.

Joint Auditing Based on the Mix of Firms:

- First Mix (Big4-Big4): This involves two auditors from "Big Four" audit firms conducting the joint audit.
- Second Mix (Big4-Non Big4): This consists of one auditor from a "Big Four" firm and another from a non-"Big Four" firm conducting the joint audit.

- Third Mix (Non Big4-Non Big4): This involves two auditors, both from firms that are not part of the "Big Four."

When discussing joint auditing, there are other types of audits that may seem like alternative names for joint auditing; however, they are actually different. The following is a clarification of each type (Al-nuimi, 2020):

1. Double Audit: In this type of audit, the auditing work is completed in its entirety twice. In contrast, in joint auditing, tasks are not fully repeated; rather, an audit plan is coordinated, and audit procedures are distributed between the two auditors. This indicates the presence of overlapping reviews, mutual quality control, and a single opinion. As there are no guidelines regarding double audits, to the authors' knowledge, it remains a theoretical concept.
2. Dual Audit: This is conducted by two independent auditors who prepare their own separate reports. Subsequently, another auditor uses these reports to prepare a comprehensive report on the entity as a whole.

Second: Competitive Advantage

It can be said that an organization's competitive advantage is the benefit that the company achieves through its competitive strategies. This advantage represents a situation in which competitors are unable to implement similar strategies and cannot replicate the success of the organization (Anggraini, et al, 2017).

A competitive advantage can also be defined as a tool that enables a company to effectively engage with its competitors (Obeidat, et al, 2021).

The company must possess a competitive advantage, which is the ability to stay ahead of current or potential competitors, ensuring its market leadership through superior performance achieved as a result of this advantage (Wala, & Aziz, 2022).

The concept of competitive advantage also refers to an organization's ability to maintain and implement strategies that place it in a better position compared to other organizations operating in the same sector. Competitive advantage is achieved through the optimal utilization of technical, physical, financial, and organizational capabilities and resources, as well as the skills, competencies, knowledge, and other attributes possessed by the organization. This enables it to design and execute effective competitive strategies (Mersal, & Muhammad, 2022).

Competitive advantage is considered the key to organizational success, and achieving it represents a strategic goal that all organizations, regardless of their type, strive to attain amid the intense competitive challenges in the economic landscape. Organizations seek to enhance the efficiency and effectiveness of their competitive performance, aiming to meet customer needs and earn their satisfaction and loyalty towards the organization's products. The importance of competitive advantage can be highlighted in the following points (Al-Hamidi et al., 2022):

1) Competitive advantage provides a positive indicator that the organization holds a strong position within the market.
2) It serves as an essential criterion for organizational success, distinguishing it from competitors through the innovation of new and unique models that are difficult to

replicate.
3) It represents a fundamental factor in the operations of organizations across various sectors, serving as the foundation around which competitive strategies are centered.
4) It is a primary competitive tool for addressing market challenges and competing against other organizations.

The importance of competitive advantage arises from its role as a criterion for successful organizations, distinguishing them through the innovation of unique and effective models that are difficult to imitate or replicate. Competitive advantage is considered the primary tool for addressing market challenges and competing against other organizations by enhancing the organization's competitive knowledge and its ability to meet future customer needs. It relies on the organization's capacity to adapt to rapidly changing opportunities and persuade customers that its products are superior to those of competitors, leading to increased customer satisfaction and market share (Al-Kahali, 2023).

The organization's ability to fulfill consumer needs, or the value that consumers seek from products, such as high quality, is reflected in how it invests its financial, human, and technological resources to create value that meets customer expectations, thereby distinguishing itself from competitors in a competitive market. This results in higher returns, reduced risk levels, and effective market penetration while establishing strong positions in sales and marketing. Such advantages ensure the continuity of the organization's activities and enhance its management through ideal independence in all areas, particularly in competition and achieving high profitability. Profitability depends on the value that customers assign to the organization's products, the prices set for these products and services, and the costs associated with creating that value (Othman & Khalafallah, 2023).

Through competitive advantage, organizations aim to achieve a set of objectives, the most prominent of which are (Al-Jabali, 2021):
A. Establishing a new vision for the future goals that the organization seeks to achieve and identifying significant opportunities it wants to seize.
B. Creating new marketing opportunities.
C. Entering a new competitive arena by exploring new markets, engaging with different types of customers, or offering innovative goods and services.

Aiming to enter a new competitive arena and establish a future vision for the goals that the organization wishes to achieve, the essence of competitive advantage focuses on the value that the organization can create, enhancing its reputation and financial standing. This, in turn, leads to achieving a high market share, increased profits, customer satisfaction, and customer loyalty (Othman & Khalafallah, 2023).

The dimensions of competitive advantage refer to how the audit office differentiates itself from others in attracting clients and meeting their needs, expressed through the following dimensions (Siddiqui & Hamo, 2022):
1. Quality: Defined as the extent to which the services provided by the audit office align with clients' expectations and aspirations.
2. Efficiency: Defined as the extent to which the decisions made by the audit office contribute to achieving predetermined goals at the lowest possible costs.
3. Creativity: Defined as the various techniques employed by the audit office to develop and

update the range of services offered to clients.

4. Responsiveness: Defined as the audit office's ability to meet client needs and requests promptly while maintaining the required level of quality.

Other dimensions of competitive advantage include cost, creativity, flexibility, and timing, explained as follows (Zarafili & Al-Bashabsha, 2023):

- Cost: The organization should focus on reducing production and marketing costs to ensure they are lower than those of its competitors. Lowering costs can lead to a larger market share and serve as a foundation for success and superiority.
- Creativity: Creativity involves implementing changes in the delivery of products and services that are perceived as new by consumers or stakeholders. Innovation can occur in services or business models.
- Flexibility: Flexibility is one of the most important competitive priorities, defined as the ability to make rapid changes in product design, offer modified versions of existing products, or quickly introduce new products in response to changes in demand.
- Timing: This advantage emphasizes reducing the time it takes to deliver products and services, ensuring they are provided more quickly than those of competitors.

Many studies have agreed on the dimensions of competitive advantage, the most prominent of which are (Al-Kahali, 2023):

- Quality: With increasing customer awareness and diverse needs, price is no longer the most important factor in the purchasing decision. Organizations strive to meet customer demands by offering high-quality products that fulfill their expectations.
- Cost: Low cost is the primary competitive dimension that organizations seek to achieve in order to market their products at a lower price than competitors and maximize profits. Controlling costs enables the organization to gain market control.
- Creativity: Creativity involves generating useful ideas and the ability to adopt and implement them. It encompasses addressing increasing competition, developing production methods, and reducing costs through innovation in processes. Additionally, creativity includes new and useful ideas that contribute to problem-solving, goal development, and reshaping established management behavior patterns using distinctive methods.

Method and Data Analysis

Research Design and Sample

This study employs a quantitative research design using a survey methodology to investigate the impact of joint audit in achieving competitive advantage for Jordanian audit offices. The population consists of all licensed auditors in Jordan. According to the Jordanian Association of Certified Public Accountants (JACPA), there were approximately 650 licensed auditors in Jordan as of 2023. Using Krejcie & Morgan's (1970) formula:

$$n = N / (1 + N(e)^2)$$

Where:
- n = Sample size
- N = Population size (650)
- e = Margin of error (5% or 0.05)

The calculated minimum sample size is: 248

$n = 650 / (1 + 650(0.05)^2)$

To handle non-response bias, 300 questionnaires were distributed, with 261 usable responses received, yielding a response rate of 87%.

Research Instrument

The main source of data collection was through a survey, utilizing a questionnaire designed based on comprehensive literature review and previous studies in the field of joint auditing and competitive advantage. The questionnaire was structured into three main sections. The first section gathered demographic information about the respondents, including their years of experience, educational qualifications, job titles, professional certifications, and academic specialization, providing essential context for understanding the respondent profile.

The second one measured Joint Audit as the independent variable which has 10 items that captured different aspects of the implementation of joint audit in the planning, execution and effectiveness of the joint audit. With care, these items were developed to capture the full nature of joint audit practices in Jordanian audit offices.

The third section measured Competitive Advantage as the dependent variable across five dimensions, each of which has four items. These dimensions included: Including cost advantage, quality advantage, time advantage, market share, and flexibility. We designed each dimension to cover different areas of competition advantage that relate to the audit office. Resource optimization and cost efficiency were the focal cost advantage items. Service excellence and professional standards were quality advantage items. Efficiency and timely service delivery was mainly done by time advantage items. Items in the market share were evaluated in terms of competitive position and client base growth orientation. Finally, flexibility items assessed adaptability and responsiveness to changes in the market.

Table 1
Questionnaire Structure

Section	**Component**	**Number of Items**	**Description**
1. Demographics	Experience	-	Years in practice
	Education	-	Academic qualifications
	Position	-	Current job title
	Certification	-	Professional credentials
	Specialization	-	Academic focus area
2. Independent Variable	Joint Audit	10	Implementation aspects
3. Dependent Variable	Cost Advantage	4	Resource optimization measures
	Quality Advantage	4	Service excellence indicators
	Time Advantage	4	Efficiency metrics
	Market Share	4	Competitive position measures
	Flexibility	4	Adaptability indicators
Total Items		**30**	

Section two and section three items were measured using a five-point Likert scale based on which respondents provided their level of agreement with the statements ranging from 1 (Strongly Disagree) through to 5 (Strongly Agree). The availability of this standardized measurement made it possible for results to be collected consistently enough and analyzed statistically.

Data Analysis Techniques
Statistical analysis of the collected data was done using Statistical Package for Social Sciences (SPSS). Both descriptive and inferential statistical methods were included to the analysis framework to make sure a complete data examination. The data from the respondents was analyzed using descriptive statistics, to analyze the demographic characteristics and summarize the response patterns. To illustrate central tendency and variability in response, I calculated frequencies and percentages for demographic variables and means and standard deviations for all questionnaire items.

Inferential statistical techniques were then used for testing the research hypotheses. To investigate the impact of joint audit on each dimension of competitive advantage, simple regression analysis was done. Moreover, correlation analysis was carried out to examine the relationship among the study variables and to examine their inter-dependencies. Internal consistency of all scales and subscales of the questionnaire was assessed to make sure that the measurement instrument was reliable, using Cronbach's alpha coefficient.

Validity and Reliability
Multiple stages of the research instrument were validated for content and construct validity. Content validity was established through a comprehensive review process involving seven expert evaluators: six participants including three professors from consulting professors from Jordanian Universities (one from Albayt University, one from Princess Sumaya University for Technology and one from the University of Jordan). The diverse panel of experts this time around brought a balanced perspective backed with academic rigor and real-world industry experience.

Several important improvements to the questionnaire were made because of the expert review process. Five items were tweaked for clarity and accuracy to measure the intended constructs. Three of them were identified as redundant, and were thus removed to keep the whole concise, while not losing much in comprehensiveness. Two new items were added based on expert recommendations to improve them (strengthen construct coverage). It also focused on the accuracy of Arabic translation of technical terms for use within a Jordanian context. In sum, each modification independently and collectively increased the instrument's capacity to effectively measure the study variables with cultural and linguistic relevance for the target population.

Construct Validity
Exploratory factor analysis was computed to assess construct validity. To perform factor analysis, the condition of data was checked prior to performing factor analysis. A Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy of 0.881 above the recommended threshold of 0.8 indicated that the sample size was sufficiently large for factor analysis. Moreover, Bartlett's test of sphericity was statistically significant ($p < 0.001$), showing that factor analysis was applicable to the data set.

The factor structure of the instrument was examined with principal component analysis using varimax rotation. The findings showed a clear six factor solutions (one factor for joint audit and five factors for competitive advantage dimensions) and all items loaded significantly on their corresponding factors. Construct validity exceeded minimum threshold (0.50) on factor loadings for all items. These factors accounted for 73.24% of total variance, making the instrument a good capture of the underlying constructs being measured.

Table 2
Factor Analysis Results

Construct/Items	Factor Loadings	Eigenvalue	% of Variance	Cumulative %
Joint Audit		4.856	16.187	16.187
JA1	0.842			
JA2	0.825			
JA3	0.813			
JA4	0.798			
JA5	0.784			
JA6	0.776			
JA7	0.765			
JA8	0.758			
JA9	0.742			
JA10	0.735			
Cost Advantage		3.987	13.29	29.477
CA1	0.834			
CA2	0.812			
CA3	0.795			
CA4	0.783			
Quality Advantage		3.845	12.817	42.294
QA1	0.856			
QA2	0.842			
QA3	0.828			
QA4	0.815			
Time Advantage		3.654	12.18	54.474
TA1	0.823			
TA2	0.814			
TA3	0.802			
TA4	0.785			
Market Share		3.123	10.41	64.884
MS1	0.812			
MS2	0.798			
MS3	0.785			
MS4	0.772			
Flexibility		2.507	8.357	73.241
FL1	0.795			
FL2	0.784			
FL3	0.776			
FL4	0.765			
Bartlett's Test of Sphericity: Chi-square = 5428.673, df = 465, p < 0.001				
Kaiser-Meyer-Olkin (KMO) Measure: 0.881				

In addition, the results of factor analysis show that the factor structures are clear and the loadings for all the items are strong, thereby proving strong construct validity. Overall variance explained is 73.241% which is above the recommended criterion of 50% and therefore represents that the instrument adequately covers the targeted constructs.

Reliability Analysis
Cronbach's alpha coefficient, an overwhelmingly recognized measure for internal consistency, was used to examine the reliability of the research instrument. To guarantee a complete reliability assessment, this analysis was conducted for each dimension of the questionnaire separately as well as the entire instrument. Results proved to be highly consistent for all dimensions of the study.

The 10-item scale comprised the joint audit scale and had excellent reliability with Cronbach's alpha of (0.892), suggesting strong internal consistency among items measuring audit partnership practices. The competitive advantage dimensions were 4 items each with reliability coefficients which were markedly strong. With a Cronbach's alpha of 0.873 the quality advantage dimension was the most reliable among the competitive advantage dimensions, time advantages($\alpha = 0.858$), cost ($\alpha = 0.845$), flexibility ($\alpha = 0.849$), and market share ($\alpha = 0.836$).

The overall questionnaire, encompassing all 30 items, demonstrated exceptional reliability with a Cronbach's alpha of 0.912, surpassing the conventional threshold of 0.80 recommended by Nunnally and Bernstein (1994) for established research domains. These results are presented in detail in Table 3.

Table 3
Reliability Analysis Results

Dimension	Number of Items	Cronbach's Alpha	Assessment
Joint Audit	10	0.892	Excellent
Quality Advantage	4	0.873	Very Good
Time Advantage	4	0.858	Very Good
Cost Advantage	4	0.845	Very Good
Flexibility	4	0.849	Very Good
Market Share	4	0.836	Very Good
Overall Questionnaire	30	0.912	Excellent

Evidence of strong internal consistency and measurement reliability is reflected by the high reliability coefficients of all dimensions. On the other hand, Cronbach's alpha values greater than 0.80 are considered signs of good reliability in basic research according to guidelines specified by Nunnally and Bernstein (1994). In all dimensions of this study, this threshold was not surpassed, implying that the items of each dimension almost invariably measure their respective constructs. Secondly, particularly the very high overall questionnaire reliability ($\alpha = 0.912$) strongly demonstrates that the whole instrument used in this research is highly reliable in determining the relationship between joint audit and competitive advantage in Jordanian audit offices.

Data Collection Procedure

To ensure wide coverage of the target population, the data collection process was conducted systematically over a period of four months from June to September 2023, using both e–distribution and physical distribution channels. Respondents were strategically divided into the distribution approach and the electronic methods accounted for 65% of the responses while physical distribution channels accounted for the remaining 35%.

Electronic distribution was conducted in multiple professional platforms such as JACPA member portal, professional email networks, LinkedIn professional groups, and WhatsApp professional groups. Physical distribution was done through direct visits to audit firms, participation in professional conferences, JACPA training events and different professional workshops. The purpose of this approach was to maximize reach and obtain representative sampling of the target population via a multi-channel approach.

A structured response management protocol was implemented to optimize the response rate. In the initial distribution phase, 300 questionnaires were distributed, along with clear instructions, researcher contact details and explicit confidentiality assurances. A systematic follow-up protocol was established, consisting of three reminder waves: It was a first reminder after two weeks, second after four weeks, and a third reminder at four weeks. Non-respondents were phoned personally to answer questions about participating, whilst other concerns were addressed.

Response tracking showed a decline in response throughout the collection period. Response peaked during the first four weeks at 121 respondents (40.3 percent) and then dropped to 89 (29.7 percent) over weeks five through eight. Over the course of the accumulation, the response rate decreased gradually, from 51 (17.0%) in weeks 9-12, to 39 (13.0%) in the last four weeks of the accumulation period.

The viral load data went through a rigorous quality control process to ensure the data integrity. For example, it consisted of comprehensive response screening by completeness checks, consistency verification, response pattern analysis and outlier identification. The data cleaning process was particularly thorough: Of the initial 300 responses received, 28 responses were incomplete and 11 were found to be ineligible either because the response patterns were inconsistent or other factors seemed to indicate quality concerns. The final and usable response rate for this was 87%, ending with 261 usable responses.

Table 4
Data Collection and Response Summary

Phase	Metric	Number	Percentage
Distribution Method	Electronic Distribution	170	65%
	Physical Distribution	91	35%
Response Timeline	Weeks 1-4	121	40.30%
	Weeks 5-8	89	29.70%
	Weeks 9-12	51	17.00%
	Weeks 13-16	39	13.00%
Data Cleaning	Total Responses Received	300	100%
	Incomplete Responses	28	9.30%
	Invalid Responses	11	3.70%
	Usable Responses	261	87%

Since only properly collected data can be analyzed, the systematic way of data collection along with rigorous quality control processes made sure that the samples collected are of invaluable quality and representativeness. The response rate of a high degree of 87% is a compelling sign of succeeding the data collection strategy and the possibility of a strong involvement of the target population.

Results and Analysis

Demographic Profile of Respondents

Demographic characteristics of the 261 respondents were analyzed and demonstrated that a well-qualified sample of auditing professionals were randomly sampled from across Jordan. An overview of the distribution of professional experience among professionals demonstrated balanced representation of the various periods in career development with the greater part of respondents (60.9%) having from 5 to 15 years of experience. More specifically, 31.8% (83 participants) had 5-10 years' experience, and 29.1% (76) had 10-15 years' experience. 16.1% (42 respondents) and 23.0% (60 respondents) of the participants were early career professionals with less than 5 years of experience and seasoned professionals with more than 15 years of experience respectively.

In terms of educational qualifications, the sample demonstrated a strong academic foundation. Most respondents (72%, 188 participants) held bachelor's degrees, while a substantial portion (24.9%, 65 respondents) had achieved master's degrees. A smaller but significant group (3.1%, 8 respondents) had attained doctoral degrees, indicating a high level of academic achievement within the profession.

The distribution of job titles reflected a comprehensive representation across organizational hierarchies. Assistant Auditors formed the largest group at 34.1% (89 respondents), followed by Principal Auditors at 28.0% (73 respondents). The management level was well represented, with Audit Managers comprising 23.4% (61 respondents) and Audit Directors making up 14.5% (38 respondents) of the sample.

Professional certification analysis revealed multiple credentials among respondents, with many holdings more than one certification. The Jordanian Certified Public Accountant (JCPA) certification was the most prevalent, held by 63.6% (166 respondents) of the sample. This was followed by ACPA certification at 18.4% (48 respondents), CPA at 1.5% (4 respondents), and

CIA at 3.1% (8 respondents). Additionally, 13.4% (35 respondents) reported holding other professional certifications, demonstrating the diverse professional qualifications within the sample.

Table 1
Demographic Profile of Respondents (N = 261)

Characteristic	Category	Frequency	Percentage
Years of Experience	Less than 5 years	42	16.1%
	5-10 years	83	31.8%
	10-15 years	76	29.1%
	15 years and above	60	23.0%
Educational Qualification	Bachelor's Degree	188	72%
	Master's Degree	65	24.9%
	PhD	8	3.1%
Job Title	Principal Auditor	73	28.0%
	Assistant Auditor	89	34.1%
	Audit Manager	61	23.4%
	Audit Director	38	14.5%
Professional Certification*	JCPA	166	63.6%
	ACPA	48	18.4%
	CPA	4	1.5%
	CIA	8	3.1%
	Other	35	13.4%
Academic Specialization	Accounting	183	70.1%
	Accounting Information Systems	38	14.6%
	Accounting and Law	25	9.6%
	Economics	15	5.7%

*Note: Professional certification percentages sum to more than 100% due to multiple certifications per respondent.

Regarding academic specialization, traditional accounting emerged as the dominant field of study, with 70.1% (183 respondents) of the sample holding degrees in this area. Accounting Information Systems represented 14.6% (38 respondents) of the specializations, followed by Accounting and Law at 9.6% (25 respondents), and Economics at 5.7% (15 respondents). This distribution reflects the audit profession's strong educational accounting background in Jordan. The demographic profile of the sample indicates a qualified sample with diversity in experience levels, strong professional credentials and appropriate educational backgrounds, which provide a good setting to examine the effect of joint auditing on competitive advantage in Jordanian audit offices.

Descriptive Statistics

The descriptive statistical analysis of the study variables was able to generate a comprehensive understanding of respondent’s perspectives of both joint audit practice and competitive advantage dimensions in Jordanian audit offices. Central tendencies and variability were measured across all study dimensions in order to clearly understand from how respondents were evaluating different aspects of the research constructs, introduced in previous literature.

Table 2
Descriptive Statistics for Study Variables

Dimension	Mean	Std. Deviation	Rank
Overall Joint Audit Mean	**4.10**	**0.81**	
Cost Advantage	3.87	0.86	5
Quality Advantage	4.23	0.73	1
Time Advantage	4.09	0.8	3
Market Share	3.99	0.84	4
Flexibility	4.13	0.77	2
Overall Competitive Advantage	**4.06**	**0.80**	

The joint audit dimension showed a high positive dimension to reach overall as mean 4.10 (SD = 0.81) indicating respondents visit strength and importance of joint audit practices. The dimension of Quality Advantage was found to be the most highly perceived of competitive advantage dimensions with the highest mean score of 4.23 (SD = 0.73). Flexibility followed as the second most important dimension with a mean of 4.13 (SD = 0.77), Time Advantage ranked third among the competitive advantage dimensions with a mean of 4.09 (SD = 0.80), Market Share followed with a mean of 3.99 (SD = 0.84), indicating a moderately strong perception of joint audit's influence on market position and client base expansion. Cost Advantage, while still maintaining a positive perception above the scale's midpoint, ranked lowest among the competitive advantage dimensions with a mean of 3.87 (SD = 0.86). The overall Competitive Advantage construct demonstrated a strong positive assessment with a mean of 4.06 (SD = 0.80). The consistency in standard deviations across dimensions (ranging from 0.73 to 0.86) suggests relatively uniform response patterns and consensus among respondents.

Hypothesis Testing

To test the hypotheses, simple regression analysis was conducted for each competitive advantage dimension, with Joint Audit as the independent variable. The results of the regression analyses are presented in Table 5.

Table 5
Simple Regression Analysis Results

H	Dependent Variable	R^2	Adjusted R^2	B	Std. Error	t	Sig.
H01.1	Cost Advantage	0.399	0.397	0.584	0.052	11.231	0.000
H01.2	Quality Advantage	0.472	0.470	0.642	0.048	13.375	0.000
H01.3	Time Advantage	0.416	0.414	0.598	0.051	11.725	0.000
H01.4	Market Share	0.374	0.372	0.565	0.053	10.660	0.000
H01.5	Flexibility	0.388	0.386	0.576	0.052	11.077	0.000

Based on these results, we can address each hypothesis:

Main hypothesis H01: There is no effect of Joint Audit in achieving the competitive advantage of Jordanian audit offices.

Given that all sub-hypotheses are rejected, we can also reject the main null hypothesis. The results provide strong evidence that joint audits have a significant positive impact on all dimensions of competitive advantage for Jordanian audit offices.

H01.1: There is no effect of Joint Audit in achieving a cost advantage for Jordanian audit offices.

This hypothesis is rejected. The regression results show that Joint Audit explains 39.9% of the variance in cost advantage ($R^2 = 0.399$). The relationship is positive and statistically significant ($\beta = 0.584$, $p < 0.001$), indicating that joint audit has a significant positive impact on achieving cost advantage.

H01.2: There is no effect of Joint Audit in achieving the quality advantage for Jordanian audit offices.

This hypothesis is rejected. Joint Audit explains 47.2% of the variance in quality advantage ($R^2 = 0.472$), showing the strongest relationship among all dimensions. The relationship is positive and statistically significant ($\beta = 0.642$, $p < 0.001$), suggesting that joint audit has the most substantial impact on quality advantage.

H01.3: There is no effect of Joint Audit in achieving the time advantage for Jordanian audit offices.

This hypothesis is rejected. Joint Audit explains 41.6% of the variance in time advantage ($R^2 = 0.416$). The relationship is positive and statistically significant ($\beta = 0.598$, $p < 0.001$), demonstrating that joint audit significantly enhances time advantage.

H01.4: There is no effect of Joint Audit in achieving the market share of Jordanian audit offices.

This hypothesis is rejected. Joint Audit explains 37.4% of the variance in market share ($R^2 = 0.374$). The relationship is positive and statistically significant ($\beta = 0.565$, $p < 0.001$), indicating that joint audit contributes significantly to increasing market share.

H01.5: There is no effect of Joint Audit in achieving flexibility for Jordanian audit offices.

This hypothesis is rejected. Joint Audit explains 38.8% of the variance in flexibility ($R^2 = 0.388$). The relationship is positive and statistically significant ($\beta = 0.576$, $p < 0.001$), showing that joint audit significantly improves flexibility.

To further explore the relationships between variables, a correlation analysis was conducted. Table 6 presents the correlation matrix for the study variables.

Table 6
Correlation Matrix

Variable	1	2	3	4	5	6
Joint Audit	1					
Cost Advantage	0.632**	1				
Quality Advantage	0.687**	0.584**	1			
Time Advantage	0.645**	0.557**	0.563**	1		
Market Share	0.612**	0.548**	0.571**	0.542**	1	
Flexibility	0.623**	0.563**	0.568**	0.534**	0.557**	1

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

The correlation analysis reveals moderate to strong positive correlations between all variables, with coefficients ranging from 0.534 to 0.687. All correlations are statistically significant at the 0.01 level. The strongest correlation is observed between "Quality Advantage" and "Joint Audit" ($r = 0.687$), which aligns with the regression results showing this dimension as having the largest impact.

Discussion

The findings of this study provide strong evidence for the positive impact of joint audits on achieving competitive advantage in Jordanian audit offices. All five dimensions examined - cost advantage, quality advantage, time advantage, market share, and flexibility - were found to have significant positive relationships with joint audit practices.

We found that the quality advantage dimension represented the most important factor affected by joint audit practices, where it had the greatest explained variance ($R^2 = 0.472$) and the highest correlation ($r = 0.687$). The finding implies that joint audits are most expedient for improving the quality of services and professional standards of audit offices. Previous research of Holm and Thinggaard (2016) emphasises this by demonstrating that joint audits have a more thorough, better quality audit outcome. This conclusion is also supported by the high mean score for quality advantage (4.23) indicating that Jordanian auditors strongly believe that joint audit arrangements provide quality benefits.

Finally, time advantage and flexibility were both large with joint audit practice ($R^2 = 0.416$ and $R^2 = 0.388$ respectively). The findings indicate that joint audits not only lead to better service quality but also to better operational efficiency and performance adaptability. Use of joint audits evidences a suitable time advantage (4.09) and flexibility (4.13) for audit firms to be responsive to client needs and market changes.

Incidentally, the cost advantage had a significant positive relationship with joint audit practices ($R^2 = 0.399$) though it received the lowest mean score (3.87) of all competitive advantage dimensions. And this finding differs from some other previous research, like for instance Andre et al. (2016) that have found cost considerations to be the major driver underlying joint audit arrangements. The relatively lower perception of cost advantages in Jordan, may indicate that audit firms place relatively high value on quality and operation improvements rather than cost benefits when conducting joint audits.

Joint audit practices were moderately positively related to market share ($R^2 = 0.374$). From this finding, we infer that joint audits are indeed indicative of market position, but other factors also may play a role in determining a market share of the Jordanian audit sector.

Practical Implications

This study has important practical implications for the Jordanian audit firms and the regulatory authority, based on its findings. The evidence reported on a strong correlation between joint audits and quality advantage raises the question how audit firms should design the joint audit arrangement to maximize the quality advantage it offers. This would require the creation of holistic quality control frameworks made for joint audit engagements and the creation of clear standards about collaborative quality assurance processes.

The study with respect to time advantages highlights the need for establishing proper protocols for joint audit activities in view of operational efficiency. In structuring joint audit arrangements audit firms should create frameworks for the allocation of tasks, communication channels, and management of decisions in such a way as to realize the benefits that an approximation of joint activity can produce. Such protocols should be set up to avoid duplication of effort going all the way down to providing adequate audit coverage.
To strategically leverage joint audit arrangements to increase firms' flexibility to market changes and client needs the positive impact on flexibility proves the need. Creativity might require the development of flexible resource allocation models and design of adaptive audit methodologies to react promptly to changing client requirements and market conditions. Joint audit arrangements can be viewed by firms as a strategic tool for building organizational agility and market responsiveness.

Results for cost advantage were positive; the relatively lower mean score, however, reveals areas of optimization needed in improvements in cost efficiencies of the joint audit arrangements. For firms to design effective audit efficiency strategies, firms must concentrate on designing better cost allocation models and identifying additional synergies to decrease cost of operations without compromising audit quality. These might entail the investment in shared technologies, standardizing processes and institutionalization of efficient resource sharing mechanisms.

Although the market share equation produces a lower amount of explained variance, the results indicate that firms should incorporate joint audits into their market development strategies. This could include extending the service offering using existing joint audit relationships to address new market segments, gain access to new services and catalyse stronger relationships with clients based on enhanced service capabilities.

Limitations and Future Research
Several important limitations of this study should be acknowledged, which provide important insight into the relationship between joint audits and competitive advantage. The study is limited in geographical scope to the Jordanian context and hence the generalizability of the findings may be limited to countries with different regulatory environments and audit market structures. This finding of contextual limitation indicates the need for wider international studies in order to test the results utilizing other regulatory and cultural environments.

A second limitation is reliance upon perceptual measures; study results are based on what respondents 'perceive' rather than what is 'objective' as measured by performance metrics. Perceptions of joint audits are valuable in understanding the type of joint audit arrangements that practitioners hold; however, they may not measure the actual performance impacts of joint audit arrangements. We also suggest that future research could relax this limitation by including financial and operational performance data to provide more objective measures of competitive advantage.

The temporal nature of the study design is cross-sectional, in which temporal changes in competitive advantage are not obtained. Although the initial effects of joint audit are examined, longitudinal research would help to understand the evolution of the benefits of joint audits and how firms adjust their joint audit practices over time to sustain the competitive advantage. It might also allow insight into the sustainability of the competitive advantage derived from joint audit arrangements.

Considerations of sample composition suggest potential for a more directed research effort on select market segments or qualitative comparisons among firms having different sizes. The sample that was currently utilized was representative of the Jordanian audit sector but further granular study of how different types and sizes of firms benefit from joint audit could be useful for practitioners and regulators.

Based on these limitations, there are several promising directions for future research. Improving knowledge of how cultural and regulations circumstance influences the performance of joint auditing could be enhanced by cross cultural studies of joint auditing practices and results across various countries. Using valid objective measures of performance as part of the research would allow the relationship between joint audit and competitive advantage to be worth proven with tangible figures. Analyses of evolution and sustainability of joint audit benefits may be gained from longitudinal research on longitudinal change in competitive advantage.

Further research in the future can also focus on stakeholders beyond audit firms such as what do clients perceive of the value and effectiveness of having the joint audit. This could offer firms important insights into how clients both perceive and value joint audit arrangements of this kind, which understanding should be useful to those firms looking to structure their service offerings. Finally, certain factors that might moderate the relationship between joint audits and competitive advantage could be analyzed further to ascertain the conditions under which joint audits might be most effective in building competitive advantage.

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