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A Comparative study of Automation of Accounting in Data Entry in Primary and Secondary Book with Tally and v Books

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Abstract

This research explores the extent of automation in accounting data entry processes within primary and secondary books, comparing two widely used software platforms—Tally (Educational version) and Zoho Books (Free version). The objective was to evaluate how much of the data input process can be automated and to test specific hypotheses regarding the automation potential in different accounting functions. Using an exploratory research design, the study assessed automation features across key accounting records including journals, cash and sales books, purchase and return registers, and document collection modules. The findings reveal that Zoho Books demonstrates significantly higher automation capabilities, particularly in secondary books such as sales, purchases, and cash management, where more than 50% of data entry tasks can be automated. In contrast, Tally remains heavily dependent on manual input, especially in primary books. The study confirms that less than 50% of data entry in primary books and document collection processes can currently be automated, while secondary book functions show promising progress, particularly through cloud-based platforms like Zoho Books. These insights emphasize the growing relevance of automation in streamlining accounting tasks and highlight the limitations of traditional systems in achieving full efficiency.

Keywords: Accounting Automation, Data Entry Automation, Accounting Software, Primary Books, Secondary Books

Main Objectives

To evaluate how much degree of data input process have been automated.

Hypotheses of the Study

H_4 – "Less than 50% of data entry in primary books can be automated."

H_5 – "More than 50% of data entry in secondary book can be automated."

H_6 – "Less than 50% of collection of accounting documents can be automated."

Methodology

"Exploratory Research"

INTRODUCTION

In the rapidly evolving landscape of business operations, automation has become a cornerstone for enhancing efficiency, accuracy, and scalability. One of the most critical yet time-consuming areas in business accounting is data entry, particularly in the preparation and maintenance of primary and secondary books of accounts. With the emergence of powerful accounting software like Tally and Zoho Books, organizations now have access to tools that promise to automate large portions of their bookkeeping processes. However, the extent to which these platforms have achieved automation, especially in the context of data input in primary and secondary books, remains a subject of practical significance and academic inquiry.

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This research paper undertakes an exploratory study to examine and compare the degree of automation possible in accounting data entry using Tally and Zoho, specifically focusing on the primary books and secondary books. The study aims to assess the current level of automation in data input processes and explore how these systems handle document collection and classification, which are often bottlenecks in full-cycle automation.

The key objective of this study is to evaluate the degree of automation in the data input process, providing insights into the practical capabilities and limitations of Tally and Zoho in automating accounting workflows.

The study tests three hypotheses:

- H4: Less than 50% of data entry in primary books can be automated.
- H5: More than 50% of data entry in secondary books can be automated.
- H6: Less than 50% of the collection of accounting documents can be automated.

Through this research, we aim to contribute to the broader understanding of automation readiness in accounting, especially for small to medium enterprises and service providers who are considering shifting from traditional methods to automated digital solutions. The findings may help accounting professionals, software developers, and decision-makers align their automation goals with realistic expectations and technological capabilities.

LITERATURE REVIEW

Definition

1. **Cloud Accounting:** Cloud accounting refers to accounting service hosted remotely on the cloud where multiple users can access from anywhere. Nowadays, disruptive technology such as artificial intelligent, big data and blockchain are also used together with cloud accounting platform (Sastararuji *et al*., 2021).

2. **Accounting Automation:** (a) Automation of accounting processes is primarily motivated by the company's desire to save time and increase productivity. In addition, accounting automation is one of the elements requiring the organization to embrace artificial intelligence services that facilitate accounting automation. (Rawashdeh *et al*., 2023). (b) Accounting Automation is a form of accounting solution that employs artificial intelligence to automate repetitive operations like data input and document analysis. Effective technology adoption necessitates the presence of automation (Rawashdeh *et al*., 2023).

3. **Primary Books:** The journal is often called the "book of original entry: because it is where all business transactions are recorded chronologically for the first time. Each entry in the journal is called a journal entry, and it records the debit and credit aspects of a transaction based on the double-entry system.

4. **Secondary Books:** The secondary books of accounting are also known as subsidiary books or special journals. These are used to record frequent and repetitive transactions, reducing the load on the primary journal.

Common Secondary Books (Subsidiary Books)

- **Cash Book** – Records all cash and bank transactions.
- **Purchase Book** – For credit purchases of goods.
- **Sales Book** – For credit sales of goods.
- **Purchase Returns Book** – For goods returned to suppliers.

- **Sales Returns Book** – For goods returned by customers.
- **Journal Proper** – For all other transactions not recorded in the above books (like opening entries, closing entries, adjustments, etc.).

The difference between cloud accounting and traditional accounting software (on premises)

Table: Cloud Accounting *vs.* Traditional Accounting Software

	Cloud Accounting	Traditional Accounting Software
Accounting software license	Company rents it	Company owns it
System location	In the cloud	Where company wants
Maintenance & support fee	Included in software license	Extra purchased
Application	Vendor manages	Company manages
Data	Vendor manages	Company manages
Runtime	Vendor manages	Company manages
Middleware	Vendor manages	Company manages
Operating system	Vendor manages	Company manages
Virtualization	Vendor manages	Company manages
Servers	Vendor manages	Company manages
Storage	Vendor manages	Company manages
Networking	Vendor manages	Company manages

(Sastararuji et al., 2021)

Properties of cloud-based

Property	Cloud-based	Traditional workstation
On-demand service	Client company can provision computing capabilities such as network storage as needed, adding to the scalability of AIS	Client company is restricted to the product features that are predetermined in the initial contract/ license. Additional functionalities and updates may be available but typically an upgrade to a different version of software is required.
Availability over network	AIS is available over the network and accessed through standard mechanisms that promote access and use over heterogenous client platforms (such as mobile phones, tablets, and laptops).	AIS is only available through the workstations where installed.
Provisioning	AIS provider's computing resources are pooled to serve multiple client companies using a multi-tenant model.	Client company takes responsibility of ensuring adequate computing resources to use the AIS on in-house workstations.

Rapid elasticity	AIS provider's capabilities are elastically provisioned and released, e.g. updates to the AIS are often provided automatically.	Client company makes decisions on updates and additional features.
Measured service	Resource usage can be monitored, controlled and reported, providing transparency for both the AIS provider and client company.	Client company may set up practices to monitor efficient use of traditional AIS.

(Asatiani et al., 2019)

Comparison Between Traditional and Cloud Computing-Based Accounting Software

Cloud Computing-Based Accounting Software	Traditional Accounting Software
Data are Entered Automatically	Data are Entered Manually
Remote Access to System is Available	Remote Access to System is not Available
Installation and Update are Done via Remote Access	Installation and Update are Done Manually
Independent Working Outside Workplace is Available	Independent Working Outside Workplace is not Available
Back-up can be Done at Cloud Computing System and Local Destination	Back-up is Done at Local Destination
Legislative Amendments are Followed Through Cloud Computing System	Legislative Amendments are Followed Individually
Declarations are Filled in and Sent Automatically	Declarations are Filled in and Sent Manually
No Time Loss in Transactions	Time Loss in Transactions
Invoices and Other Official Documents are Filled in and Sent Through Web	Invoices and Other Official Documents are Filled in and Sent Manually
Managers of Establishment Can Remotely Access to Financial Data at Any Time	Managers of Establishment Cannot Remotely Access to Financial Data at Any Time
There is a Constant Web-Based Communication with Customer Establishments for Financial Consultants	There is not a Constant Communication with Customer Establishments for Financial Consultants

("The Risks of Cloud Computing in Accounting Field and the Solution Offers," 2015)

RESEARCH AND FINDING

Primary Book

Book	Item	Zoho Books (Free)	Tally (Edu)
Journal	Manual Journal	Manual	Manual

Secondary Book

Book	Item	Zoho Books (Free)	Tally (Edu)
Cash Book	Banking	Automated, Manual	Automated, Manual
	Cash	Automated, Manual	Manual
Sales Book	Name of Inventory	Automated, Manual	Manual
	Name of Customer	Automated, Manual	Manual
	Quotes	Automated, Manual	Manual
	Sales Order	Automated, Manual	Manual
	Delivery Challan	Manual	Manual
	Invoices	Automated, Manual	Manual
	Payment Received	Automated, Manual	Manual
	Recurring Invoice	Automated, Manual	Manual
Sales Returns Book	Credit Notes	Automated, Manual	Manual
Purchase Book	Name of Vendors	Automated, Manual	Manual
	Expenses	Automated, Manual	Manual
	Purchase Order	Automated, Manual	Manual
	Bills	Automated, Manual	Manual
	Payment Made	Automated, Manual	Manual
Purchase Returns Book	Vendor Credits	Automated, Manual	Manual
Journal Proper	Manual Journal	Automated, Manual	Manual

Collection of Accounting Documents

Function	Item	Zoho Books (Free)	Tally (Edu)
Banking	Receipt	Automated, Manual	Not Available
	Payment	Automated, Manual	Not Available
Sales	Invoice	Automated, Manual	Not Available
Purchase	Bill	Automated, Manual	Not Available
Expenses	Invoice	Automated, Manual	Not Available

CONCLUSION

This study sought to evaluate the degree of automation achievable in data entry across primary and secondary accounting books using two widely used platforms - Tally (Educational version) and Zoho Books (Free version). Through exploratory research and comparative analysis, it was observed that Zoho Books offers a significantly higher level of automation in both

primary and secondary book data entry processes compared to Tally.

With respect to Hypothesis H4, the findings support the assumption that less than 50% of data entry in primary books can be automated, as both platforms still rely heavily on manual entries.

For Hypothesis H5, the results indicate that more than 50% of data entry in secondary books can be automated, particularly when using Zoho Books, which supports automated entries in various components such as invoices, payment receipts, credit notes, and vendor details. This highlights Zoho's advantage in reducing manual workload in routine transactions.

Regarding Hypothesis H6, the findings align with the statement that less than 50% of collection of accounting documents can be automated, as several functions in Tally are not available or remain manual.

Overall, the research highlights a clear shift toward partial automation in secondary accounting processes, with modern cloud-based tools like Zoho Books leading this transformation. However, limitations in primary book automation and document collection signal a need for further development in software capabilities, especially in legacy systems like Tally. This study underscores the importance of choosing appropriate accounting tools to optimize efficiency, especially for businesses aiming to reduce data entry efforts and enhance workflow accuracy.

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