



## **The Impact of Auditors' Use of Prepackaged Accounting Procedures on Audit Risk and Audit Quality: An Analytical Study of a Sample of Auditor Opinions in the Kurdistan Region of Iraq**

**Lect. Soran Muhammed Ameen Habeeb**

[soran.ameen@garmian.edu.krd](mailto:soran.ameen@garmian.edu.krd)

College of Science

Germian University-Iraq- District of Germian - Sulaimaniyah

**Asst. Prof. Dr. Rizgar Ali Ahmed**

[rizgar.ahmed@univsul.edu.iq](mailto:rizgar.ahmed@univsul.edu.iq)

College of Administration and Economics

University of Sulaimaniyah - Iraq Sulaimaniyah

### **Article History**

Received: 08July2023

Revised: 29 Aug 2023

Accepted: 02 Oct 2023

### **Abstract:**

Owing to the risks and challenges facing the work of auditors, the development in dealing with accounting programs ought to be kept pace with and be scientifically and practically qualified in order to be able to express a neutral technical opinion on the financial statements. Therefore, the research included three sections focused on the effect of employing ready-made accounting programs by auditors on audit risks and quality. The statistical program SPSS was adopted to reach to an analysis of the results of the questionnaire distributed to a sample of auditors who work in auditing accounts and have been at work for a long time. The research hypotheses mentioned in the research have been proven. The researchers reached a set of conclusions and recommendations that serve the auditors and other parties for the purpose of working

<p>CCLicense CC-BY-NC-SA 4.0</p>	<p>professionally to reach efficiency and quality in dealing with accounting programs. One of the most important conclusions reached by the researchers is that the auditors have the ability to deal with accounting programs, which leads to reducing risks and increasing the quality of auditing. One of the key recommendations is a great necessity for the development courses for auditors in the technical aspects of accounting programs, as these programs are permanently developing and modernized.</p> <p><b>Keywords:</b></p> <p>Ready-Made Accounting Programs, Auditors, Audit Risk, Audit Quality, Auditing</p>
--------------------------------------	---

## Introduction:

Computerized accounting programs are one of the fundamental methods for generating accounting data, which help in financing the economic unit and operational decisions to be more logical (Rashid & Sabir Jaf, 2023). Since companies and institutions make use of these systems, the auditors must have the ability to deal with such programs, because they scrutinize the financial reports produced by these programs. Therefore, the inability to deal with the auditors will affect the audit risk, thus, it will be reflected on the quality of the audit (Rashid, 2018). As a result, the research problem was raised and represented in “Does employing computerized accounting programs by auditors affect the audit risks and quality. In light of the questions of the research problem, the research hypothesizes that there is a relationship and effect when employing the ready-made accounting programs on the risks of auditing and its quality in the Kurdistan

Region. The research stemmed its importance from the auditors' awareness in dealing with accounting programs and its impact on audit risks and quality.

### **Research importance:**

The research stemmed its importance from the importance of the auditors' awareness in dealing with accounting programs and its impact on audit risks and quality.

### **Research hypotheses:**

Based on the questions of the research problem, the research hypothesizes that there is a relationship and effect on audit risks and quality in the Kurdistan Region when the auditors employ ready-made accounting programs.

### **Research community and sample:**

The research community consists of a sample of auditors in the Kurdistan region of Iraq.

### **Auditing under accounting programs, its risks and quality**

#### **First: The definition of audit:**

Auditing is defined as the systematic examination of the control systems, data, documents and accounting books of institutions or organizations, and their verification and compliance with acknowledged international rules and standards (Rashid, 2020). The degree to which these claims accurately reflect the organization business outcomes over a specific time period, whether a profit or a loss, is expressed by opinion. What these financial statements represent must necessarily imply an audit of the accounts. (Naasan, 2018; Noori & Rashid, 2017)

## **Second: Definition of computerized accounting software:**

Computerized accounting programs are regarded as one of the most significant contemporary management information systems. These systems depend on the interdependence and integration of extremely effective human efforts and are made possible by the ease with which data can be collected from various sources (Rashid, 2019). It saves, transmits, analyzes and recovers data to carry out certain operational processes, which lead to making them as information and outputs through the preparation of accurate financial statements and reports on time. They could be relied on in making several decisions (Al-Firdous, 2019; Ismael et al., 2020).

## **Third: Audit Risks:**

Audit risk is defined as “it is when the auditor expresses an inappropriate opinion about the financial statements as a result of obtaining incorrect conclusions by the auditor during the audit process and thus expressing an incorrect opinion about those statements”. It is also known as” the auditor’s failure to make an appropriate adjustment to his opinion on the financial statements that are tainted by intrinsic errors. (Shaheen, 2015; Rashid, 2017).

## **Fourth: Quality Audit:**

According to the definition of audit quality, it should be possible to find and disclose major inaccuracies and mistakes in the client's financial statements. It implies that the auditor's independence is demonstrated by the potential of the auditor reporting on inaccuracies (Karim et al., 2020). Based on that, increasing the quality of auditing means increasing the auditor’s ability to discover accounting errors, and increasing his degree of independence. (Nassar, 2019). The researchers

believe that the inability of auditors to deal with computerized accounting programs affects audit risks and thus is reflected on the quality of auditing.

### **Field study**

First: The field side tool: The field side of the research is based on building and designing a questionnaire form, which is the main tool for the practical side of the research. The questionnaire variables were built according to the Likert five scale, from which five options were available for the research sample within the framework of (strongly agree, agree, neutral, disagree, and strongly disagree).

Second: Designing the components of the field side tool: The questionnaire was divided into two parts:

- Personal information (general data): It deals with the respondent's personal information which consists of (gender, age, and educational qualifications).
- Questionnaire questions: it is a field of research that aims at identifying the relationship and the effect between using ready-made accounting programs and the risks and quality of auditing. The research sample consists of a group of auditors in the Kurdistan Region - Iraq. This section includes a set of (32) paragraphs, divided into two main variables:

The first variable is entitled: The auditors are aware of dealing with computerized accounting programs. When analyzing, it has the symbol (X) and it consisted of (15) paragraphs symbolized by the following (X1, X2, X15).

The second variable is “the auditors are aware of dealing with computerized accounting programs reduces audit risks and leads to an increase in audit quality. When analyzing, the symbol (Z) was inserted consisting of (17) paragraphs symbolized by the following (Z1, Z2, ..., Z17).

### Third: Likert scale

In the context of statistical processing of the questionnaire data, the five-point Likert scale was used. The study questionnaire was based on the five-point Likert scale (strongly agree & strongly disagree). There are five categories to which arithmetic means belong. The category is determined by finding the length of the range ( $5-1 = 4$ ) and then dividing the range by the number of categories (5), i.e. ( $4/5 = 0.80$ ). Then (0.80) is added to the lower limit of scale (1) or subtracted from the upper limit of scale (5), and the categories are as follows: (Dewberry, 2004; Budur, 2020)

- 1.00-1.80 too low
- 1.81-2.60 Low
- 2.61-3.40 moderate
- 3.41-4.20 High
- 4.21- 5.00 very high

### Fourth: Information Analysis and Interpretation of Results:

#### • Analysis of the personal information of the research sample:

This paragraph deals with the data related to the respondents to the questionnaire questions in order to ensure the reliability of their answers, and raise confidence in the results obtained. This consists of three paragraphs, where the characteristics of the research sample and the data of the respondent can be clarified through Table No. (1):

Table (1): Personal Data

Variables	Level of variables	No.	%
	Arab Institute for Accounting and Auditing	16	21.1

	Higher Institute of Accounting and Financial Studies	2	2.6
	Higher Institute of Chartered Accountants in Kurdistan Region / Erbil	58	76.3
Years of experience	less than 10	59	77.6
	from 10-15	8	10.5
	from 15-20	5	6.6
	From 20 and above	4	5.3
	less than 4	19	25
	6- 4	27	35.5
	7-10	11	14.5
	More than 10	19	25
<b>Total</b>	Arab Institute for Accounting and Auditing	<b>76</b>	<b>100</b>

Through Table No. (1) we note that the largest percentage of the research sample are those who have professional qualifications from the Higher Institute of Certified Accountants in the Kurdistan Region / Erbil, who are (58) individuals, at a rate of (76.3%). As for those who have professional qualifications from (The Arab Institute for Accounting and Auditing), which is the highest percentage of those who have professional certificates from the Higher Institute of Certified Accountants, are (16) individuals, and at a rate of (21.1%). We note that the majority of the research sample members are those with practical experience (less than 10 years) with (77.6%). The least experience was (from 20 years and above), with (5.3%). We note that the highest percentage of the research sample in the sample are those who take less than 4 courses and take more than 10 courses, who are (19) individuals, at (25%).

• **Presentation, analysis and discussion of information related to the variables of the questionnaire:**

After calculating the repetitions, percentages, and relative importance of the responses of the research sample members to determine the strength of each paragraph in the variable and its importance in relation to the variable, and after calculating the arithmetic mean to determine the direction of the paragraphs, the standard deviation was found to display the dispersion in the responses of the research sample in each paragraph.

The responses were interpreted in light of the relative importance and the arithmetic mean. Thus, the paragraph is positive, indicating that the sample members will agree on its content, if the relative importance is greater than (60%), and the arithmetic mean is greater than the hypothetical mean, which is equal to (3 hypothetical mean = (5) Strongly Agree 4 + Agree + 3 Neutral + 2 Disagree 1 + Strongly Disagree)/3 =). The paragraphs are negative, indicating that the sample members will disagree with content, if the relative importance is less than (60%), and the arithmetic mean is less than the hypothetical mean (Budur et al., 2023). This applies to all paragraphs of the questionnaire. From this perspective, this part deals with a presentation or analysis of information related to the research variables, which are:

**• Presentation, analysis and discussion of the results related to the paragraphs of the first variable (the auditors are aware of dealing with computerized accounting programs):**

After calculating the repetitions, percentages, arithmetic mean, relative importance, order and direction of paragraphs for the responses of the research sample to the first variable (the auditors are aware of dealing with computerized accounting programs), the descriptive data of the answers of the study sample related to the variable showed that the auditors are aware of dealing with computerized accounting programs (Jaf et al., 2019).



Table (2): Arithmetic means, standard deviations, and coefficient of variation for variable paragraphs. The auditors are aware of dealing with computerized accounting programs

The Impact of Auditors' Use of Prepackaged Accounting Procedures on Audit Risk and Audit Quality: An Analytical Study of a Sample of Auditor Opinions in the Kurdistan Region of Iraq

Axis	Variation coefficient	Standard deviation	Average	Strongly agree	Agree	Sometimes	Disagree	Strongly disagree	Level of significance
				No.	No.	No.	No.	No.	
				%	%	%	%	%	
X1	13.28	0.58	4.36	30	44	1	1	0	87.11
				39.6	57.9	1.3	1.3	0	
X2	11.15	0.49	4.41	31	44	1	0	0	88.16
				40.8	57.9	1.3	0	0	
X3	14.06	0.6	4.29	28	42	6	0	0	85.79
				36.8	55.3	7.9	0	0	
X4	12.35	0.53	4.28	24	49	3	0	0	85.53
				31.6	64.5	3.9	0	0	
X5	13.13	0.57	4.32	28	44	4	0	0	86.32
				36.8	57.9	5.3	0	0	
X6	13.31	0.58	4.37	32	40	4	0	0	87.37
				42.1	52.6	5.3	0	0	
X7	15.09	0.65	4.3	28	45	2	0	1	86.05
				36.8	59.2	2.6	0	1.3	
X8	13.82	0.58	4.18	20	51	4	1	0	83.68
				26.3	67.1	5.3	1.3	0	
X9	14.12	0.61	4.3	28	44	3	1	0	86.05
				36.8	57.9	3.9	1.3	0	
X10	13.12	0.55	4.17	19	51	6	0	0	83.42
				25	67.1	7.9	0	0	
X11	12.62	0.53	4.24	22	50	4	0	0	84.74
				28.9	65.8	5.3	0	0	
X12	13.95	0.59	4.2	21	50	4	1	0	83.95
				27.6	65.8	5.3	1.3	0	
X13	14.26	0.6	4.24	24	47	4	1	0	84.74
				31.6	61.8	5.3	1.3	0	
X14	12.35	0.53	4.28	24	49	3	0	0	85.53
				31.6	64.5	3.9	0	0	
X15	13.73	0.58	4.24	23	49	3	1	0	84.74
				30.3	64.5	3.9	1.3	0	
Total	6.78	0.29	4.28	382	700	51	6	1	
				33.5	61.4	4.5	0.5	0.1	

Weighted average description: (1 - 1.8 very low, 1.81 - 2.6 low, 2.61 - 3.40 medium, 3.41 - 4.20 high, 4.21 - 5 very high)

The data in Table (2), which includes the arithmetic means, standard deviations, coefficient of variation, and percentage of agreement for each paragraph interrelated to the first variable, make it abundantly evident that the auditors are knowledgeable of how to work with computerized accounting systems. The average value of arithmetic mean for this variable was 4.28, its standard deviation was 0.29, coefficient of variation was 6.78%, relative significance was 85.54%, and overall trend was towards (agree). It was found that the arithmetic mean of this variable at the aggregate level was higher than the hypothetical arithmetic mean of the scale (3). This indicated that the research community members agreed that the auditors' awareness in dealing with computerized accounting programs was of great importance by (94.9%) at the level of (strongly agreed and agreed), according to their point of view. Also, (4.5%) of the research sample members were not sure of this, and (0.6%) at the level of (I disagree or strongly disagree). As for each question separately within this variable, its explanation can be summarized in the following.

As for the paragraph (X2), which deals with (the auditors have the awareness to identify the use of computerized accounting programs), shows the highest value of the arithmetic mean is (4.41). This indicates that it is greater than the hypothetical arithmetic mean of scale (3), which leads to the fact that it is agreed upon. As for the standard deviation, it is (0.49) with the coefficient of variation of (11.15%). This paragraph indicates that (98.7%) is at the level of (agree and strongly agree) of the responses of the research sample members. Also, (1.3%) of the respondents are not sure of this. As for the paragraph (X1), that deals with (the auditors have professional qualifications in the field of using computerized accounting programs), has the highest value followed by the paragraph (X2). The value of (4.36) for the arithmetic mean indicates that the

research sample agree which is greater than the hypothetical arithmetic mean of scale (3). The standard deviation value was (0.58) and the coefficient of variation was (13.28%). This paragraph indicated that (97.4%) was at the level of (agree and strongly agree) according to their point of view, and (1.3%) of the research sample was not sure. (1.3%) was at the level of (strongly disagree and disagree). Thus, this went for the other paragraphs in the same order as the previous two paragraphs, in light of the highest ratio of the arithmetic mean to the lowest ratio, as well as the standard deviation and coefficient of variation. There was agreement on it in all these paragraphs.

• **Presentation, analysis and discussion of the results related to the paragraphs of the second variable:**

The descriptive data of the answers of the study sample related to the second variable (the auditors are aware of dealing with computerized accounting programs reduces audit risks and leads to an increase in audit quality)

Table (3): Arithmetic means, standard deviations, and coefficient of variation for variable paragraphs. The auditors are aware of dealing with computerized accounting programs reduces audit risks and leads to an increase in audit quality.

Axis	Variation coefficient	Standard deviation	Average	Strongly agree	Agree	Sometimes	Disagree	Strongly disagree	Level of significance
				No.	No.	No.	No.	No.	
				%	%	%	%	%	
Z1	12.3	0.54	4.41	33	41	2	0	0	88.16
				43.4	53.9	2.6	0	0	
Z2	10.93	0.47	4.34	26	50	0	0	0	86.84
				34.2	65.8	0	0	0	
Z3	10.99	0.48	4.36	27	49	0	0	0	87.11
				35.5	64.5	0	0	0	

The Impact of Auditors' Use of Prepackaged Accounting Procedures on Audit Risk and Audit Quality: An Analytical Study of a Sample of Auditor Opinions in the Kurdistan Region of Iraq

Z4	11.04	0.48	4.37	28	48	0	0	0	87.37
				36.8	63.2	0	0	0	
Z5	15.24	0.67	4.37	33	40	2	0	1	87.37
				43.4	52.6	2.6	0	1.3	
Z6	11.48	0.5	4.33	26	49	1	0	0	86.58
				34.2	64.5	1.3	0	0	
Z7	11.6	0.51	4.36	28	47	1	0	0	87.11
				36.8	61.8	1.3	0	0	
Z8	10.99	0.48	4.36	27	49	0	0	0	87.11
				35.5	64.5	0	0	0	
Z9	10.74	0.46	4.24	19	56	1	0	0	84.74
				25	73.7	1.3	0	0	
Z10	15.24	0.67	4.37	33	40	2	0	1	87.37
				43.4	52.6	2.6	0	1.3	
Z11	14.12	0.61	4.3	26	49	0	0	1	86.05
				34.2	64.5	0	0	1.3	
Z12	11.18	0.5	4.45	34	42	0	0	0	88.95
				44.7	55.3	0	0	0	
Z13	11.55	0.5	4.34	27	48	1	0	0	86.84
				35.5	63.2	1.3	0	0	
Z14	15.69	0.69	4.38	35	37	3	0	1	87.63
				46.1	48.7	3.9	0	1.3	
Z15	14.73	0.64	4.34	30	44	1	0	1	86.84
				39.5	57.9	1.3	0	1.3	
Z16	15.16	0.68	4.47	41	32	2	0	1	89.47
				53.9	42.2	2.6	0	1.3	
Z17	12.3	0.55	4.46	37	37	2	0	0	89.21
				48.7	48.7	2.6	0	0	
Total	4.81	0.29	4.37	510	758	18	0	6	87.34
				39.4	58.7	1.4	0	0.5	
Weighted average description: (1 - 1.8 very low, 1.81 - 2.6 low, 2.61 - 3.40 medium, 3.41 - 4.20 high, 4.21 - 5 very high)									

It becomes clear from Table (3) that the arithmetic means, standard deviations, coefficient of variation and agreement ratio for all paragraphs related to the second variable (the auditors' awareness in dealing with computerized accounting programs reduces audit risks and leads to an increase in audit quality), and the value of the arithmetic mean at the general level for this variable reached up to (4.37), the standard deviation to (0.29) and the coefficient of variation (4.81%). The relative importance of this variable is equal to (87.34%), and the general trend of this variable as a whole towards (agree). It was found that the arithmetic mean at the general level in this variable is greater than the hypothetical arithmetic mean of the scale (3). This indicates that the research community members agree that the auditors are aware of dealing with computerized accounting programs which reduces audit risks and leads to an increase in audit quality of great importance by (98.1%) at the level of (strongly agreed and agreed), according to their point of view. Also, (1.4%) of the research sample members are not sure of this, and (0.5%) is at the level of (I disagree or strongly disagree). As for each question separately within this variable, its explanation can be summarized in the following.

With regard to paragraph (Z16), which deals with the use of computerized accounting programs provides the automated processing system with techniques that help detect errors during processing and gives auditors more accuracy. This reduces audit risks and increases the quality of the audit process. The highest value of the arithmetic mean is (4.47), which indicates that it is greater than the hypothetical arithmetic mean of scale (3). This means that it is agreed upon. As for the standard deviation, it is (0.68) and the coefficient of variation is (15.16%). This paragraph indicates that (96.1%) is at the level of (strongly agree and agree) of the

responses of the research sample members, whereas (2.6%) of the research sample members are not sure of this, and (1.3%) is at the level of (disagree and strongly disagree). As for paragraph (Z17), which deals with (the knowledge of auditors to determine the procedures of the electronic audit process reduces audit risks and increases the quality of the audit process), is the highest value after paragraph (Z16), showing that the value of the arithmetic mean is (4.46). This means that the research sample agrees and it is greater than the hypothetical arithmetic mean of the scale (3). The standard deviation value is (0.55) and the coefficient of variation is (12.3%). This paragraph indicates that (97.4%) is at the level of (agree and strongly agree) according to their point of view, and (2.6%) of the research sample members are not sure of that. Thus, this goes for the other paragraphs, in the same order as the previous two paragraphs, in light of the highest ratio of the arithmetic mean to the lowest ratio. The standard deviation and the coefficient of variation must also be indicated, as there is agreement on them in all these paragraphs.

### Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is applied to verify the factor structure for a set of observed variables (the load factor). Composite reliability (CR) is evaluated (Budur et al., 2023). Discriminant validity is also evaluated by HTMT analysis. The results are presented in Table (4).

Table (4): Scale items, their sources, and confirmatory factor analysis results

(Factor loading	( Scale Items)
	<b>Auditors are aware of dealing with computerized accounting programs</b>
	<b>(AVE = .62, CR = .96, <math>\alpha</math> = .96, Skew. = -0.565, Kurt.= 0.344)</b>

0.823	X1
0.852	X2
0.808	X3
0.822	X4
0.803	X5
0.754	X6
0.75	X7
0.795	X8
0.813	X9
0.871	X10
0.77	X11
0.829	X12
0.793	X13
0.521	X14
0.769	X15
Auditors are aware of dealing with computerized accounting programs reduces audit risks and leads to an increase in audit quality	
<b>(AVE = .63, CR = .97, <math>\alpha</math> = .97, Skew. = .002, Kurt.= -.292)</b>	
0.838	Z1
0.86	Z2
0.83	Z3
0.813	Z4
0.692	Z5
0.824	Z6
0.838	Z7
0.835	Z8



0.842	Z9
0.721	Z10
0.738	Z11
0.794	Z12
0.806	Z13
0.698	Z14
0.734	Z15
0.75	Z16
0.834	Z17

The normal distribution can be checked by measures of skewness and kurtosis. They can be considered as two measures to indicate the degree of normal distribution of the data. Skewness indicates the realization of the bell shape, and the symmetry of the curve around the mean. Positive skewness means that most of the results are less than the average, and vice versa in the case of negative skewness. As for the positive kurtosis, it indicates the direction of the curve towards a higher peak and vice versa in the case of negative kurtosis (e.g., Bagozzi and Yi, 1988; Fornell and Larcker, 1981; Hair et al., 2010, Field A., 2013). (Panuwatwanich K., Stewart R.A., 2008; Jaf et al., 2011). Skewness and kurtosis indices indicate a normal distribution when they fall within the range (-2 to +2). In this study, the skewness values ranged from (-0.565, and 0.002) and the kurtosis values ranged between (-0.292, and 0.344). These results indicate that the distribution of the data used in this study can be considered normal as shown in Table (3.4). In CFA, greater factor loading or saturation estimates confirm that indices correlate closely with their associated constructs and are one indicator of construct validity (Hair et al., 2010; Sabir, 2022). These results indicate that all

factor loading or saturation is greater than 0.50 and is statistically significant. (Bollen, 2014). The average variance extraction (AVE) was also greater than 0.50. Collectively, these results revealed that convergent validity was achieved (e.g, Fornell and Larcker, 1981; Sabir et al., 2011). Discriminant validity was verified by Fornell and Larcker's method (1981).

The AVE values show that the auditors are aware of dealing with computerized accounting programs, which reduces audit risk and leads to an increase in audit quality. They are greater than the square correlation between the related latent structures, as it exists in (Karatepe and Choubtarash, 2014, and Nunkoo et al. 2013). The CFA provides a method for assessing differentiation validity according to (Hair et al (2010) which is the comparison of the mean values of the (AVE). Passing this test provides good evidence of the validity of the variance (Hair et al., 2010). The convergent validity of the CFA score must be supported by ( $\alpha$ ), construction reliability, and AVE. (Hair et al., 2010). All factor loading or saturation is significant ( $\rho < 0.001$ ). In addition, construct reliability ratings recommended by Hair et al. and Sekaran and Bougie, 2013 (2010), ranging from 0.96 to 0.97, and exceeding the critical value of (0.7), indicate that they are acceptable. In short, the validity of variance appears to have been achieved. All scales were reliable because all composite reliability are ( $> 0.60$ ) in addition to alpha coefficient which was ( $> 0.70$ ). (Bagozzi and Yi, 1988; Hair et al., 2010). The results for the reliability scores are shown in Table 3.4, whereas the summary statistics and correlations between the variables are shown in Table 3.5.

Table (5): The results of the correlations between the study variables

Z	X	
	1	X

1	.216**	Z
---	--------	---

**Table 6: HTMT Analysis**

Z	X	
		X
	<b>0.607</b>	Z

Translation is too long to be saved

Table (6) shows that the HTMT values are less than 0.85 according to Kline (2011). HTMT values less than 0.85 indicate the validity of the variance between the reflective structures. Accordingly, there are no collinearity problems between the latent construct (multiple collinearity) and there are overlapping elements of respondent perceptions in the affected constructs. Based on the results of Tables (5) and (6) above, the appropriate final model is shown in Figure (7).

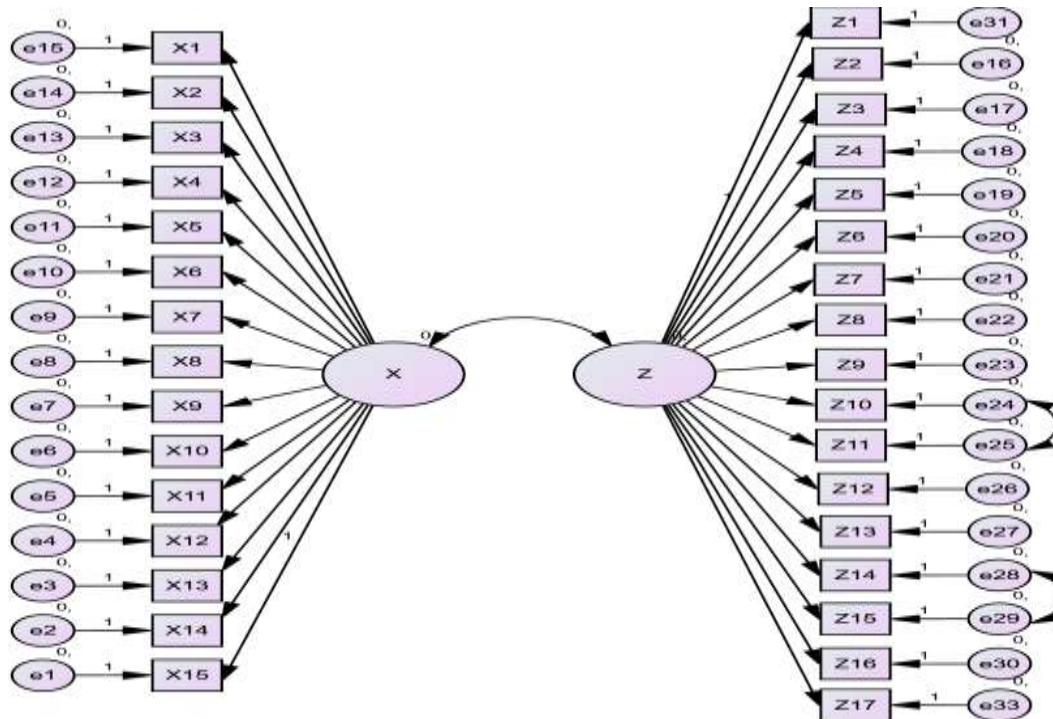


Figure (7): the best appropriate CFA model

## Indicators of model matching data

These indicators are of great importance in determining the extent to which the hypothetical model matches the data related to the phenomenon under study. In the following explanation, we will address the key indicators adopted: the chi-square indicator, the standard chi-square indicator (relative). ( $\chi^2/\text{df}$ ) Root mean square error of approximation, comparative fit index, Incremental-fit index, and Tucker-Lewis index. follows:

Table (8): Results of model conformance indicators

Model	IFI	TLI	CFI	$\chi^2/\text{df}$	Level of significance	$\chi^2$	RMSEA
Model performance	0.973	0.97	0.972	1.086	0.098	500.8	0.04
Standard appropriateness	$\geq 0.90$	$\geq 0.90$	$\geq 0.90$	$\leq 2$	Non-sig.		$\leq 0.08$

Table (8) shows that the value of the chi-square statistic that tests the null hypothesis that the assumed model correspond to the data, the non-significant chi-square test result indicates corresponding the model with the data, and the standard chi-square ( $\chi^2/\text{df}$ ) confirms the chi-square result. The value of RMSEA is less than 0.08 which indicates an excellent model agreement according to (Hu & Bentler, 1999). The CFI value is greater than 0.90, indicating a good corresponding to the model (Hancock and Mueller, 2006). Also, the TLI value is greater than 0.90, which indicates a high good correspondence according to (Sharma et al. 2005), (Bollen, 2014). Due to the result of the existing test, the hypothetical model was relied upon.

## Testing the hypotheses

Structural Equation Modeling (SEM) has been applied to test the hypothesis of this research, as shown in Figure 3.2. The hypothesis of the study states that “there is a relationship and impact of auditors’ use of ready-made accounting programs on audit risks and quality in the Kurdistan Region.

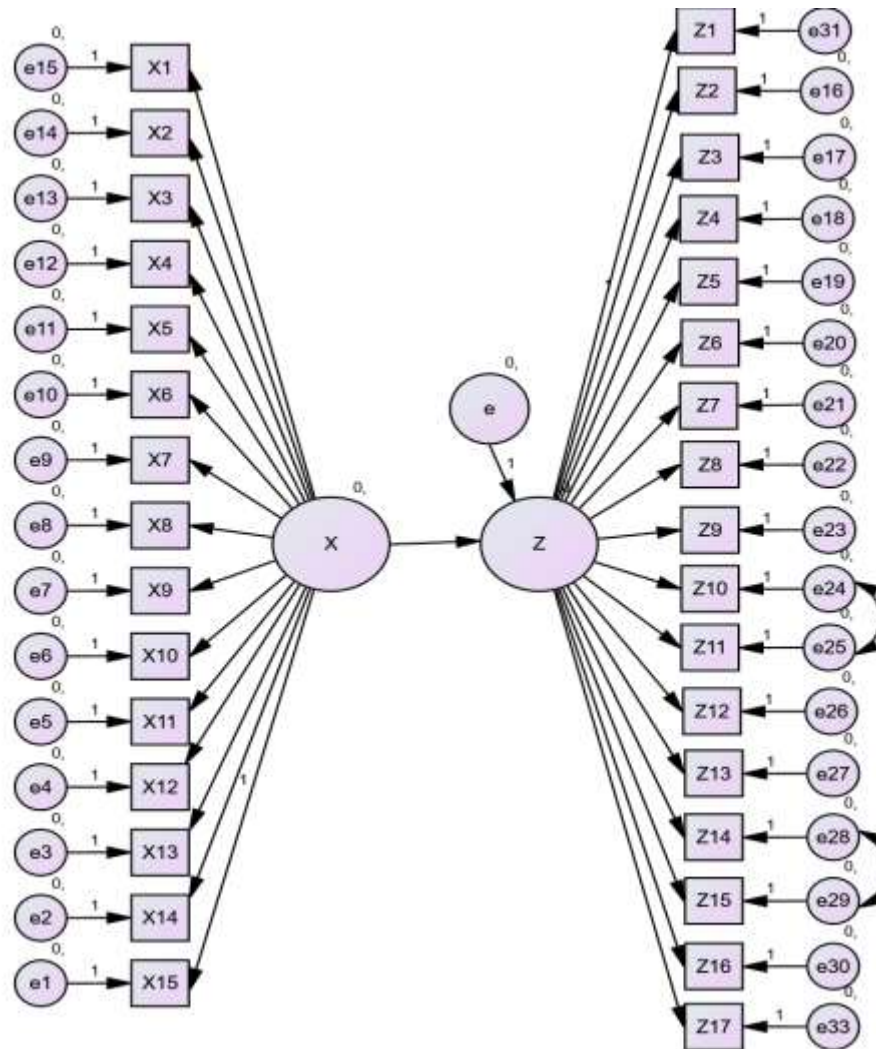


Figure (9): SEM model for testing the hypothesis

The hypothesis of the study was tested, which states that "there is a relationship and impact on audit risks and quality by using ready-made accounting programs." The results are shown in Table (10):

Table (10): Weighted Regression Structural Equation Model (SEM)

$R^2$	P	C.R.	S.E.	Evaluation
0.37	***	4.244	0.149	0.632

F2 ← F1

**Note: S.E. is the standard error of the weighted regression, C.R. is the critical ratio, P is the significant level**

Table (10) shows using ready-made accounting programs and their impact on audit risk and quality. The critical ratio value is greater than 2 and the test significant value (\*\*\*) which is less than 0.05. This indicates the significance of the level (Byrne, 2013). The relationship between using ready-made accounting program and audit risk and quality is a strong, positive, and significant relationship as the value of the correlation is equal to 0.607, as shown in the above table. (Evans, 1996). Accordingly, it is possible to accept the hypothesis of the study, which states that "there is a relationship and impact on audit risks and quality in the Kurdistan Region by using ready-made accounting programs". The general model supports the measurement model according to these criteria given in the table above. The magnitude of this effect is 0.632. Employing ready-made accounting programs by auditors shows that 37% of the variance lie in audit risk and quality, as the value of  $R^2$  is 0.37.

## Conclusions and Recommendations

### First: Conclusions:

In light of the above analysis, the following conclusions have been reached:

1. The awareness of dealing with computerized accounting programs by auditors contributes to reducing audit risks.
2. Account auditors have the awareness to know the use of computerized accounting programs.
3. Professional qualification is available to auditors in the use of accounting programs.

### Second: Recommendations:

Based on the results that have been reached from the practical side of the research, a recommendation has been reached to take courses and seminars for accounting programs and how to audit them.

## Reference

1. Abu Nassar, A, M. (2019) *Factors Affecting Audit Fees and Their Reflection on Audit Quality: An Applied Study for Public Shareholding Industrial Companies Listed on the Amman Stock Exchange*. Master Thesis, Amman, Jordan.
2. Bollen K, A. (2014). *Structural equations with latent variables*. John Wiley & Sons, New York.
3. Brown, T. A. (2015). *Confirmatory factor analysis for applied research*. (2<sup>nd</sup> ed.). The Guilford Press.
4. Budur, T., Abdullah Rashid, C., & Poturak, M. (2018). Students perceptions on university selection, decision making process: A case study in Kurdistan Region of Iraq. *International Journal of Social Sciences & Educational Studies*, 5(1), 133-144.



5. Budur, T. (2020). The role of online teaching tools on the perception of the students during the lockdown of Covid-19. *International Journal of Social Sciences & Educational Studies*, 7(3), 178-190.
6. Budur, T., Demirer, H., & Rashid, C. A. (2023). The effects of knowledge sharing on innovative behaviours of academicians; mediating effect of innovative organization culture and quality of work life. *Journal of Applied Research in Higher Education*.
7. Budur, T., Abdullah, H., Rashid, C. A., & Demirer, H. (2023). Connection Between Knowledge Management Processes and Sustainability at the Higher Education Institutions.
8. Byrne, B. M. (2013). *Structural equation modelling with AMOS: Basic concepts, applications, and programming*. Routledge.
9. Dewberry, C. (2004). *Statistical methods for organizational research: Theory and practice*. Psychology Press.
10. Evans, J. D. (1996). *Straightforward statistics for the behavioural sciences*. Pacific Grove, CA: Brooks/Cole Publishing
11. Firdous, S. (2019) *The Impact of Using Electronic Accounting Programs on the Quality of Accounting Information*. Master Thesis, Kasdi Merbah University, Ouargla - Algeria.
12. Hair J F, Ringle C M, Sarstedt M. (2011) PLS-SEM: indeed a silver bullet. *The Journal of Marketing Theory and Practice*,; 19(2):p.139–152.
13. Hancock, Gregory R. and Mueller, Ralph O. (2006). *Structural Equation Modeling*, Information Age Publishing, United States of America.
14. Hu, L., Bentler, P.M. (1999) *Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives*" SEM vol. 6(1), pp. 1-55.
15. Ismael, B. A., Ahmed, R. A., Yaba, J. A., Hamawandy, N. M., Abdullah, R., Jamil, D. A., & Sulaiman, A. A. (2020). The effects of computerized accounting system on



- auditing process: a case study from northern Iraq. *Solid State Technology*, 63(5), 8564-8578.
16. Jaf, R. A., Sabr, S. A., & Nader, K. A. (2015). Impact of management accounting techniques on achieve competitive advantage. *Research Journal of Finance and Accounting*, 6(4), 84-99.
  17. Jaf, R. A., Shatnawi, H., & Al-Kake, F. (2019). The impact of strategic analysis for operating income on the performance evaluation case study on Baghdad soft drink company. In *International Conference on Accounting, Business, Economics and Politics, ICABEP* (pp. 414-423).
  18. Karim, A. H. M., AL-Shatnawi, H. M., Jaf, R. A. S., Al-Kake, F., & Hamawandy, N. M. (2020). The role of adopting strategic audit to improve audit quality. *management*, 7(11), 2020.
  19. Kline, R. B. (2011). *Principles and practice of structural equation modeling*. Guilford Publications Press.
  20. MacCallum, R.C., Browne, M.W., and Sugawara, H., M. (1996) *Power Analysis and Determination of Sample Size for Covariance Structure Modeling*,” *Psychological Methods*, 1 (2), 130-49.
  21. Naasan, S, O. (2018) *Factors affecting the quality of auditing from the point of view of external auditors*, Master’s thesis, Islamic University of Gaza, Palestine.
  22. Noori, T. M., & Rashid, C. A. (2017). EXTERNAL AUDITOR’S RESPONSIBILITY REGARDYING TO GOING CONCERN ASSUMPTION IN HIS/HERS REPORT: CASE OF KURDISTAN REGION/IRAQ. *International Journal of Research-Granthaalayah*, 5(5), 138-152.
  23. Rashid, C. A. (2017). The Importance of Audit Procedure in Collecting Audit Evidence/Case of Kurdistan Region/Iraq. *International Journal of Social Sciences & Educational Studies*, 4(2), 15.
  24. Rashid, C. A. (2018). Efficiency of financial ratios analysis for evaluating companies’ liquidity. *International Journal of Social Sciences & Educational Studies*, 4(4), 110.
  25. Rashid, C. A. (2019). Pricing policy and its impact on the profitability. *International Journal of Finance & Banking Studies*, 8(3), 101-108.

26. RASHID, C. A. (2020). Balanced Score Card and Benchmarking as an Accounting Tool to Evaluate Morrison's Performance. *Journal of Global Economics and Business*, 1(3), 59-72.
27. Rashid, C. A., & Sabir Jaf, R. A. (2023). The Role of Accounting Measurement and Disclosure of Social Capital in Improving Quality of Accounting Information. *Iranian Journal of Management Studies*.
28. Sabir, R. A., Xinping, X., & Sabr, S. A. (2011). Using target costing to investigate competitive price. *International Journal of Mechanical and Industrial Engineering*, 5(11), 1397-1404.
29. Sabir, R. A. (2022). The Role of International Financial Reporting Standards (IFRS) to Encourage International Investments in the Kurdistan Region-Iraq: An applied study on a sample of banks listed in the Iraqi Stock Exchange. *Academic Journal of Nawroz University*, 11(1), 30-46.
30. Sabir, R. A. (2022). The effect of cultural values on the policy of income smoothing Applied Research on Sample in Kurdistan region Industrial Companies. *Academic Journal of Nawroz University*, 11(2), 10-22.
31. Sekaran, U. & Bougie, R. (2013) *Research Methods for Business: A Skill-Building Approach*. 6<sup>th</sup> Edition, Wiley, New York.
32. Shaheen, I, T. (2015) The Impact of Audit Risk Assessment on Audit Quality, PhD Thesis, Damascus University, Damascus, Syria.
33. Sharma, S., Sharma, Sharma, A., and Dillon, W, R, (2005) A simulation study to investigate the use of cut off values for assessing model fit in covariance structure models. *Journal of Business Research* 58 935-943.