

## MEN AUDITOR, WOMEN AUDITOR AND AUDIT QUALITY

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**Abstract:** *Many researches on auditor specific characteristic use evidence from psychological researches on the existence of certain sex-based differences amongst individuals. The objective of this study is to see whether indeed there are sex differences in auditor in terms of risk profile, problem solving skill, and independence - three important traits with potential of influencing the auditor judgment and audit quality-as it is not obvious that stereotypical believes about men and women are true or that findings from literature about the general population can be interpreted to the specific context of auditors. Primary data was employed for the study using a sample of 115 auditors, 175 accounting students, 112 management students and 114 nonaccounting and nonmanagement students with independent sample test and mann-whitney u test. The findings suggested there is no sex difference in auditors while overall, there is sex difference in risk profile. It is concluded that there is no sex difference affecting audit quality.*

**Keywords:** Audit quality, gender, risk profile, mathematical problem-solving, independence.

**Abstrak:** Penelitian mengenai karakteristik spesifik auditor dengan menggunakan bukti dari penelitian psikologi tentang perbedaan pria dan wanita menjadi sorotan saat ini. Tujuan penelitian ini adalah untuk membuktikan apakah terdapat perbedaan antara pria dan wanita yang berprofesi sebagai auditor dalam profil risiko, kemampuan menyelesaikan masalah, dan tingkat independensi adalah tiga sifat penting yang berpotensi mempengaruhi penilaian auditor dan kualitas audit. Hal yang menjadi dasar penelitian ini adalah apakah stereotip mengenai perbedaan pria dan wanita adalah fakta dan apakah hasil penelitian mengenai stereotip ini dapat diinterpretasikan juga pada pria dan wanita yang berprofesi sebagai auditor. Jenis data yang digunakan dalam penelitian ini adalah data primer, dengan sampel 115 auditor, 175 murid akuntansi sebagai calon auditor, 112 murid manajemen sebagai jembatan antara populasi umum dengan auditor, dan 114 murid yang bukan berasal dari akuntansi maupun manajemen sebagai populasi umum. Penelitian ini menggunakan tes *independent sample* dan mann-whitney. Hasil penelitian menunjukkan bahwa terdapat perbedaan antara pria dan wanita secara keseluruhan dalam profil risiko namun tidak terdapat perbedaan antara pria dan wanita yang berprofesi sebagai auditor. Dengan demikian, dapat disimpulkan bahwa tidak terdapat perbedaan antara pria dan wanita yang berprofesi sebagai auditor yang dapat mempengaruhi kualitas audit.

**Kata kunci:** Kualitas audit, jenis kelamin, profil risiko, penyelesaian masalah matematis, independensi.

## INTRODUCTION

Struggle for gender equality has been done for many years, initiated by Mary Wollstonecraft. In Indonesia, feminism is initiated by Raden Ajeng Kartini in 1904. Since then, women's rights have been improved and number of great women has increased, especially in education and occupation. However, women's struggle for equality and equity continues. Most people do not believe in women's ability especially when women get high position in certain workplaces, including in auditing. Research indicates that many clients do not wish to be audited by women (and that 'the client' is used as a rhetoric device that justifies many dimensions of organizational processes (Anderson-Gough et al. 2005, Grey 1998 in Hardies 2011, Kornberger et al. 2010).

As auditing is inherently a judgment and decision-making process, audit quality (i.e. the probability that, within reasonable limits, the auditor discovers and reports a material misstatement in the financial statements) depends on the auditor's judgment and decision-making qualities (Knechel 2000). The quality of an auditor's judgment and decision making generally depends on certain auditor characteristics. The probability of discovering a material misstatement depends generally on the auditor's technical expertise, problem-solving skill, risk profile, and experience while probability of reporting a material misstatement depends on its discovery, the auditor's risk profile, and the auditor's independence from the client (Hardies et al. 2009a).

Based on psychological literature, recently some researchers (Barbosa et al. 2010 in Hardies et al. 2011, Breesch and Branson 2009, Chin and Chi 2008, Chung and Monroe 2001 in Hardies et al. 2009a, Gold et al. 2009, Ittonen and Peni 2009 in Hardies et al. 2009a, Ittonen et al. 2010 in Hardies et al. 2011, Jones 2009, Niskanen et al. 2010, O'Donnell and Johnson 2001 in Hardies et al. 2011) have stated that there are sex differences in personal auditor characteristics (e.g. riskaversion) and it

leads to sex-differentiated audit judgments and decisions. Stereotypical beliefs which relate personal characteristics to sex (therefore men are rather masculine and women rather feminine) suggest that sex differences exist in the areas of risk profile, mathematical problem-solving, and independence.

Related to risk profile, most studies report women to be more risk-averse than men (e.g. Dohmen et al. 2009), even when these women has been a financial professional (Olsen and Cox 2001 in Hardies et al. 2009a). Math is believed to be 'a boy thing' (Rowley et al. 2007 in Hardies et al. 2009a). If a kid is asked to draw who a mathematician is, he will draw a man. This indicates what kind of perception the society has on sex difference although meta-analyses show that sex differences in mathematical performances are somewhere between non-existent and almost non-existent (Hyde and Linn 2006). However, on contrary, most studies (e.g. Penner and Paret 2008) find men to be somewhat better mathematical problem solvers than women. In matter of independence, there is also evidence that suggests that men and women differ in determinants of independence, i.e. in ethical behaviour, empathy, and proneness to cognitive biases. Women appear to be more ethical (White 1999), more empathetic (Baron-Cohen 2004) and less prone to cognitive biases (especially overconfidence (Dahlbom 2011).

Analyzing sex differences in those areas is an interesting field of research since nowadays there are many researches discussing sex differences in traits (e.g. Pawlowski et al. 2008, Frederick 2005). The conclusions of the findings may have important implications on the auditor choice by companies, the assignment of personnel to audit tasks, and quality control issues (Hardies et al. 2009a). However, before expanding this line of research, it is required to control for a potential major bias as sex differences that may be present in the general population are also present between women and men who are auditors. It is important to be sure that conclusions from psychological research about

the average men and women (about aspects that potentially influence audit quality) are also applicable for auditors.

Motivation of this research is to test whether men and women overall, auditors, accounting, management, nonaccounting and nonmanagement are different in audit quality. Purpose of this research is to obtain empirical evidence about the difference between men and women overall, auditors, accounting, management, and nonaccounting and nonmanagement in audit quality.

This research is proposed with following systematic review. First is introduction which explains research background, research problem, research objective and contribution, and systematic review. Second is theoretical framework and hypothesis development which explains theory and previous research about difference between men and women overall, auditors, accounting, management, and non-accounting and nonmanagement in audit quality, and hypothesis development. Third is research method which explains sample selection, operational definition and data collection technique. Fourth is the result which consists of descriptive statistics, result and its interpretation. Last is closing which consists of conclusion, limitation, and recommendation.

There is significant difference between sex and gender. According to WHO (World Health Organization), sex refers to the biological and physiological difference between men and women while gender refers to the socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women. Furthermore, women and men are sex categories while masculine and feminine are gender categories. This is what West and Zimmerman (1987) meant by '*doing gender*' (i.e. behavior emerged from learning process, not enacted in one self). Sex, other than gender, becomes scope of this research. Researchers have proven sex differences in general in many ways. Despite the amount of research on the effects of gender in general, there is surprisingly little work

examining whether behavioral differences between female and male auditors exist in terms of audit quality.

In the 1900s, audit quality is defined as the market-assessed joint probability that a given auditor will both detect material misstatements in the client's financial statements and report the material misstatements (DeAngelo 1981 in Hardies et al. 2009a). More recently however (e.g. Knechel 2007 in Hardies et al. 2009a), audit quality has been defined in terms of the level of assurance that the auditor obtains. Different studies have been done on measurement of audit quality that they can be divided into six different groups (Zerni 2009): (1) direct (financial reporting compliance with GAAP, quality control review, bankruptcy, desk review and SEC performance) and indirect measures (audit size, auditortenure, industry expertise, audit fees, economic dependence, reputation and cost of capital); (2) studies based on source of differentiation (institutional differences across countries (cross country differences), differences across individual practice offices (cross-city differences) and differences due to industry specialization (Francis 2004 in Hardies et al. 2009a); (3) studies rely on input (e.g. auditor perception and compulsory audit tendering), process (e.g. audit environment, process performance, earning forecast and earning management), and output (e.g. audit opinion); (4) organizational aspects (audit firm and audit team); (5) behavioral perspective; (6) different perceptions of audit quality (perceptions of shareholders, auditors, analysts, and audit committee chair person, preparers, clients, federal inspectors and financial journalist).

Audit quality is not only primarily about auditing standards but also about the quality of people, their training and ethical standards. The FRC (Financial Reporting Council) argues that the skills, personal qualities of audit partners and staff, and the training given to audit personnel are important factors in determining audit quality. This view is what is called as behavioral perspective.

The objective of behavioral research in auditing is to describe, explain, and improve the auditors' professional judgments and their information processing. Becker (1967) distinguishes behavioral accounting research from other forms of accounting research by indicating that behavioral accounting research applies theories and methodologies from behavioral sciences to examine the interface between accounting information and its processes and human.

Measuring audit by seeing the personal auditor characteristics is behavioral research in auditing. It is inevitable that auditing is fully based on judgment and decision-making process. The quality of decision and judgment taken determines audit quality. The quality of decision and judgment is dependent upon personal auditor characteristics.

Church et al. (2008) in Hardies et al. (2009a) advocate that researchers investigate whether there is a systematic relationship between individual characteristics (e.g. sex, age, personality and appearance) and the quality of audit reporting. Systematic associations between, for example, sex and one or more personal auditor characteristics enable an observer to predict auditor characteristics more accurately than an observer who ignores auditor's sex. If there are indeed significant sex differences in personal auditor characteristics, it is reasonable to expect that an auditor's sex is systematically associated with audit quality. Therefore, sex difference results in audit quality difference.

There are a number of personal auditor characteristics in sex affecting audit quality. For example, risk profile (e.g. Farmer 1993 in Hardies et al. 2009a, Van Nieuw Amerongen 2007 in Hardies et al. 2009a), problem-solving skill (e.g. Bierstaker and Wright 2001 in Hardies et al. 2009, Libby and Tan 1992 in Hardies et al. 2009a), and independence (e.g. Baotham 2009, Suyono 2012).

In audit scope, risk attitude is used for many important decisions, e.g. sample size selection. Auditors who are risk averse will set a lower materiality threshold and select larger

sample. As a result, larger number of material misstatement will be detected. However, the fact that women tend to be more risk averse could indicate higher audit quality. If men and women select larger or smaller samples (because of differences in risk propensity), the probability that material misstatements will be detected might be affected by the auditor's sex. As women as auditors tend to be more risk-averse, women as auditors might be expected to set a lower materiality level and select larger samples than men as auditors. This could result in a higher number of material misstatements detected and reported by women as auditors than by men as auditors.

Plenty of experiments on risk taking have shown that women are more risk-averse than men in a wide variety of risk profile domains. Women are less likely to donate blood (Bani and Giussani 2010), more risk-averse when investing (Felton et al. 2002), even when they are financial professionals (Olsen and Cox 2001). Nevertheless, in a recent paper, Gysler et al. (2002) show that an increase in knowledge in a financial decision making context balances gender differences in risk attitude. In specific context of auditors, Hardies et al. (2009a) found that there is sex difference in risk profile. On contrary, when multivariate framework is used, there is, indeed, significant sex difference in risk profile. The same situation goes to Mgbame et al. (2012), Breesch and Banson (2009) and Niessen and Ruenzi (2005) where there is significant sex differences in risk profile on auditors.

If in the population of auditors there would be, for example, a sex difference in mathematical problem-solving skill, it might be that men or women as auditors discover more potential misstatements than women or men as auditors. For example, due to higher mathematical problem-solving skill, an auditor can find material misstatement in client's financial statement.

In an audit context the focus should be on mathematical problem solving since the understanding of financial statement matters and audit reports is most likely to be influenced

by logico-mathematical abilities (Anandarajan et al. 2008 in Hardies et al. 2009a). Recent years, research has repeatedly reported sex differences in mathematics performance on a number of standardised mathematics tests such as the Scholastic Assessment Test-Mathematics (SAT-M) (e.g. Gallagher 1990, 1992 in Zhu 2007). However, the results are not consistent. Majority of studies found that men are better mathematical problem-solver than women (e.g. Benbow and Stanley 1980, 1983 in Hardies et al. 2009, Benbow 1988 in Hardies et al. 2009, Gallagher et al. 2000, Royer et al. 1999 in Hardies et al. 2009a) while a research found the opposite (Pajares 1996 in Zhu 2007) due to different selected samples. For auditors, Mgbame et al. (2012) and Libby and Tan (1992) found sex difference in mathematical problem-solving skill while Hardies et al. (2009a) found the reverse.

In relation to independence, sex contributes in two aspects, empathy and cognitive bias. An auditor who has more empathy than others is not capable of issuing bad opinion, such as qualified, disclaimer, or adverse. This produces lower audit quality. Meanwhile, cognitive bias also decreases audit quality. For example, if an auditor is overconfidence, the auditor will overestimate his judgment and miss some material misstatements in client's financial statement.

Concerning independence, two issues are at stake: malevolent behaviour and unconscious behaviour. The real problem of independence, however, is an unconscious lack of independence (Moore et al. 2006). In the context of unconscious behaviour, the primary focus has to be on a priori-assumptions and (cognitive) biases that interfere independent judgment. It is widely known and documented that prior beliefs bias the evaluation of arguments and data. In evaluating new information, people use their background knowledge and use their own schemata in order to fill in absent details (Hardies et al. 2009a). By doing that, their thought patterns can be at fault due to cognitive distortions (i.e. ourthinking is not rational) (Gazzaniga

and Heatherton 2003 in Hardies et al. 2009a). Cognitive biases may, for example, hinder the issuing of a going-concern opinion, even when the auditor is aware of a client's uncertain financial position (Kleinman et al. in press in Hardies et al. 2009a).

Some evidence points out that men and women tend to differ in this unconscious behaviour. Psychological research indicates that men are more likely to suffer from cognitive distortions than women (Chung and Monroe 1998). The study of Chung and Monroe (1998) found evidence indicating that men as students enrolled in a third year undergraduate auditing class displayed confirmation bias, while women as students did not. If this phenomenon is specifically applied to auditors, women as auditors might discover more material misstatements than men as auditors. This situation reveals higher audit quality produced by women as auditors. Especially regarding overconfidence, this sex difference is well-documented (e.g. Dahlbom et al. 2011, Barber and Odean 2001 in Hardies et al. 2009a). The impact of overconfidence describes the tendency of people to believe that their judgment is more accurate than it really is. As a result, overconfidence can create a mismatch between one's confidence in one's own judgments and the real accuracy of these judgments. Because women are less overconfident than men (Barber and Odean 2001, Dahlbom et al. 2011), women as auditors could be expected to be more reluctant than men as auditors when deciding to report a material misstatement. This situation reveals higher audit quality produced by women as auditors.

The second issue that may unconsciously undermine auditor independence is empathy. It is believed that long-term relationships result in increasing empathy between parties. Reduced audit quality would happen undermined when an auditor gets too familiar with a company or long audit tenure (Richard 2006 in Hardies et al. 2009a, Knechel and Vanstraelen 2007 in Hardies et al. 2009a, Jackson et al. 2007 in Hardies et al. 2009a). To ensure auditor independence, PCAOB

issues concept of mandatory rotation of the audit firm or of key personnel.

Scientific evidence from the Empathizing-Systemizing theory (Baron-Cohen 2004, Chapman et al. 2006 in Hardies et al. 2009a, Nettle 2007 in Hardies et al. 2009a) and from the psychological 'Big Five' taxonomy of personality traits (Costa et al. 2001 in Hardies et al. 2009a, Schmitt et al. 2008 in Hardies et al. 2009a) supports that women are more empathetic than men. Women as auditors might therefore get closer more with their clients than men and therefore report less material misstatements and/or issue fewer going-concern disclosures to a client's audit report than men. This statement is contradictory with risk profile assumption which is women as auditors are expected to have higher propensity to issue a going concern opinion than their men counterparts to avoid the risk of legal exposure from audit failure.

Researches in sex difference in independence for auditors reveal inconsistent result. Many researchers imply that there is no difference in independence (Hardies et al. 2009a, Hardies et al. 2009b, Hardies et al. 2010) while Barber and Odean (2001) said the contrary. Moreover, Hardies et al. (2009a) stated that there is difference in conjunctive fallacy and insensitivity in sample size while there are no differences for the other biases.

Hardies' et al. (2009a) use business students as sample because in Europe, business students are soon to be auditors. However, in Indonesia, auditors are part of accounting students and management students are part of business students. Thus, management students are also regarded as this research's sample. Accounting and management students are to compare whether women as auditors are the same as women in general and whether women and men in general are different. If auditors differ from the other population and sex differences are, due to self-selection and/or socialization, not present in the population of auditors this may (to some degree) also be the case in the population of accounting students since auditors

are only a very specific subgroup of (former) accounting students. Indeed it appears that students in fields of economics are not even representative of the population of students, both in terms of their attitudes (e.g. their appraisal of the virtues of the market system (Cipriani et al. 2009 in Hardies et al. 2009a) as in terms of their personal characteristics (e.g. their selfishness Frey and Meier 2003, 2005 in Hardies et al. 2009a), their tolerance to economic risk taking (Sjöberg and Engelberg 2009 in Hardies et al. 2009a). Since this is probably due to self-selection, it can be assumed that accounting students (women and men) are rather similar, as well as management students. Thus sex differences in a population of accounting and management students are expected to be of a magnitude somewhere in between those of the other population and the population of auditors. Accordingly, nonaccounting and nonmanagement students which are undergraduate students are elected to represent other population.

From those stated, hypothesis can be made are:

- H<sub>1</sub> There is difference between women men overall in risk profile as determinant of audit quality
- H<sub>2</sub> There is difference between women men overall in mathematical problem-solving skill as determinant of audit quality
- H<sub>3</sub> There is difference between women men overall in independence as determinant of audit quality
- H<sub>4</sub> There is difference between women as auditors and men as auditors in risk profile as determinant of audit quality
- H<sub>5</sub> There is difference between women as auditors and men as auditors in mathematical problem-solving skill as determinant of audit quality
- H<sub>6</sub> There is difference between women as auditors and men as auditors in independence as determinant of audit quality
- H<sub>7</sub> There is difference between women as accounting students and men as accounting students in risk profile as determinant of audit quality

- H<sub>8</sub> There is difference between women as accounting students and men as accounting students in mathematical problem-solving skill as determinant of audit quality
- H<sub>9</sub> There is difference between women as accounting students and men as accounting students in independence as determinant of audit quality
- H<sub>10</sub> There is difference between women as management students and men as management students in risk profile as determinant of audit quality
- H<sub>11</sub> There is difference between women as management students and men as management students in mathematical problem-solving skill as determinant of audit quality
- H<sub>12</sub> There is difference between women as management students and men as management students in independence as determinant of audit quality
- H<sub>13</sub> There is difference between women as nonaccounting and nonmanagement and men as nonaccounting and nonmanagement in risk profile as determinant of audit quality
- H<sub>14</sub> There is difference between women as nonaccounting and nonmanagement and men as nonaccounting and nonmanagement in mathematical problem-solving skill as determinant of audit quality
- H<sub>15</sub> There is difference between women as nonaccounting and nonmanagement and men as nonaccounting and nonmanagement in independence as determinant of audit quality.

## RESEARCH METHODS

### Sample Selection

This research uses convenience sampling in selecting samples. The sample of this research is auditors, accounting students, management students and nonaccounting students in Jakarta. Eight hundred questionnaires are disseminated throughout Jakarta, which consist of 200 for auditors, 200 for accounting students, 200 for management students, and 200 for nonaccounting students which are represented by design students.

### Operational Definition of Variables and Measurement

**Risk profile** is level of risk taking ability that a person possesses. Numbers of questions regarding risk profile are asked as proxy. Respondents' risk profile is measured by likert scale. **Mathematical problem-solving skill** is the ability to solve mathematical problems. Numbers of questions regarding mathematics are asked as proxy. The number of correct answers will be counted. **Independence** can be seen from empathy and cognitive biases. Cognitive biases consist of conjunctive fallacy, confirmation bias, insensitivity to sample size, information bias, and overconfidence.

Empathy is the capacity to recognize and, to some extent, share feelings (such as sadness or happiness) that are being experienced by another sentient or semi-sentient being. A question is asked to determine level of empathy. A cognitive bias is a pattern of deviation in judgment that occurs in particular situations, leading to perceptual distortion, inaccurate judgment, illogical interpretation, or what is broadly called irrationality (Kahneman and Tversky 1972). Numbers of questions regarding cognitive bias are asked as proxy.

Conjunctive fallacy is false belief that specific conditions are more probable than a single general one. Confirmation bias is the tendency to look for believes-supporting evidence and to attach relatively more value to evidence that confirms believes that to evidence that contradicts believes. Insensitivity to sample size is ignoring sample size when assessing the likelihood of certain results. Information bias is believing that the more information that can be acquired to make a decision, the better, even if that extra information is irrelevant for the decision. Disjunctive fallacy is false belief that the probability of a general event is less than the sum of the probabilities of its separate components. Overconfidence is the tendency to believe that judgments are more accurate than they really are.

## RESEARCH RESULT

Below is the detail of questionnaire dissemination result:

**Table 1 Questionnaire Dissemination Result**

Description	Sum	Total	Percent
Disseminated questionnaire	200 auditors 200 accounting students 200 management students 200 nonaccounting and nonmanagement students	800 questionnaires	100%
Returned questionnaire	132 auditors 175 accounting students 115 management students 142 nonaccounting and nonmanagement students	564 questionnaires	70.5%
Valid questionnaire	115 auditors 175 accounting students 112 management students 114 nonaccounting and nonmanagement students	516 questionnaires	64.5%

From 200 questionnaires disseminated to auditors, 132 questionnaires are returned and 115 questionnaires are valid and reliable. For accounting students, 175 of 200 questionnaires are returned and valid. Meanwhile, 115 questionnaires of 200 questionnaires from management are returned and 112 question-

naires are valid. For nonaccounting and nonmanagement students, there are 142 questionnaires returned and 114 are valid.

The results of statistic descriptive respondent for auditor are shown in the table below:



Table 2 Auditor Descriptive Statistics

		Men	Women	Total
Sex		50 (43.48%)	65 (56.52%)	115
Age	20-24	23 (35.51%)	40 (63.49%)	63
	25-29	19 (48.72%)	20 (51.28%)	39
	30-34	7 (58.33%)	5 (41.67%)	12
	45-49	1 (100%)	0 (0%)	1
Affiliation	Big 4	0 (0%)	2 (100%)	2
	Non big 4	50 (44.25%)	63 (55.75%)	113
Experience	<3	30 (36.14%)	53 (63.86%)	83
	3-5	7 (46.67%)	8 (53.33%)	15
	>5	13 (76.47%)	4 (23.53%)	17
Position	Junior	29 (34.94%)	54 (65.06%)	83
	Senior	17 (60.71%)	11 (39.29%)	28
	Partner	4 (100%)	0 (0%)	4
Status	Jobholder	36 (40.91%)	52 (59.09%)	88
	Internship	5 (55.56%)	4 (44.45%)	9
Major in high school	Probation	9 (50%)	9 (50%)	18
	Science	15 (42.86%)	20 (57.14%)	35
	Social	28 (44.44%)	35 (55.56%)	63
Math score	Vocational (other)	7 (41.18%)	10 (58.82%)	17
	5.01-6.00	5 (35.71%)	9 (64.29%)	14
	6.01-7.00	13 (43.33%)	17 (56.67%)	30
	7.01-8.00	26 (45.61%)	31 (54.39%)	57
	8.01-9.00	4 (36.36%)	7 (63.64%)	11
	9.01-10.00	2 (66.67%)	1 (33.33%)	3

The results of statistic descriptive respondent for student are shown in the table below:

**Table 3 Students Descriptive Statistics**

		Accounting		Management		Nonaccounting and nonmanagement	
		men	women	men	women	men	women
Sex		66 (37.71%)	109 (62.29%)	51 (45.54%)	61 (54.46%)	51 (44.74%)	63 (55.26%)
Age	17-19	41 (37.61%)	68 (62.39%)	32 (47.76%)	35 (52.24%)	5 (23.81%)	16 (76.19%)
	23-25	-	-	1 (50%)	1 (50%)	3 (100%)	0 (0%)
	26-28	0 (0%)	1 (100%)	-	-	-	-
University Name	STIE Trisakti	65 (38.92%)	102 (61.08%)	50 (45.45%)	60 (54.55%)	-	-
	Tarumanegara University	-	1 (100%)	1 (50%)	1 (50%)	34 (44.74%)	42 (55.26%)
	Bina Nusantara University	-	-	-	-	2 (25%)	6 (75%)
	Esa Unggul University	-	-	-	-	14 (50%)	14 (50%)
	Krida Wacana University	1 (14.29%)	6 (85.71%)	-	-	1 (50%)	1 (50%)
Year Intake	2007	-	-	-	-	2 (100%)	0 (0%)
	2008	-	1 (100%)	-	-	-	-
	2009	9 (36%)	16 (64%)	1 (14.29%)	6 (85.71%)	1 (37.5%)	3 (62.5%)
	2010	15 (41.67%)	21 (58.33%)	9 (34.61%)	17 (34.61%)	22 (56.41%)	17 (43.59%)
	2011	42 (37.17%)	71 (62.83%)	41 (51.90%)	38 (48.10%)	9 (36%)	16 (64%)
GPA	0.00-1.00	-	-	-	-	1 (100%)	0 (0%)
	1.01-2.00	1 (50%)	1 (50%)	3 (75%)	1 (25%)	-	1 (100%)
	2.01-3.00	20 (38.46%)	32 (61.54%)	20 (45.45%)	24 (54.55%)	16 (72.73%)	6 (27.27%)
	3.01-4.00	45 (37.19%)	76 (62.81%)	28 (43.75%)	36 (56.25%)	34 (37.78%)	56 (62.22%)
Major in high school	Science	18 (30.51%)	41 (69.49%)	14 (50%)	14 (50%)	19 (37.25%)	32 (62.75%)
	Social	31 (44.29%)	39 (55.71%)	29 (48.33%)	31 (51.67%)	31 (51.67%)	29 (48.33%)
	Vocational (other)	17 (36.96%)	29 (63.04%)	8 (33.33%)	16 (66.67%)	1 (33.33%)	2 (66.67%)
Math score	5.01-6.00	-	1 (100%)	3 (60%)	2 (40%)	3 (42.86%)	4 (57.14%)
	6.01-7.00	9 (39.13%)	14 (60.87%)	17 (60.71%)	11 (39.29%)	15 (48.39%)	16 (51.61%)
	7.01-8.00	32 (42.67%)	43 (57.33%)	15 (33.33%)	30 (66.67%)	20 (40.82%)	29 (59.18%)
	8.01-9.00	19 (36.54%)	33 (63.46%)	13 (48.15%)	14 (51.85%)	11 (47.83%)	12 (52.17%)
	9.01-10.00	6 (25%)	18 (75%)	3 (42.86%)	4 (57.14%)	2 (50%)	2 (50%)

The results of descriptive statistics variable for auditor are shown on the table below:

**Table 4 Descriptive Statistic Variable Risk Profile for Auditor**

	N	Min	Max	Mean	Mode	Std. Deviation
P1	115	1	5	2.3	1	1.326
P2	115	1	4	1.66	1	.826
P3	115	1	5	3.16	4	1.144
P4	115	1	5	2.75	3	1.13
P5	115	1	5	2.99	3	1.136
P6	115	1	5	1.62	1	.923
P7	115	1	4	2.38	1	1.174
P8	115	1	4	1.92	1	.984
P9	115	1	4	1.3	1	.688
P10	115	1	5	2.56	3	1.125
P11	115	1	4	1.37	1	.741

**Table 5 Descriptive Statistic Variable Mathematical Problem Solving for Auditor**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	115	0	9	3.8	4	2.05821

**Table 6 Descriptive Statistic Variable Independence for Auditor**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	115	0	5	1.6087	2	1.21897

The results of descriptive statistics variable for accounting are shown on the table below:

**Table 7 Descriptive Statistic Variable Risk Profile for Accounting**

	N	Min	Max	Mean	Mode	Std. Deviation
P1	175	1	5	2.19	1	1.148
P2	175	1	5	1.75	1	.887
P3	175	1	5	3.75	4	.931
P4	175	1	5	3.07	3	.916
P5	175	1	5	3.49	4	.909
P6	175	1	5	1.56	1	.901
P7	175	1	5	2.33	3	1.094
P8	175	1	5	1.84	1	1.149
P9	175	1	4	1.15	1	.519
P10	175	1	5	2.51	3	.958
P11	175	1	5	1.63	1	.990

**Table 8 Descriptive Statistic Variable Mathematical Problem Solving for Accounting**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	175	1	10	6.7	8	2.3

**Table 9 Descriptive Statistic Variable Independence for Accounting**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	175	0	5	2.39	2	1.103

The results of descriptive statistics variable for management are shown on the table below:

**Table 10 Descriptive Statistic Variable Risk Profile for Management**

	N	Min	Max	Mean	Mode	Std. Deviation
P1	112	1	5	2.38	3	1.225
P2	112	1	4	1.84	1	.926
P3	112	1	5	3.53	4	1.031
P4	112	1	5	3.2	3	1.073
P5	112	1	5	3.49	4	1.065
P6	112	1	4	1.69	1	.93
P7	112	1	5	2.16	1	1.103
P8	112	1	5	1.78	1	1.08
P9	112	1	4	1.27	1	.657
P10	112	1	5	2.55	3	1.081
P11	112	1	4	1.64	1	.899

**Table 11 Descriptive Statistic Variable Mathematical Problem Solving for Management**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	112	0	10	5.18	5	2.341

**Table 12 Descriptive Statistic Variable Independence for Management**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	112	0	6	2.4	2	1.241

The results of descriptive statistics variable for nonaccounting and nonmanagement are shown on the table below:

**Table 13 Descriptive Statistic Variable Risk Profile for Nonaccounting and Nonmanagement**

	N	Min	Max	Mean	Mode	Std. Deviation
P1	114	1	5	2.44	1	1.290
P2	114	1	5	2.18	1	1.149
P3	114	1	5	3.04	3	1.030
P4	114	1	5	3.15	3	1.107
P5	114	1	5	2.87	3	0.973
P6	114	1	5	1.90	1	1.144
P7	114	1	5	2.25	1	1.125
P8	114	1	5	2.36	1	1.364
P9	114	1	5	1.77	1	1.212
P10	114	1	5	2.71	3	1.095
P11	114	1	5	2.03	1	1.032

**Table 14 Descriptive Statistic Variable Mathematical Problem Solving for Nonaccounting and Nonmanagement**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	114	0	9	4.91	4	2.204

**Table 15 Descriptive Statistic Variable Independence for Nonaccounting and Nonmanagement**

	N	Min	Max	Mean	Mode	Std. Deviation
jawab	114	0	4	1.75	2	1.079

Hypothesis test results are as follow:

**Table 16 Hypothesis test Result All**

	Statistical test tool	Significance	Decision	Conclusion
Risk Profile	Mann Whitney U test	0.000	Ha <sub>1</sub> Accepted	Difference
Mathematical Problem-Solving Skill	Mann Whitney U test	0.211	Ha <sub>2</sub> Not Accepted	No Difference
Independence	Mann Whitney U test	0.253	Ha <sub>3</sub> Not Accepted	No Difference

**Table 17 Hypothesis test Result Auditor**

	Statistical test tool	Significance	Decision	Conclusion
Risk Profile	Independent Sample t-test	0.292	Ha <sub>4</sub> Not Accepted	No Difference
Mathematical Problem-Solving Skill	Independent Sample t-test	0.143	Ha <sub>5</sub> Not Accepted	No Difference
Independence	Independent Sample t-test	0.313	Ha <sub>6</sub> Not Accepted	No Difference

**Table 18 Hypothesis test Result Accounting**

	Statistical test tool	Significance	Decision	Conclusion
Risk Profile	Mann Whitney U test	0.034	Ha <sub>7</sub> Accepted	Difference
Mathematical Problem-Solving Skill	Mann Whitney U test	0.011	Ha <sub>8</sub> Accepted	Difference
Independence	Mann Whitney U test	0.098	Ha <sub>9</sub> Not Accepted	No Difference

**Table 19 Hypothesis test Result Management**

	Statistical test tool	Significance	Decision	Conclusion
Risk Profile	Independent Sample t-test	0.063	Ha <sub>10</sub> Not Accepted	No Difference
Mathematical Problem-Solving Skill	Independent Sample t-test	0.337	Ha <sub>11</sub> Not Accepted	No Difference
Independence	Independent Sample t-test	0.322	Ha <sub>12</sub> Not Accepted	No Difference

**Table 20 Hypothesis test Result Nonaccounting and Nonmanagement**

	Statistical test tool	Significance	Decision	Conclusion
Risk Profile	Independent Sample t-test	0.006	Ha <sub>10</sub> Accepted	Difference
Mathematical Problem-Solving Skill	Independent Sample t-test	0.250	Ha <sub>11</sub> Not Accepted	No Difference
Independence	Independent Sample t-test	0.383	Ha <sub>12</sub> Not Accepted	No Difference

**Table 21 Mean Difference**

	Overall	Auditor	Accounting	Management	Non accounting and non management
Risk profile	F<M	F=M	F<M	F=M	F<M
(Mean score)	24.5369<26.4862		24.6697<26.2727		25.1746<28.5686
Mathematical Problem-Solving	F=M	F=M	F<M	F=M	F=M
(Mean score)			6.39<7.21		
Independence	F=M	F=M	F=M	F=M	F=M

From the results above, overall, there is difference between men and women in risk profile ( $0.000 < 0.05$ ). On the other hand, there is no difference between men and women in problem solving skill ( $0.211 > 0.05$ ), as well as independence ( $0.253 > 0.05$ ). It means that  $H_{a1}$  is accepted,  $H_{a2}$  is not accepted, and  $H_{a3}$  is not accepted.

Seeing from specific groups above, for auditors, there is no difference between men and women as auditors in risk profile ( $0.292 > 0.05$ ), mathematical problem-solving skill ( $0.143 > 0.05$ ), and independence ( $0.313 > 0.05$ ). It means that  $H_{a4}$ ,  $H_{a5}$ , and  $H_{a6}$  are not accepted. For risk profile, this indicates that there is no difference in setting materiality threshold and selecting larger sample. For mathematical problem-solving skill, this indicates that there is no difference in discovering potential material misstatement between men and women as auditors. For independence, this indicates that there is no difference in treating clients in terms of independence.

For accounting students, there is difference between men and women as accounting students in risk profile ( $0.034 < 0.05$ ) and mathematical problem-solving skill ( $0.011 < 0.05$ ), which is women are more risk averse. On contrary, there is no difference between men and women as accounting students in independence ( $0.098 > 0.05$ ). It means that  $H_{a7}$  is accepted,  $H_{a8}$  is accepted, and  $H_{a9}$  is not accepted.

For management students, there is no difference between men and women as management students in risk profile ( $0.063 > 0.05$ ), mathematical problem-solving skill ( $0.337 > 0.05$ ),

and independence ( $0.322 > 0.05$ ). It means that  $H_{a10}$ ,  $H_{a11}$ , and  $H_{a12}$  are not accepted.

For nonaccounting and nonmanagement students, there is difference between men and women in risk profile ( $0.006 < 0.05$ ). On the other hand, there is no difference between men and women in mathematical problem-solving skill ( $0.250 > 0.05$ ), as well as independence ( $0.383 > 0.05$ ). It means that  $H_{a13}$  is accepted,  $H_{a14}$  is not accepted, and  $H_{a15}$  is not accepted.

## CONCLUSSION, LIMITATIONS AND RECOMMENDATION

Based on the hypothesis test, it is concluded that there is difference between men and women overall in risk profile but not when they are auditors. For mathematical problem-solving skill, only men and women as accounting students who are different. Meanwhile, all groups state that there is no difference between men and women in independence.

Limitations of this research are validity, reliability and normality test can not be done for mathematical problem-solving skill and independence. It is because there is only one question each for mathematical problem-solving skill and independence. In addition, the research only uses three constructs in determining audit quality, which are risk profile, mathematical problem-solving skill and independence. Lastly, samples cite is only in Jakarta which is less representative for other auditors in Indonesia. Recommendation to cover the limitations are using more than three constructs in determining audit quality and extending sample cite to other places other than Jakarta.

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