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A Study On The Effects Of Winman Software In Tax Calculation

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Abstract**—**This study explores the effects of Winman software in tax calculation, focusing on how key user-related factors contribute to performance outcomes and potential errors. Conducted over four months, the research utilizes primary data collected through a structured questionnaire. Analytical techniques include Multilayer Perceptron (MLP) and Structural Equation Modeling (SEM) to examine both predictive and theoretical dimensions of human error. The MLP model revealed that years in the current role significantly impact error prediction, while age showed minimal influence. SEM analysis confirmed a strong positive relationship between accuracy and consistency, with model fit indices (CFI = 0.96, TLI = 0.92) indicating a reliable structure. By integrating neural and structural modeling, the study highlights the importance of user experience and system interaction in software-based tax computation. These findings offer valuable insights for improving training, minimizing errors, and enhancing the overall efficiency of tax-related tasks using Winman software.

Index Terms**—**Speed and efficiency, Multi-layer perceptron, Structural equation modelling

I. INTRODUCTION

Winman CA-ERP is the No.1 CA software suite in India. This flagship product is a bundle of many software like Income Tax software, Balance Sheet software, Audit Report software etc. The software is rated as the 'best income tax software' for Chartered Accountants as the software is specifically developed to revolutionize the Income tax computation, tax return preparation, tax filing procedures, preparation of balance sheet and other functions of CA office in India. Income tax software is a package of Income tax computation software, ITR software and income tax e-filing software. Income tax software is enabled for different types of Assesse Status. The data entry in CA-ERP is very simple and user-friendly due to minimum key operations and single window computation. As the calculation of tax and entry of data are in the same table, there is no navigation through multiple windows and thereby avoids confusion in data entry.ITR Software facilitates easy preparation and generation of ITR forms in paper returns and e-return by automatically filling the values from the computation sheet and balance sheet to ITR forms.

II. OBJECTIVES

- To find the barriers to the adoption of Winman in organizations.
- To determine whether adopting Winman minimizing human error in data entry and processing.
- To evaluate how Winman enhances speed and efficiency.
- Aim at how Winman reduces human error.
- To study the impact of Winman on maintaining reliability and consistency across operations

III. SCOPE

The study will cover various aspects, including the software's ease of use, integration with existing financial systems, and its impact on reducing errors in tax computations. It will evaluate whether Winman Software streamlines the overall tax filing process and ensures compliance with current tax regulations. Furthermore, the scope includes exploring the time-saving benefits and cost reductions experienced by businesses using the software compared to manual tax calculation methods.

IV. REVIEW OF LITERATURE

Ibrahim Zubairu, Patrick Akeba Atiawin and Ahmed Jamal Iddrisu.,(2025) This research study delved into the multifaceted rea00lm of tax compliance within the digital economy context, with a specific focus on the impact of digitalization, the role of taxpayer education programs, and the importance of taxpayer awareness programs. A diverse sample of 278 participants, this study encourages stakeholders to take the initiative and makes suggestions for managers, legislators, academics, and business leaders to use digitalization's revolutionary potential to promote tax compliance.

Rufina Milamo, Mato Magobe, Cyril Chimilila, And Ryoba Mzalendo (2025) This study investigates the impact of trust, service quality, and extrinsic motivation on taxpayer's engagement with electronic tax filing systems, alongside the relationship between system engagement and the tax compliance burden. The study utilized partial least squares structural equation modeling (PLS-SEM). The analysis draws on survey data collected from 230 business taxpayers in Dar es Salaam, Tanzania. The results demonstrate that trust, service quality, and extrinsic motivation significantly drive taxpayer's engagement with the e-filing system.

Yanlei Sun, Md Mominur Rahman et…al (2024) In the realm of sustainable development, Environmental, Social, and Governance (ESG) performance has become a crucial metric for evaluating the long-term viability and ethical conduct of businesses. However, there remains a gap in understanding how these factors operate within the context of developing nations such as Bangladesh.

Ngo Quang Trung and Minh Ly Duc(2024) In the post-Covid-19, the e-commerce industry is expanding rapidly. Electronic companies have been thinking about progressively transitioning to the e-commerce industry. The booming telecommunications sector supports the e-commerce sector's quick acceleration in response to the global economy.

Maryam Larikaman, Mahdi Salehi, and Nour-Mohammad Yaghubi(2024) This study aims to investigate blockchain technology (BT) and its opportunities and weaknesses in Iran's tax system; it addresses the opportunities and challenges of BT when incorporated into Iran's tax system this study provides helpful insights and develops the knowledge. Furthermore, this is among the initiatives addressing BT's opportunities and challenges in three discriminative taxation sectors, including value-added tax, tax on shipping goods, and payroll tax.

V. RESEARCH METHODOLOGY

A **qualitative research** design is a roadmap for exploring and understanding complex phenomena through non-numerical data, emphasizing depth and context over breadth and statistical significance. A sample of 200 determined using Morgan's table, was deemed appropriate for this research. From a population of 410.

VI. DATA ANALYSIS AND INTERPRETATION

6.1 Structural equation modelling

Table 6.1.1 modification indices

Modification indices							
			Modif. index	*EPC*	*sEPC (LV)*	*sEPC (all)*	*sEPC (nox)*
DE	~~	**B**	7.12	1.09	1.09		
accuracy	=~	**B**	7.12	0.80	1.20	0.26	0.26
DE	~~	**HE**	6.06	0.32	0.32		
accuracy	=~	**HE**	6.06	0.24	0.36	0.22	0.22
SE	~~	**HE**	5.59	-1.13	-1.13	-0.34	-0.34
DE	~~	**AC**	4.15	-0.41	-0.41		
accuracy	=~	**AC**	4.15	-0.30	-0.45	-0.19	-0.19
SE	~~	**AC**	4.11	1.52	1.52	0.32	0.32
AC	~~	**B**	1.00	-0.61	-0.61	-0.08	-0.08
HE	~~	**B**	0.87	-0.39	-0.39	-0.08	-0.08
HE	~~	**AC**	0.08	-0.07	-0.07	-0.04	-0.04
accuracy	=~	**SE**	0.08	0.08	0.12	0.03	0.03
DE	~~	**SE**	0.08	0.11	0.11		
SE	~~	**B**	0.08	-0.32	-0.32	-0.02	-0.02

(Source: primary data may-2025)(Software: Jamovi)

(Note: SE-Speed and Efficiency, AC- Across consistency, HE-Human error, DE-Data entry and B-Barriers for adopting)

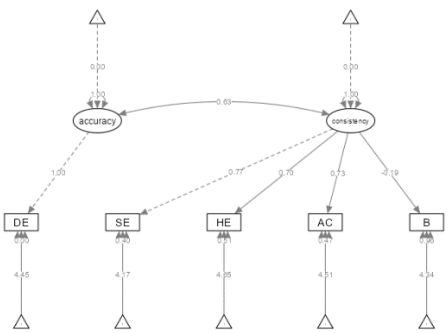
6.1.1 Finding

The largest modification indices suggest adding a covariance between DE and B (Modify. Index = 7.12) and a direct effect from B to accuracy (Modify. Index = 7.12). These modifications could potentially improve the model fit.

6.1.1 Inference

In overview, the SEM analysis provides a comprehensive evaluation of the relationships between the observed and latent variables. While the model shows generally good fit, some areas, such as the RMSEA and PNFI.

FIGURE 6.1: SEM



6.2 MLP (Multi-layer perceptron)

Table 6.2.1 NETWORK INFORMATION

Network Information			
Input Layer	Factors	1	Age
		2	Years in current role
		3	Education level
		4	Income
	Number of Units [a]		17
Hidden Layer(s)	Number of Hidden Layers		1
	Number of Units in Hidden Layer 1[a]		3
	Activation Function		Sigmoid
Output Layer	Dependent Variables	1	he3
	Number of Units		18
	Activation Function		Hyperbolic tangent
	Error Function		Sum of Squares
a. Excluding the bias unit			

(Source: primary data may-2025)(Software: SPSS)

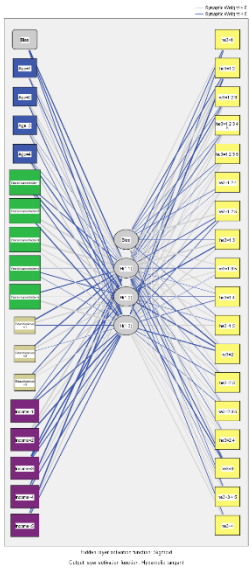
6.2.1 Finding

Predicting the most influential demographic factor on human error among age, years in current role, educational qualification, and income is challenging due to their interconnectedness and context-dependent effects.

6.2.1 Inferences

In the Multilayer Perceptron (MLP) model analyzing factors contributing to human error, the variables **years in current role** were found to have the strongest impact. These variables demonstrated high-weight connections across hidden neurons, indicating a significant role in predicting error. On the other hand, **education level** and **income** showed moderate influence, with some inconsistent or mixed weight patterns. Notably, **age** contributed the least, with low and scattered weights across the network, suggesting it has minimal predictive value in this model.

FIGURE 6.2: MLP



VII. SUGGESTION

- Using MLP and SEM as complementary tools—MLP gives predictive accuracy, while SEM provides theoretical clarity and relationships. Cross-check results between MLP and SEM. For example, do SEM loadings and MLP importance rankings agree on variable impact

- Ensure variables are scaled or normalized across both MLP and SEM where needed to improve consistency and comparability.
- MLP to discover non-linear effects, and SEM to validate the theoretical structure.
- Based on both models, provide a unified interpretation of which variables.

VIII. CONCULSION

This study employed two analytical approaches—Multilayer Perceptron (MLP) and Structural Equation Modeling (SEM)—to identify and interpret the key factors influencing human error. The MLP model, using a data-driven neural network approach, incorporated four predictors: age, education level, income, and years in the current role. These years in role showed the strongest influence, indicated by high-weight connections across hidden layers. Education level and income had a moderate impact, while age was the weakest predictor, showing low and inconsistent weight patterns. Together, these findings highlight the value of combining MLP and SEM. While MLP reveals predictive power and variable importance, SEM confirms theoretical relationships and model structure. This integrated approach provides a clearer understanding of the key drivers of human error and supports evidence-based strategies for improving performance and reducing.

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