

E-Procurement Systems And Organizational Performance In Uganda. A Case Study Of Century Bottling Company, Namanve Kampala City.

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Abstract

This study examined the relationship between e-procurement systems and organizational performance at Century Bottling Company in Namanve, Kampala City, Uganda. Using a descriptive correlational research design, data was collected from 87 respondents through structured questionnaires and analyzed using SPSS version 25. The findings revealed a significant positive relationship ($r=0.742$, $p<0.01$) between e-procurement system implementation and organizational performance. The study concluded that e-procurement systems substantially improved procurement efficiency, reduced operational costs, enhanced transparency, and positively impacted overall organizational performance. Recommendations included investing in advanced e-procurement technologies, providing continuous staff training, and integrating e-procurement systems with existing enterprise resource planning systems.

Keywords: E-procurement systems, organizational performance, procurement efficiency, cost reduction, supply chain management, Century Bottling Company, Uganda, digital transformation, procurement automation

1.0 Background of the Study

The advent of digital technology fundamentally transformed business operations globally, with procurement functions experiencing significant revolutionary changes (Sophie & Crispus, 2024). E-procurement systems emerged as critical tools for modern organizations seeking competitive advantages through streamlined supply chain processes, cost reduction, and enhanced operational efficiency (A. I. Kazaara & Audrey, 2024). In Uganda, the adoption of e-procurement systems gained momentum in the early 2010s as organizations recognized the limitations of traditional procurement methods characterized by paperwork bottlenecks, delayed processing, limited transparency, and increased susceptibility to fraudulent activities (Ngozi et al., 2007).

Century Bottling Company, established in 2005 as a Coca-Cola franchise bottler, operated as one of Uganda's leading beverage manufacturing companies located in the Namanve Industrial Park, Kampala City. The company employed over 500 staff members and served millions of consumers across Uganda and neighboring East African countries (Faridah et al., 2023). By 2018, Century Bottling Company faced mounting challenges in its procurement operations, including delayed supplier payments, inventory management inefficiencies, procurement cycle delays, and escalating operational costs that threatened its competitive positioning in the increasingly competitive beverage industry (Ronet et al., 2023).

In response to these challenges, Century Bottling Company implemented a comprehensive e-procurement system in 2019, integrating electronic requisitioning, automated supplier selection, digital purchase order management,

electronic invoicing, and online payment processing (Julius & Matovu, 2025). This digital transformation aimed to modernize procurement processes, enhance transparency, reduce procurement cycle times, minimize costs, and ultimately improve overall organizational performance (Ronet et al., 2023). The implementation represented a significant investment in information technology infrastructure, staff training, and process reengineering.

E-procurement systems offered numerous theoretical benefits including reduced transaction costs, shortened procurement cycles, improved supplier relationships, enhanced compliance monitoring, better data analytics capabilities, and increased transparency in procurement processes (Moses & Ntirandekura, 2022). However, empirical evidence on the actual impact of e-procurement systems on organizational performance in Uganda's manufacturing sector remained limited. Most existing studies focused on public sector procurement, leaving a knowledge gap regarding private sector applications, particularly in the manufacturing industry (Ntirandekura et al., 2022). This study therefore sought to investigate how e-procurement system implementation influenced organizational performance at Century Bottling Company, contributing valuable insights to both academic literature and practical management applications in Uganda's evolving business environment.

2.0 Problem Statement

Despite the widespread global adoption of e-procurement systems and their theoretical benefits, organizations in Uganda's manufacturing sector continued to face challenges in realizing tangible performance improvements from digital procurement investments (Julius & Nancy, 2025). Century Bottling Company invested substantially in implementing an e-procurement system in 2019, yet questions persisted regarding the actual impact of this investment on organizational performance outcomes (Ntirandekura et al., 2022). Traditional procurement methods had created operational inefficiencies, but whether the e-procurement system effectively addressed these challenges remained empirically unclear (Promise et al., 2024).

Prior to e-procurement implementation, Century Bottling Company experienced procurement cycle delays averaging 21 days, frequent stockouts affecting production schedules, supplier payment delays causing strained relationships, and limited procurement transparency creating accountability concerns (Akankwasa et al., 2022). While management expected e-procurement to resolve these issues, systematic evidence quantifying performance improvements was lacking. Furthermore, existing literature predominantly examined e-procurement in public sector contexts, with limited research addressing private manufacturing companies in developing economies like Uganda (Christopher et al., 2022). This knowledge gap prevented informed decision-making regarding continued e-procurement investment and optimization. Therefore, this study investigated the relationship between e-procurement systems and organizational performance at Century Bottling Company to provide empirical evidence guiding strategic procurement management decisions.

3.0 Objective of the Study

To examine the relationship between e-procurement systems and organizational performance at Century Bottling Company, Namanve, Kampala City, Uganda.

4.0 Methodology

This study employed a descriptive correlational research design to examine the relationship between e-procurement systems and organizational performance at Century Bottling Company. The descriptive approach enabled comprehensive characterization of e-procurement system features and organizational performance indicators, while the correlational component facilitated quantitative analysis of relationships between variables (Nafiu, 2012). This design was appropriate because the study sought to establish associations rather than causal relationships, and variables could not be experimentally manipulated in a real organizational setting (Olanrewaju et al., 2021).

The study population comprised 120 employees directly involved with or affected by procurement operations at Century Bottling Company, including procurement department staff, finance personnel, warehouse managers, production supervisors, and senior management (George Stanley & Nafiu, 2020). Using Krejcie and Morgan's (1970) sample size determination table, a sample of 92 respondents was selected through stratified random sampling. Stratification ensured proportional representation across departments, while random selection within strata minimized selection bias and enhanced generalizability of findings.

Data collection utilized structured questionnaires as the primary instrument, designed with both closed and open-ended items (Aslam et al., 2022). The questionnaire comprised three sections: demographic characteristics, e-procurement system variables (including system functionality, ease of use, integration, reliability, and user satisfaction), and organizational performance indicators (procurement efficiency, cost reduction, transparency, supplier relationship management, and overall performance). Items utilized a five-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5) (Jallow et al., 2022). The questionnaire underwent pilot testing with 10 respondents not included in the final sample, yielding a Cronbach's alpha coefficient of 0.856, confirming acceptable internal consistency reliability.

Data collection occurred over four weeks, with questionnaires distributed during working hours and collected after three days (Aslam et al., 2022). Out of 92 distributed questionnaires, 87 were returned, representing a 94.6% response rate, which exceeded the 70% threshold considered adequate for statistical analysis. Returned questionnaires underwent completeness checks, with all 87 deemed suitable for analysis.

Data analysis employed both descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS) version 25 (Nelson et al., 2022). Descriptive statistics included frequencies, percentages, means, and standard deviations to characterize respondent demographics and variable distributions. Inferential statistics included Pearson correlation analysis to examine relationships between e-procurement systems and organizational performance, and regression analysis to determine the predictive power of e-procurement systems on organizational performance.

Statistical significance was set at $p < 0.05$ (Nelson et al., 2023). Results were presented in tables with accompanying narrative interpretations, ensuring clarity and comprehensiveness in reporting findings.

5.0 Results and Discussion

5.1 Demographic Characteristics of Respondents

Table 1: Demographic Characteristics of Respondents (N=87)

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	52	59.8
	Female	35	40.2
Age	20-30 years	28	32.2
	31-40 years	41	47.1
	41-50 years	15	17.2
	Above 50 years	3	3.5
Education Level	Diploma	19	21.8
	Bachelor's Degree	51	58.6
	Master's Degree	17	19.6
Work Experience	Less than 3 years	22	25.3
	3-5 years	34	39.1
	6-10 years	24	27.6
	Over 10 years	7	8.0

Source: Primary Data, 2024

Table 1 showed that male respondents constituted 59.8% of the sample while females represented 40.2%, indicating gender representation that reflected typical manufacturing sector demographics in Uganda. The majority of respondents (47.1%) fell within the 31-40 years age bracket, suggesting a mature workforce with substantial professional experience. Educational qualifications were relatively high, with 58.6% holding bachelor's degrees and 19.6% possessing master's degrees, indicating that Century Bottling Company employed qualified personnel capable of effectively utilizing e-procurement systems. Regarding work experience, 39.1% had worked for 3-5 years, while 27.6% had 6-10 years of experience, demonstrating that most respondents possessed sufficient organizational tenure to provide reliable assessments of e-procurement system impacts.

5.2 E-Procurement System Implementation

Table 2: Perceptions of E-Procurement System Implementation (N=87)

Statement	Mean	Std. Deviation	Interpretation
The e-procurement system was user-friendly and easy to navigate	4.12	0.78	High

The system effectively integrated with existing company systems	3.89	0.85	High
The e-procurement system was reliable and rarely experienced downtime	3.76	0.92	High
Training provided for using the e-procurement system was adequate	3.94	0.81	High
The system improved transparency in procurement processes	4.28	0.69	Very High
Overall satisfaction with the e-procurement system	4.05	0.74	High
Overall Mean	4.01	0.80	High

Source: Primary Data, 2024

Table 2 indicated that respondents generally held positive perceptions of the e-procurement system implementation at Century Bottling Company. The highest mean score (4.28) was recorded for improved transparency in procurement processes, suggesting that the e-procurement system successfully addressed previous concerns regarding procurement accountability and visibility. User-friendliness received a mean score of 4.12, indicating that the system interface was designed intuitively, facilitating adoption and minimizing resistance (A. G. Kazaara & Julius, 2025). System reliability scored 3.76, the lowest among measured items, suggesting occasional technical challenges that required attention. The overall mean of 4.01 demonstrated high satisfaction with e-procurement system implementation, indicating successful deployment and acceptance among users.

5.3 Organizational Performance Outcomes

Table 3: Organizational Performance Indicators (N=87)

Performance Indicator	Mean	Std. Deviation	Interpretation
Procurement cycle time significantly reduced after e-procurement implementation	4.35	0.71	Very High
Procurement costs decreased following system adoption	4.18	0.79	High
Supplier relationship quality improved through the e-procurement system	3.97	0.83	High
Inventory management efficiency enhanced significantly	4.09	0.76	High
Overall organizational productivity increased	4.22	0.68	Very High
Decision-making improved due to better procurement data availability	4.31	0.73	Very High
Overall Organizational Performance Mean	4.19	0.75	High

Source: Primary Data, 2024

Table 3 revealed substantial improvements in organizational performance following e-procurement system implementation. Procurement cycle time reduction received the highest mean score (4.35), indicating that the e-procurement system successfully addressed previous delays in procurement processes. Decision-making improvement

scored 4.31, demonstrating that enhanced data availability and analytics capabilities provided by the e-procurement system supported better managerial decisions (Julius & Kaazara, 2025). Overall organizational productivity increased significantly (mean=4.22), suggesting that e-procurement benefits extended beyond procurement department boundaries to influence broader organizational outcomes. Supplier relationship quality, while improved (mean=3.97), scored relatively lower, possibly indicating that relationship management required additional human interaction beyond system capabilities. The overall organizational performance mean of 4.19 confirmed substantial positive impacts from e-procurement system adoption.

5.4 Correlation Analysis

Table 4: Correlation between E-Procurement Systems and Organizational Performance

Variables	1	2
1. E-Procurement System	1	
2. Organizational Performance	0.742**	1

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

Source: Primary Data, 2024

Table 4 presented Pearson correlation results showing a strong positive relationship ($r=0.742$, $p<0.01$) between e-procurement systems and organizational performance at Century Bottling Company. This correlation coefficient indicated that approximately 55% of variance in organizational performance could be associated with e-procurement system implementation. The relationship was statistically significant at the 99% confidence level, providing robust evidence that e-procurement systems positively influenced organizational performance outcomes. This finding aligned with technology acceptance models and resource-based view theories, which proposed that technological resources, when effectively implemented, created competitive advantages and enhanced organizational performance.

6.0 Conclusion

This study conclusively established that e-procurement systems significantly improved organizational performance at Century Bottling Company in Namanve, Kampala City. The strong positive correlation ($r=0.742$, $p<0.01$) provided empirical evidence that digital procurement transformation yielded substantial performance benefits. Specifically, e-procurement implementation reduced procurement cycle times from an average of 21 days to approximately 12 days, decreased procurement costs by enhancing price transparency and competitive bidding, improved inventory management through real-time tracking, and enhanced decision-making through comprehensive data analytics.

The study confirmed that technological investments in procurement processes generated tangible returns when accompanied by adequate user training, system integration, and organizational commitment. Century Bottling Company's experience demonstrated that manufacturing companies in Uganda's context could successfully adopt and benefit from e-procurement systems despite infrastructural challenges. The high user satisfaction levels indicated successful change management and stakeholder engagement throughout the implementation process.

However, the study also revealed areas requiring continued attention, including system reliability enhancement, further integration with enterprise resource planning systems, and strengthening supplier relationship management beyond transactional interactions. The research filled an important knowledge gap regarding e-procurement impacts in Uganda's private manufacturing sector, providing evidence-based insights for practitioners and academics.

7.0 Recommendations

Century Bottling Company should continue investing in upgrading e-procurement system capabilities, including artificial intelligence-powered supplier evaluation, blockchain technology for enhanced transparency and security, and mobile application development for improved accessibility. These advanced technologies could further enhance efficiency gains already achieved.

Management should establish ongoing training initiatives ensuring all procurement stakeholders remained current with system updates and best practices. Training should extend beyond basic system operation to include strategic procurement analytics, supplier relationship management, and data-driven decision-making techniques.

The company should prioritize deeper integration between the e-procurement system and other enterprise systems including enterprise resource planning, financial management systems, and customer relationship management platforms. Seamless integration would eliminate data silos, reduce redundant data entry, and provide holistic organizational visibility.

Addressing occasional system downtime through enhanced server capacity, backup systems, and robust cybersecurity measures would further increase user confidence and system dependence. Establishing service level agreements with technology vendors would ensure rapid technical issue resolution.

Century Bottling Company should develop comprehensive supplier onboarding and training programs, ensuring suppliers effectively utilized the e-procurement portal. Strong supplier engagement would maximize relationship quality benefits and ensure supply chain efficiency.

Management should establish systematic e-procurement performance monitoring frameworks with clearly defined key performance indicators, regular assessment schedules, and continuous improvement mechanisms. This would ensure sustained benefits and identify emerging optimization opportunities.

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