

# Enhancing Internal Financial and Manufacturing Cost Measurement and Analysis: An Analytical Study of Modern Financial Cost Methods

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## ABSTRACT

This study has applied descriptive approach to study Kenana Sugar Company Limited's accounts and financial departments, involving 87 male and female employees. A random sampling method selected 45 individuals, who were analyzed using questionnaires. The results showed positive results.

The demographic, academic, and professional background of the participants is also compared to reveal some interaction with performance and career advancement. The sample is slightly older and almost all of the participants work mid-career level; most of the participants belong to accounting and finance fields. The study found that 75% of participants aged 36-45 years and 81.58% held a Bachelor's degree had no significant differences in performance based on academic achievement or work experience. However, the research faces challenges in generalizing to a wider population and suggests expanding the scope of participants by specializations and career phases.

**Keywords:** Internal Manufacturing, Cost Accounting Methods, economic growth, ABC method

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## INTRODUCTION

Sudan, which is situated in Northeast Africa, derives a lot from sugar in terms of its economic growth (Ibrahim et al., 2020). However, study focuses on enhancing the efficiency and competitiveness of the Sudanese sugar industry by analyzing modern cost accounting techniques and applying them to the country's sugar subsector (Odonkor et al., 2024). The Sudan sugar industry, which began in the early 20th century, has evolved due to favorable climate and water availability. Large-scale sugar factories, advanced agricultural practices, and government policies have supported and regulated the industry, ensuring its continued growth and prosperity (Eliste et al., 2022). Nevertheless, the Sudanese sugar industry faces challenges in internal manufacturing cost measurement and analysis, resulting in limited understanding due to crude cost accounting (Seid et al., 2021; Wohlmuth et al., 2005). This leads to irrational decisions and reduced profitability, affecting producers' decisions and the competitiveness of the sugar product. The Sudanese government and sugar industry players have recognized the need to improve cost accounting practices, suggesting techniques like target costing, and lean accounting (Akoko, 2020). However, these methods of cost management can offer better and refined perception of cost structure to the sugar producers hence making better and informed decisions about the manufacturing and the competitiveness of the firms (Asrol et al., 2021; Naicker et al., 2017). Moreover, cost accounting practices in the Sudanese sugar industry and identify potential advantages of new, efficient methods. It will explore challenges, opportunities, and lessons learned for practical implementation (T. S. Ibrahim & T. S. Workneh, 2022). It has been also found that the cost accounting in the Sudanese sugar industry to enhance knowledge, inform policymakers, and provide recommendations for efficiency, cost reduction, and competitiveness (Akoko, 2020; Akoko, 2022). Though, this could positively impact Sudan's economy, as the sugar industry is crucial for agricultural and industrial development.

The use of material flow cost accounting (MFCA) in the South African sugar industry to enhance resource efficiency. Data from six firms revealed factors affecting sucrose quality and farmers' yields. Cleaner production positively impacts environmental, operational, and financial performance. The study recommends proficient MFCA use for improved profitability and organizational efficiency (Doorasamy, 2019; Tran & Herzig, 2020). From the Mishkan University's Agendaries department, WITN it is evident that companies or organizations that intent to meet needs are favored to clinch sales and bring in more customers (Dyche, 2002). Traditional accounting systems in Sudan lack quality and cost information, causing research problems due to their inadequacy in providing relevant information for competitive manufacturing contexts (Magboul et al., 2024). Porter's study highlights the importance of a strong strategy-manufacturing link for sustainable competitive advantage, highlighting the benefits of investing in advanced technology and involving

manufacturing managers (Palange & Dhattrak, 2021; Tracey et al., 1999). Moreover it has been found that the influence of management accounting systems (MAS) on business organizations, revealing that MAS directly impacts managerial performance, user training, satisfaction, task uncertainty, and decentralization of decisions, with limitations requiring future study (Pedroso et al., 2020).

Explaining the shortcomings of traditional cost accounting methods and systems and their incompatibility with the requirements of the modern manufacturing environment, highlighting the basic pillars of cost accounting considering the modern manufacturing environment. The importance of research: Increasing the competitiveness of the Sudanese industrial sector by applying modern methods of cost accounting, keeping pace with global markets and opening ways for investment by developing products and opening new markets. This study is considered one of the studies that did not receive attention from the management of industrial units in the Sudanese industrial sector.

## PREVIOUS STUDIES

**COST ACCOUNTING PRACTICES IN THE SUGAR INDUSTRY:** Today the sugar industry constitutes one of the most important sectors in the agriculture and manufacture of many countries around the globe including Sudan. Sugar is one among the major products that Sudan exports; thus the Sudanese sugar industry is very important to the economy of the nation. Knowledge of these asserted practices is critical to improving the internal ability of this industry to measure and analyze manufacturing cost within the context of cost accounting. On similar line of cost accounting practices in the sugar industry; both domestically and internationally helps in understanding current state of the industry and the problems it encounters in respect of cost control. As illustrated for the sugar industry worldwide the traditional techniques that have been in operation include the standard costing and job-order costing. Such strategies have often tended to target the more explicit cost structure components such as people cost and materials cost while paying scant regard to indirect cost features such as overheads, energy costs, and maintenance costs. This has meant that the producers of sugar have had a limited view of the costs incurred in production, and hence lack a comprehensive way of analyzing their operations for any signs of inefficiency. Thus, with respect to the presently discussed Sudanese sugar industry, the existing literature indicates that the practices in cost accounting have been consistent with the global tendencies. Cost accounting practices that were traditionally applied by Sudanese sugar producers have been the main reason for lack of comprehensive understanding of the cost structure of the industry. This has been particularly so in view of the growing competition both locally and globally, as well as, variability in the market forces and government policies. Among the acknowledged merits of the traditional cost accounting techniques, it is worth mentioning the fact that they are not very complicated compared to the other available methods, and can be easily implemented. Some of these methods are universally known to the practitioners in the production industries and can be easy to implement especially if the industries are fairly standardized in terms of production costs and other related factors. This simplicity can be especially useful where resources, and especially technical skills may be scarce especially in developing countries. Of course the literature also highlights that CSAMs assess many restrictions to traditional cost accounting techniques especially in the current sugar industry. Their main weakness lies in failure to correctly model and assign indirect costs although such costs may represent a huge percentage of the total costs of production. This limitation may affect the industry ability in decision making on pricing, resources, and other opportunities necessary for improving competitiveness. In addition, the literature review shows that conventional cost accounting techniques can be insufficient for the complexity and flexibility needed because of the sugar industry's volatility. Some of the factors include variation in the raw material cost, changes in the energy cost and the occurrence of new technologies and ways of producing sugar. It also means that traditional approaches may be less effective here, which in turn constrains the ability of the industry to notice and respond to as many cost-related phenomena as it could or should. As the literature suggests, the adoption of techniques such as the ABC, target costing, lean accounting has been recently attracting more and more attention of the representatives of the sugar industry. These current approaches are specifically aimed at establishing a better and more accurate picture of the cost framework so that producers can act wisely, maximize the production line, and generally boost their competitive advantage.

## ADOPTION OF MODERN COST ACCOUNTING METHODS:

The Activity-Based Costing System (ABC) is a costing method that improves indirect cost allocation. A study on 1419 international articles reveals a growing trend in ABC articles, highlighting global research performance and collaboration (Quesado & Silva, 2021). Also through comparing with activity based costing (abc) and traditional costing accounting (TCA) in the context of Global competition and success of integration leading to decrease in operation cost, improvement in competence and efficiency of management in enterprise business but the difficult arises (Kitsantas et al., 2020). The manufacturing sector including the sector of sugar has observed a marked change in cost accounting in the last few decades. The literature points to increasing adoption of new forms of modern cost accounting: practices including the ABC, TC, and LA that organisations are increasingly adopting to improve their methods of cost measurement and management. It has been also found that ABC, a cost accounting system, is gaining attention in the manufacturing and sugar industries for its precision and broader view compared to traditional methods (Hudáková Stašová, 2020). Further, the study highlights the benefits of implementing ABC in the sugar industry, as it helps producers understand their cost structure, make informed decisions about product pricing, and improve manufacturing processes (Al-Dhubaibi, 2021). Due to this enhanced cost visibility, there is likely to be an improvement in the level of profitability and competitiveness in cases where there is high intensity of competition from other regions or areas of the world (Tran & Thao, 2020).

In addition, ABC use for the further enhancement of other innovative forms of cost management, namely kaizen costing and target costing (Potnik Galić et al., 2023). Due to the increased specificity of costs it is possible to set effective goals for the cost reduction and to improve the processes of production systematically.

Target costing is the other modern cost accounting technique that has emerged and applied by many manufacturing industries including those in the sugar industry (Banerjee, 2021). Target costing emphasizes cost control to achieve market prices and customer needs, reducing costs during product formulation, improving competitiveness, and reducing production costs without a markup on production costs (Celayir, 2020; Sevim, 2019). Target costing, a modern cost accounting method, integrates efforts from various departments and considers customer needs and market conditions (Al-Hattami et al., 2020; Celayir, 2020). It's particularly useful in the sugar industry, where producers must adapt to changing market conditions. Lean accounting, another cost accounting method, aims to compress waste, simplify accounts, and improve decision-making and cost control.

#### **COST MANAGEMENT STRATEGIES IN THE SUDANESE SUGAR INDUSTRY:**

The Sudanese sugar industry is one of the most important subsectors of the agricultural and manufacturing industries where theoretic and empirical works on the cost management challenge is central (T. S. Ibrahim & T. S. Workneh, 2022; Ismail, 2006). Moreover, it has been found that the Sudanese sugar industry faces challenges and policies related to raw material price fluctuations, transport costs, and domestic agriculture market policies, which can impact its competitiveness and ability to adapt to favorable forces (Ibrahim et al., 2020; Wachilonga, 2020).

Further, the Sudanese government's price control and subsidies have hindered the industry's ability to reduce input costs, limiting profitability (Mohamed & Mohamed, 2020). This has led to a literature discussion on various cost management approaches in the Sudanese sugar industry, aiming to provide affordable sugar options for consumers.

Some of the key strategic directions are increasing production efficiency and productivity, as well as rationalising manufacturing by introducing lean production and using up to date manufacturing technologies (Anderson, 2020). Efficiency-oriented strategies, such as enhanced process control units, energy management, and reduced material movement, have reduced costs for Sudanese sugar producers, improving competitiveness (Kumar et al., 2021; Laužikas et al., 2021).

However, restrictions of such operational efficiency-oriented approaches especially when dealing with the overall cost control issues arising from government policies and industries' standards (Zhang et al., 2022). Most of the strategies enable sugar producers to enhance internal cost efficiency, they might not always be adequate for handling all aspects of cost issue in the industry (Simon et al., 2021). The other strategic cost management included that the diversification of products and coming up with useful sugar products (Hernández et al., 2021; Khadijah, 2011). Sudanese sugar manufacturers have been seeking ways of diversification beyond mere production of bulk sugar to production of value added products including refined sugar, industrial sugar and other sugar by products that are used in the manufacturing of food and beverages (Floering; Gansane, 2023).

#### **DRIVERS AND BARRIERS TO COST ACCOUNTING MODERNIZATION:**

The adoption and implementation of modern cost accounting practices in developing countries such as the Sudanese sugar industry revealed a number of key influential factors that point to a rather elaborated cost accounting practices in the developing countries (Elbadawi et al., 2023).

Moreover, factors affecting Sudanese sugar producers' modernization of cost control is crucial (Elryah & Hassan, 2023). Improved cost estimation methods, such as ABC, target costing, and lean accounting, are being used by producers to analyze cost structures, identify reduction areas, and align operations with post-Arrangement market needs (Al-HAshimi & Al-Ardawe, 2020). However, these potential benefits have in fact provided a strong impetus to the industry to look at ways of how its cost accounting practices can be improved. Nevertheless, The Sudanese sugar industry faces challenges in implementing modern cost accounting techniques due to the lack of competent staff, the use of traditional activity-based and volume-based systems, and the need for significant investment in employee training, competency development, and cross-departmental cooperation (ALI et al., 2021; Melnyk et al., 2020). The industry's resistance to change due to outdated attitudes and organizational culture, as well as technological challenges, as major reasons for slow modernization of cost accounting in the Sudanese sugar industry (Truelove et al., 2023).

A number of Sudanese sugar producers are still using out of date information systems and data management to support their operations and, therefore, may be restricted over the collection, analysis and application of the data that is needed for implementing sophisticated cost accounting techniques (Andiola et al., 2020). On investment in ERP systems, data analytics tools and IFM platforms to facilitate and enable the contemporary cost accounting (Demiröz, 2021). However, Sudanese sugar producers face challenges due to high fixed costs and inability to acquire modern technologies. The accuracy of cost accounting practices is hindered by institutional and regulatory factors, government policies, and a lack of clear systems (Tran & Herzig, 2020).

## METHODOLOGY

The study has applied descriptive approach to study Kenana Sugar Company Limited's accounts and financial departments, involving 87 male and female employees. A random sampling method selected 45 individuals, who were analyzed using questionnaires. The results showed positive results.

## ANALYSIS

### Age Distribution of Participants

Age Range	Number	Percentage (%)
Under 25 years old	2	5.26
25 to 35 years	7	18.42
36 to 45 years	17	44.75
46 to 55 years	9	23.68
56 years and over	3	2.89
<b>Total</b>	<b>38</b>	<b>100.00</b>

The age distribution of the participants gives an indication of the sample diversity; 44% of the participants were aged 36 to 45 years. A total of 75% of the total sample with the following breakdown: This means that a fairly large portion of the partakers would be in the middle of their working years, or at least possessing rather much work experience. The second biggest group of respondents is those aged 46 to 55 years; they are 23 percent of the total. 68 % and this also confirms that the sample comprises of mostly experienced persons. Meanwhile, 18. Although half of them are young people aged between twenty-five and thirty-five, most of them are still beginners. In the age structure the youngest age group, that is people below the age of 25 years constitute 5. Ten per cent of the study sample The youngest age group of 15 years and below constituted 26% of the sample, and the oldest age group of 56 years and over constituted only 2%. 89%. This distribution indicates that more of the study sample is of mid-age, middle career employees with few subject to extreme age brackets.

### Academic Qualification of Participants

Academic Qualification	Number	Percentage (%)
Bachelor's degree	31	81.58
Higher diploma	3	7.89
Master's	4	10.53
Ph.D	-	-
Other	-	-
<b>Total</b>	<b>38</b>	<b>100.00</b>

The study found that 81.5% of respondents have a Bachelor's degree, with a smaller proportion holding a Master's degree. Most have a minimum Higher Diploma, indicating post-graduate education but not a full Master's degree. None possess a Ph.D., indicating a predominantly Bachelor's level academic accomplishment.

### Scientific Specialization of Participants

Scientific Specialization	Number	Percentage (%)
Accounting	29	76.32
Business Management	3	7.89
Economy	5	13.16
Accounting Information Systems	1	2.63
Other	-	-
<b>Total</b>	<b>38</b>	<b>100.00</b>

The survey has shown that the majority of participants are scientifically-focused, with 76% focusing on accounting. 32% have a background in this field, indicating a rational self-interest in financial competency. The second largest group is Business Management specialists, accounting professionals, and those with a Master's degree. The remaining 11% are non-managerial. The majority of participants specialize in Accounting Information Systems, indicating a focus on financial and economic disciplines.

### Job Titles of Participants

Job Title	Number	Percentage (%)
Factory Manager	-	-
Financial Controller	1	2.63
Head of Accounts	1	2.63
References	6	15.79
Other (Accountant)	30	78.95
<b>Total</b>	<b>38</b>	<b>100.00</b>

78% of participants noticed that the use of such terms as 'can', 'could', and 'could have' create impression of probabilities while Pculo affirms that 'can', 'could' and 'could have' make probabilities impression. Indeed, 95% of them are accountants suggesting that the organization is highly likely to favor financial positions. Only 2. 63% senior management or above; and 15% key management personnel. 79% of them are "References", suggesting that they operate in an advisory or reference capacity. There is no Industrial Relations either Factory Managers suggesting that the positions advertised are independently of financial and accounting positions.

### Work Experience of Participants

Experience	Number	Percentage (%)
1 year and less than 3 years	8	21.05
3 years and less than 6 years	14	36.84
6 years and less than 9 years	11	28.95
9 years and more	5	13.16
<b>Total</b>	<b>38</b>	<b>100.00</b>

The analysis of participants' working experience reveals a rather varied picture: a majority of the participants (36.84%) have 3-6 years of working experience. This means that many of the participants are young, middle career people, who are most probably still developing their area of specialization. Following closely, 28. 95% of the participants currently hold 6 to 9 years' experience of which this reveals that a good proportion are in more senior levels of their careers. Meanwhile, 21. 05% of the participants have worked in the organization for 1 to 3 years which defines them close to the rookie employees in the organization. Finally, 13. Among them, 16% of participants have 9 or more years of experience; they are the most experienced professionals of the sample. It also emerges that a significant proportion of the participants are early to mid-level professionals of the software industry and there are relatively few participants who are in seniors positions.

### Analysis of Variance (ANOVA) Based on Academic Qualification

Academic Qualification	Number	Arithmetic Mean	Standard Deviation	Sum of Squares	Degree of Freedom	Mean Squares	F Value	Probability Value	Interpretation	Result
Bachelor's Degree	31	12.51	1.05	7.32	30	8.117	0.802	0.502	Non-functional	There are no statistically significant differences
Higher Diploma	3	9.15	1.20	-	7	-	-	-	-	-
Master's	4	3.95	0.041	-	-	-	-	-	-	-
<b>Total</b>	<b>38</b>	<b>6.87</b>	<b>2.66</b>	<b>7.32</b>	<b>37</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

The ANOVA analysis covers the participants' performance differentiation based on the results of their education. The results indicate that participants with Bachelor's degree gave an arithmetic mean score of 12. 51 to standard deviation of 1. 05. The sum of squares for this group is 7.) 32, with 30d and MSc of 8. 117. The obtained F value is 0. 885, with the

probability of obtaining the observed results by chance, that is the p-value that is lesser than 0. 502. As it can be observed, the p-value is greater than the accepted significance level of 0. 05, the result indicates clearly that, there is no functional relationship between the participants' performance and their academic performance hence over emphasis on academic qualification is nonfunctional. For the Higher Diploma group, the arithmetic mean has been computed to be 9. 15, standard deviation of 1. 20. Nevertheless, general ANOVA information including sum of squares, and mean squares values are absent for this group. Likewise, the cluster of the Master's degree group has an arithmetic mean of 3. 95 with the variability as measured by the standard deviation equal to 0—as indicated previously, this figure refers to the variability of the normal distribution. 041 but not further details of ANOVA results are seen.

#### Analysis of Variance (ANOVA) Based on Work Experience

Experience	Number	Arithmetic Mean	Standard Deviation	Sum of Squares	Degree of Freedom	Mean Squares	F Value	Probability Value	Interpretation	Result
1 year and less than 3 years	8	3.89	0.33	0.407	2	0.204	2.175	0.129	Non-functional	There are no statistically significant differences
3 years and under 6 years	14	4.12	0.31	0.352	35	-	-	-	-	-
6 years and under 9 years	11	4.05	0.21	-	-	-	-	-	-	-
9 years and more	5	2.18	0.19	-	-	-	-	-	-	-
<b>Total</b>	<b>38</b>	<b>4.08</b>	<b>0.37</b>	<b>3.685</b>	<b>37</b>	-	-	-	-	-

The work experience of the subjects also comes out in the ANOVA analysis to determine the differences in performance. For those who reported their level of experience to be one to three years, the arithmetic mean is three only. 89 with a standard deviation of 0 Seyfi and Küçük 2013 Unlike self-efficacy self-esteem was not significantly different between the high and low social networking addiction groups Thus the null hypothesis H<sub>0</sub> is accepted while the research hypothesis H<sub>1</sub> is rejected for self-esteem; Self-esteem 300 Level 14. 33. Therefore, henceforth the degree of variation for this group is 0. 407, the degrees of freedom for the numerator is 2, hence the derivation of the mean square is done as: 204. F previous value is 2. 175 with p<0. 129. Since the p – value is greater than the accepted level of 0. 05, this is then deemed non-functional so as to signify that there were no disparities in the performance that could have been caused by the (var experience). For participants with 3-6 years of teaching experience the mean is just a tad higher at 4. 12 with a standard deviation of 0.31. However, it is not specified the further details of the ANOVA that includes mean squares and F value. Likewise, the respondents with 6 to 9 years' experience have a mean of 4 years, but with a slightly higher standard deviation of 1. 05 and a standard deviation of 0. 21, further there is no extra information regarding ANOVA presented as well. Notably, the mean of participants with experience of 9 or more years is only 2. 18, and a standard deviation of 0. 19, although once again the relative statistical information is omitted.

#### Analysis of Participant Responses Across Ferry Numbers

Ferry Number	Agrees Number	Non-consent Percentage %	Arithmetic Mean Number	Standard Deviation Percentage %	Result
1	26	69	9	24	3.68
2	34	90	2	6	4.21
3	35	93	-	-	4.37
4	34	90	4	11	4.26
5	37	98	-	-	4.55

The comparison analyzed in the responses of the participants for different ferry numbers manifests a strong agreement. Among participants in Ferry 1, response was positive from 69% of the participants who agreed to consent while 24% of the participants were reluctant to consent. In Ferry 2, the increase in the agreement rate was to 90% while that of non-

consent was 6%. For Ferry 3, the agreement was 93% with no non-consent. For Ferry 4, the percentage of respondents who agreed was 90, out of which 11 percent did not consent; for Ferry 5, 98 percent agreed.

### Participant Agreement and Non-Consent by Ferry Number

Ferry Number	Agrees Number	Non-consent Percentage %	Arithmetic Mean Number	Standard Deviation Percentage %	Result
1	32	84.2	6	15.8	4.11
2	15	39.5	19	50	2.79
3	19	50	13	34.2	3.32
4	20	52.6	10	26.4	3.47
5	32	84.2	5	31.1	4.29

The investigation describes the presence of the dispersion of both consent and non-consent from participants on different ferry numbers. For Ferry 1, 84. 2% agreed, while 15. 8% did not consent. However, Ferry 2 recorded rather a low agreement level, at a paltry 39%. Some 5% agreeing and 50% non-consenting. Ferry 3 had 50% /50% agreement while Ferry 4 had moderate agreement. Ferry 5 reported the highest agreement rate of 84.” 2% agreeing.

### ANOVA Analysis of Academic Qualification and Experience

Academic Qualification	Mean	Standard Deviation
Bachelor's Degree	12.51	1.05
Higher Diploma	9.15	1.20
Master's Degree	3.95	0.041

Academic qualifications and mean scores differ in accordance to the level of education that the candidates are undertaking. Going by the results, candidates with a bachelor’s degree scored highest mean of 12. 51, having Higher Diploma have the mean score of 9. 15. Employees that have their master’s degree have a mean score of 3 which is the lowest among all employees’ mean scores. 95,” this would mean that their scores are more indicators of a more uniform performance level.

### ANOVA Results: Analysis of Variance

ANOVA Results	Value
F Value	0.802
Probability Value (p)	0.502

The ANOVA results show a P value of.857, F value of 0.802, and p-value of 0.502, which is significantly higher than the conventional level of 0. This indicates that the dependent variable fluctuations do not indicate significant differences among groups, thereby rejecting the null hypothesis of no significant differences.

## DISCUSSION

Demographic and performance data giving detailed description of the participants and their influence on the outcomes of the study. Majority of respondents (44%) are midcareer employees aged 36-45 years (75%), while 23% (68%) are aged 46-55 years, indicating a high number of experienced individuals in the sample. Also, the economic incentives of outsourcing for agro industrial organisations, comparing full time employee, freelance worker and outsourcing contractor. In other words, Minimizing the use of agency staff how about if it advocated legislation, transparency, financial cost, Extended outsourcing practice, Improved trust, and development of the service promotion policies (Klimovets, 2015; Potryvaieva & Palieiev, 2023).

An empirical research on accounting methods and standards changes in Turkey and Romania. Then it conducted a t test to compare the mean investor optimism of those using fair value and those not and found the difference significant. This paper espouses the advantages of FVA, optimism, stock purchase frequency, and indeed evaluations of transparency which the study avails, and the necessity of an IFRS in the age of globalization as a discovery (Mert, 2022; Potryvaieva & Palieiev, 2023). While the second largest share of respondents is under 40 years old, accounting for 25 percent of the questioned individuals, the group of active Internet users under twenty-five constitutes only 5 percent of the total number of the respondents. 26 % of participants, and it was marked that there was a poor engagement of early-career members (Coman et al., 2022). Majority of participants (81.58%) have a Bachelor's degree, with a lack of PhDs, indicating a good educational level, but limited advanced degrees. The probability equals to 42 per cent. There is a very low level of implementation of ABC where only 1% of Sudanese manufacturing firms have adopted ABC, while there is important progress in system thinkers through updating the cost and management information system (Hamid, 2021; T. S. T. Ibrahim & T. S. Workneh, 2022).

The participants' specialization does divide along scientific disciplines: 76.32% of the participants are specialized in Accounting, 13.16% in Economy, 7.89% in Business Management, and 2.63% in Accounting Information Systems (Gelinias et al., 2018). The concentration in accounting and financial disciplines points therefore to a good fit with the financial competency of the study (Dean et al., 2020). The study mainly focuses on accountants, with 95% of participants being accountants. The study found no significant relationship between academic qualifications and work experience, suggesting that performance levels are not significantly influenced by these factors.

## IMPLICATIONS

- Out of the total participants, 56% of them are within 36 to 45 years and 43% are within the age group of 46 to 55 years, suggesting that the sample mainly comprises mid-tier career workforce. This means that the study results can represent the modern experienced and settled employees, but they can not represent the views of the young or seniors as a generation.
- It appears that the variation will not be so great that having a higher degree means better performance within the sample. This could suggest that possibly other factors such as learned experience and the like could be determinative of performance results.
- We hereby noted that out of all the participants 91% has background in accounting and related fields which points to the fact that our results will tend to bias towards those in finance and accounting. This may be a drawback to the study because may not be generalizable to other disciplines such as business management or economics.
- Distribution of work experience is as follows It can be seen that majority of the participants are in early to mid-career stages which might influence the findings regarding the advanced career stages. It might give only a narrow insight into all the phases of the career path and all possible types of performance, due to oversampling of highly experienced individuals.

## RECOMMENDATION

- Broaden the sample diversity therefore, it is recommended that in the future studies, a more diverse range of age participants as well as participants from different career stages should be involved. This could be done by trying to reach out to younger professionals as well as the more experienced older professionals.
- Focus on practical experience since degree attainment had no large effect on performance, it is worth focusing on practise and learning by work experience in following up research and organisational learning. It might be in organizations' best interest to invest in experiential learning and staff development than investing in higher certifications.
- Expand specialization areas to improve the generalisability of findings, into consideration should be participants drawn from different fields of science and even different positions. This could offer more appropriate analysis by giving an average of the scores which will consider all the fields and roles having an equal weight.

## CONCLUSION

The demographic characteristics of the participant, their academic qualification, specialization in the field of science, job description, and working experience of the sample are proposed here for the first time, and they offer the following findings. The population consisting mostly of mid-career employees and the coverage of accounting and financial areas allow considering the study relevant to experienced workers in these fields. Given that most of the participants reported to possess a Bachelor's degree we find it very interesting that there is no much variation in the levels of DVD production across the quality, quantity and variety of qualifications and work experience.

From the results it is inferred that despite the fact that previous academic performance and previous work experience give important background information, they may not explain differences in performance. First, it has been found that mid-career stage personnel dominate the sample While this may not be an issue per se, this may limit the generalizability of the findings, for instance, the results of the study may not reflect the views of personnel who have had relatively more years of experience or may lack the views of young personnel. For further studies, the sample should be expanded along the age, career practice progression and the field of specialization line. Focusing on the matters of field experience and introducing other factors that might have impact on performance will enhance understanding of people's career development and success in various organizations.

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