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Ethical sensitivity and ethical behavior of accounting students from Kuwait

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ABSTRACT

This study investigates the factors influencing ethical sensitivity and ethical behavior of accounting students from Kuwait. Specifically, it examines the impact of individual characteristics such as ethical reasoning and internal locus of control, psychological traits such as self-esteem, cynicism, emotional intelligence, spiritual intelligence, and intellectual intelligence, along with ethics education on ethical sensitivity. The study also explores the influence of moral reasoning, ethical sensitivity, and the perceived ethical climate on students' ethical behavior. Additionally, it considers the moderating role of motivation on the relationship between moral reasoning and ethical behavior as well as ethical sensitivity on ethical behavior. Utilizing a quantitative research design, the data were collected from a sample of accounting students through a structured questionnaire developed based on the extant literature review. The results revealed that individual and psychological characteristics along with ethics education significantly enhance ethical sensitivity, underscoring the importance of these factors in ethics education. Furthermore, moral reasoning, ethical sensitivity, and a supportive ethical climate positively impact the ethical behavior of the students. The findings also indicate that motivation moderates the effect of moral reasoning on ethical behavior, suggesting that intrinsic motivation strengthens ethical conduct.

Keywords: Ethical behavior, Ethical sensitivity, Moral reasoning, Ethical education, Ethical climate.

1. Introduction

One of the most significant factors influencing the reputation of an individual is their ethical attitude, which is commonly linked to their professionalism (Agustini, 2016). With the increasing levels of complexity in business (Nadaraja & Mustapha, 2017), ethics has become even more crucial in the field of accounting where maintaining public trust and upholding the integrity of financial reporting is paramount (Ariani & Zulhawati, 2021; Boyd & Shilton, 2021; Nadilla et al., 2021). Since human nature is dominated by basic negative traits such as greed and selfishness, being ethical can often be challenging (Agustini, 2016). The honesty and reliability of public accountants have come under scrutiny in light of some exposed accounting scandals (Hidayat, 2019; Indriasari et al., 2020). Therefore, accounting students need to have a solid ethical grounding as they are the future gatekeepers of financial information (Anjarwati et al.,

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2023). Among the many ethical aspects, ethical sensitivity forms one of the key critical ones (Agustini, 2016; Astuti et al., 2021; Hidayat, 2019; Nadaraja & Mustapha, 2017). Ethical sensitivity has been defined as the "ability to interpret a given situation and to realize that a moral problem exists" (Karcher, 1996). It enables complex, reflective ethical decision-making (Ariail et al., 2021). Accounting students are the future gatekeepers of financial integrity (Astuti et al., 2021); therefore, an increased ethical sensitivity will ensure that accounting professionals uphold high ethical standards (Muslichah et al., 2022). These professionals require extensive ethical training and awareness, as evidenced by the integration of worldwide accounting standards and the growing intricacy of financial transactions (Nadilla et al., 2021; Taylor, 2013). Understanding such ethical aspects becomes even more necessary in Kuwait, a rapidly developing economy with a distinct multi-ethnicity with a cultural and economic landscape (Fraij, 2019; Haddad et al., 2017). By identifying and analyzing the determinants in a quantitative research design, this study aims to provide insights into effective ethics education programs and interventions, ultimately enhancing the ethical standards of future accounting professionals in Kuwait. This study theoretically contributes to the field of ethics education and has several practical implications for multiple stakeholders, including educational institutions, policymakers, accounting professionals, researchers, and the broader society. The significance of this study lies in its potential to shape future ethics education, improve professional conduct in accounting, inform policy decisions, and contribute to the overall ethical health of the accounting profession.

The rest of the paper is structured as follows. Section 2 summarizes the literature associated with this study, while Section 3 elaborates on the development of hypotheses and the conceptual framework for the study. The next section outlines the methodology and the findings have been analyzed, presented, and discussed in Section 5. This paper concludes by addressing the aim of the study and listing the limitations of the study, based on which future scope of research has been suggested.

2. Literature review

Over the years, there has been a growing interest in understanding the ethical aspects of accounting students (Astuti et al., 2021). Accounting students across countries were found to be ethically sensitive (Mustapha & Nadaraja, 2014; Nadilla et al., 2021; Owusu et al., 2021) with higher levels than accountants who were practicing in the industry (Fiolleau & Kaplan, 2017) even though the reverse is usually expected (Anjarwati et al., 2023). Ethical sensitivity varied with age, gender, hometown, year of study, and academic performance of Malaysian accounting students (Shamsuddin et al., 2015). Statistically significant variations in ethical sensitivity were reported among students depending on their specialization and their educational levels (Al-Kateeb et al., 2021; Muslichah et al., 2022). In contrast, it was observed that there were no statistical differences between the levels of ethical sensitivity of those students who have received ethics education and those who have not (Astuti et al., 2021) or no positive influence of ethics education on ethical sensitivity (Ariail et al., 2021). In a separate study, Agustini (2016) reported that the love of money and greed did not impact ethical sensitivity in accounting students from Indonesia. In fact, ethical sensitivity was unrelated to ethical reasoning too (Chan & Leung, 2006). In another Indonesian study, there was a significant and positive impact of moral reasoning, ethical sensitivity, and ethical climate on the ethical behavior of accounting students (Hidayat, 2019). Moreover, ethical sensitivity also influenced the insights into "creative accounting practices" (Sevi et al., 2021) and mediated the impact of self-esteem on academic performance (Karakoc, 2016)

Despite its enormous importance, there are hardly any empirical studies that specifically focus on the ethical sensitivity and behavior of accounting students from Kuwait even when the number of accounting students is quite high (EduRank, 2024). It has been estimated that there are more than "300 universities and colleges in the Gulf Cooperation Council (GCC)" (Al-Thani et al., 2017). Studies from Kuwait have either focused on ethical sensitivity and awareness in organizations (Al-Kazemi & Zajac, 1999) or ethical behavior at workplaces/ schools in the context of their educational system (Antonaras et al., 2023; Fraij, 2019) or exploring business ethics coupled with corporate governance in banks (Alotaibi et al., 2020) or ethical orientations of business schools (Vrdoljak Raguž & Matić, 2016) or ethical curriculum in business colleges (Al-Thani et al., 2017). Moreover, in a comparison of understanding of unethical acceptability between the business educators of accounting and finance with marketing and management, it was found the accounting team was more ethical (Haddad et al., 2017). Clearly, there is a huge gap in research in this regard, therefore, in order to address these issues, this study seeks to

explore the multifaceted determinants of ethical sensitivity and ethical behavior along with their relationships among accounting students in Kuwait. Moreover, the impact of motivation on the impact of moral reasoning and ethical sensitivity on ethical behavior was also explored. This study stands out in several ways by focusing not only on the ethical behavior of students in the cultural context of Kuwait, it also integrates the psychological and ethical factors and validates their interrelationships in the educational context using a conceptual model.

3. Conceptual framework and hypotheses development

Several aspects of ethics that build ethical sensitivity and lead to ethical behavior have been described below, based on which a conceptual framework has been developed for the study (Figure 1).

Ethical sensitivity typically comprises of four components: moral characters, moral judgment, moral motivation, and moral sensitivity (Shamsuddin et al., 2015). Moral characteristics are personality traits that are required to conduct the right act, which include ego strength, persistence, foundation, resilience, belief, and bravery while moral judgment focuses primarily on determining whether a behavior is morally right or wrong. When moral principles are prioritized above other principles, it points to moral motivation. Coming to moral sensitivity, it can be referred to as the state of being conscious of the impact that the action of an individual can have on other people. Factors influencing sensitivity include ethical alignment, professional dedication, organizational commitment, environmental context, and personal character (Ariani & Zulhawati, 2021). In some cases, ethical intent and ethical action also are included (Miller et al., 2020). Apart from demographics (Ariail et al., 2021; Taylor, 2013), ethical sensitivity can be influenced by individual characteristics, which comprises of two components, ethical reasoning (Driskill & Tiggeman, 2021) and internal locus of control. Ethical reasoning in accounting students refers to the cognitive processes and decision-making abilities they employ when faced with ethical dilemmas or situations in the field of accounting (Chan & Leung, 2006). It involves the application of ethical principles, values, and standards to evaluate the moral implications of actions, make ethical judgments, and determine the appropriate course of conduct in accounting practice. Increased ethical reasoning is expected to increase the ethical sensitivity of accounting students (Ariail et al., 2021). Coming to the next component, locus of control, it refers to the extent to which individuals believe they can control events affecting them (Indriasari et al., 2020). It has been found to be critical for accounting students and tends to influence ethical behavior (Hermawan & Sari, 2018; Suryaningnum et al., 2013). Thus, a combination of these two as one factor was validated through the first hypothesis,

H1: The individual characteristics of the accounting students comprising of ethical reasoning and internal locus of control significantly impact their ethical sensitivity.

Coming to the psychological factors, it comprises of five sub-factors such as self-esteem, cynicism, and emotional spiritual, and intellectual intelligence. Cynicism and self-esteem has been found to play a critical role in the ethnic sensitivity of accounting students (Karakoc, 2016). Along with this, intellectual intelligence, emotional intelligence, and spiritual intelligence significantly affect the ethical behavior of accounting students (Yuniar & Sayidah, 2022). Based on this, the influence of psychological factors necessary for building ethical character on ethical sensitivity was evaluated employing the following hypothesis,

H2: Psychological factors are significantly related to the ethical sensitivity of accounting students.

Ethics education forms an integral part of the curriculum of accounting students wherein it tends to configure their attitudes and behaviors (Mustapha & Nadaraja, 2014; Okougbo et al., 2021). An increased sense of moral judgment was observed in students studying ethics education, especially when they were facing ethical predicaments (Astuti et al., 2021). Therefore, it becomes necessary to understand the impact of such education on the ethical sensitivity of accounting students, based on which the next hypothesis was formulated,

H3: Ethics education positively influences the ethical sensitivity of accounting students.

Ethical behavior is expected to be an essential component integrated in the existence of all accountants (Mubako et al., 2021). It has been defined as the behavior that is in accordance with social norms and are generally accepted in relation to right and good actions (Hidayat, 2019). It can get influenced by multiple factors, such as moral reasoning, ethical sensitivity, and ethical climate (Ariani & Zulhawati, 2021; Hermawan & Sari, 2018; Nadilla et al., 2021). In fact, it has been observed that moral reasoning and ethical sensitivity partially affect the ethical behavior of accounting students (Hermawan

& Sari, 2018). Coming to ethical climate, it is a perception or view that applies in organizational practices and procedures that have ethical content (Hidayat, 2019). Therefore, to test their impact on ethical behavior, the following hypotheses were formulated,

H4: The moral reasoning of the accounting students influences their ethical behavior.

H5: Ethical sensitivity positively affects the ethical behavior of accounting students.

H6: Perceived ethical climate has a significant influence on the ethical behavior of accounting students.

Coming to motivation, it can be defined as a desire that is found in an individual who stimulates him to take action (Hasibuan, 2006: 125). A moderating role of motivation on the impact of ethical sensitivity and moral reasoning on ethical behavior was suggested (Hermawan & Sari, 2018). To validate this, these final hypotheses were formulated,

H7: Motivation has a moderating relationship between ethical sensitivity and ethical behavior of accounting students.

H8: The motivation moderates the impact of moral reasoning on the ethical behavior of accounting students.

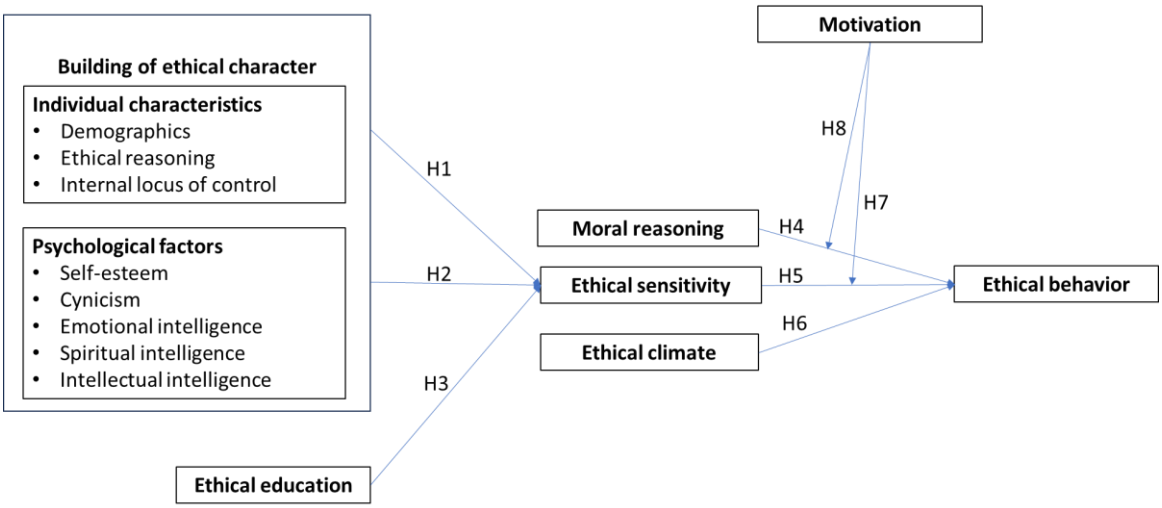

Figure 1. Conceptual model for the study.

4. Methodology

4.1 Research design

This study applied a positivistic research philosophy with an explanatory research purpose employing a deductive research approach with a quantitative research design approach to understand the relationships between aspects of building ethical character, ethical education, ethical climate, moral reasoning, motivation, ethical sensitivity, and ethical behavior in a cross-sectional time frame. This explanatory aspect is critical for understanding the underlying mechanisms and causality within the context of ethical sensitivity and behavior. The survey was chosen as the research strategy for this study where a semi-structured questionnaire was developed to verify the formulated hypotheses of the developed conceptual framework based on the research objectives. The data were collected within four months.

4.2 Participants

The population comprised of accounting students enrolled in private and public universities in Kuwait. The sample size was determined based on Cochran's formulae of a finite population (Cochran, 1977). According to EduRank (2024), the number of enrolled students in accounting in Kuwait is more than 44,000. By applying the above-mentioned Cochran's formulae, where it is assumed that half of the population displays the attribute, implying a maximum variability of p=0.5 and a confidence level of 95% that the real value is within ±5.5% of the measured/surveyed value (margin of error), a minimum sample size of 316 was obtained. The questionnaire was distributed electronically via email or through an online

survey platform or in person whichever feasible to 400 accounting students studying in Kuwait to achieve the required target of sample size using the random sampling method. Out of this, a total of 366 were considered as the final sample population for the study, removing possible non-responses and incomplete data. Informed consent was obtained from all participants before they participate in the study, ensuring confidentiality and anonymity and that participation in the study was voluntary. Table 1 summarizes the demographic details of the participants for this study. It was observed that the more than half of the respondents (59.0%) fall within the age group of 21-30 years, followed by those under 21 years (37.7%), representing a young population. In terms of gender, 66.1% were males compared to almost 34.0% of females. Regarding their marital status, almost all of them were single (93.4%) and the rest married. In terms of educational background, more than three-fourths (77.0%) of the population majoring in accounting, while others (23.0%) had different subject as the major in their courses. Almost 62% of the study population belonged to the senior batch, followed by juniors (31.7%), and first-year students (6.6%). Within the subjects studied, the most common subject was cost and management accounting (49.7%). In terms of university type, the majority of them (82.5%) attended public universities, while the rest (17.5%) were enrolled in private universities. Coming to their status of employment, it was found that most of them (83.6%) were unemployed, while some are full-time (10.9%) or part-time (5.5%) employed. Regarding work experience, the majority (82.0%) have no work experience or less than one year of experience. The religiosity among respondents varied, with a majority (62.3%) displaying low religiosity, followed by high religiosity (32.2%), and none (5.5%). More than half of the respondents (50.3%) have undergone courses related to business ethics, while 21.3% of students had undertaken three or more number of courses on ethics in colleges, however, more than 42% did not have any ethics courses in their college curriculum.

Table 1

Demographic details of the participants.

Demographic characteristics	Frequency (n = 366)	Percent
Age (years)		
Under 21	138	37.7
21-30	216	59.0
31-40	8	2.2
Over 40	4	1.1
Gender		
Male	242	66.1
Female	124	33.9
Marital status		
Single	342	93.4
Married	24	6.6
College major in		
Accounting	282	77.0
Other	84	23.0
Academic class/ level		
First-year	24	6.6
Junior	116	31.7
Senior	226	61.7
Subjects studied		
Cost and management accounting	182	49.7
Financial information system	20	5.5
Internal auditing	4	1.1
Other	160	43.7
Type of university		
Public	302	82.5

Private	64	17.5
Current employment status		
Full-time	40	10.9
Part-time	20	5.5
Unemployed	306	83.6
Work experience		
No or less than one year	300	82.0
2-5 years	50	13.7
6-10 years	16	4.4
Religiosity		
None	20	5.5
Low	228	62.3
High	118	32.2
Courses previously taken related to business ethics		
No	182	49.7
Yes	184	50.3
Number of ethics courses taken during college		
0	154	42.1
1	72	19.7
2	62	16.9
3 or more	78	21.3

4.3 Measures

The developed questionnaire comprised of close-ended questions divided into nine sections and included questions where the responses were measured on a 5-point Likert scale. The first section enquires about their demographic details such as age, gender, marital status, educational background, subjects studied, type of university, current employment status, work experience, religiosity (Religiosity refers to the degree to which an individual or a society is devoted to or adheres to religious beliefs, practices, rituals, and values; Singh et al., 2020), exposure to business ethics, and the number of ethics courses taken during college. Section 2 focuses on a total of 10 items for the individual characteristics with five items each for ethical reasoning adapted from Chan and Leung (2006) and Welton and Lagrone (1994) as well as for the perception towards internal locus of control which was based on Suryaningnum et al. (2013). Coming to the psychological factors (Section 3), it comprises of five subfactors such as self-esteem (5 items; Karakoc, 2016), cynicism (5 items; Karakoc, 2016), emotional intelligence (5 items; Yuniar and Sayidah, 2022), spiritual intelligence (5 items; Yuniar & Sayidah, 2022), and intellectual intelligence (5 items; Yuniar & Sayidah, 2022). Section 4 enquired about ethics education with five items developed based on Shawver and Sennetti (2009), while moral reasoning comprised of six sub-factors (Section 5), namely idealism (10 items; Coyne et al., 2005; Forsyth, 1980), relativity (10 items; Coyne et al., 2005; Forsyth, 1980), justice or moral equity (5 items; Forsyth, 1980; Hidayat, 2019)(Coyne et al., 2005; Forsyth, 1980), egoism (4 items; Forsyth, 1980; Hidayat, 2019), utilitarianism (5 items; Forsyth, 1980; Hidayat, 2019), and deontology or contractualism (4 items; Forsyth, 1980; Hidayat, 2019). In Section 6, a total of 20 items based on Shamsuddin et al. (2015) described ethical sensitivity and its four subfactors such as moral characteristics, moral sensitivity, moral judgement, and moral motivation having five items each. Ethical climate was evaluated through 10 items (Abdullah, 2014) in Section 7. Section 8 measured motivation of the accounting students through five items (Hermawan & Sari, 2018) and finally, ethical behavior in Section 9 which comprised also of five items (Hermawan & Sari, 2018). The scales ranged from mostly false (coded as 1) to always true (coded as 5) for ethical climate and ethical behavior or from always (coded as 1) to never (coded as 5) for ethical sensitivity, while for the rest of variables, the scales ranged from (strongly disagree; coded 1 to strongly agree; coded 5). A copy of the questionnaire is available from the authors on request.

4.4 Data analysis

The raw data collected from the questionnaire was statistically analyzed using SPSS (version 24.0) to understand the demographic characteristics of the sample population in the tabulated form of percentage and frequency. Analysis of variance or student's t test was conducted to evaluate any differences in the study variables due to demographics. Partial Least Squares Structural Equation Modeling (PLS-SEM) using Smart PLS v3.3.3 was applied to analyze the complex relationships between individual characteristics, psychological characteristics, ethical education, ethical climate, ethical sensitivity, ethical behavior, and the moderating role of motivation on the relationship between moral reasoning and ethical behavior as well as ethical sensitivity and ethical behavior as proposed in the conceptual framework. Indicator reliability, internal consistency reliability, convergent validity, discriminant validity was estimated under the reflective measurement model with indicator weights and collinearity under the formative measurement model and model fit assessment. The structural model was evaluated for path coefficients between the latent variables and the coefficient of determination values, R-squared value, effect size, predictive relevance, and multicollinearity. A p value of less than 0.05 was considered statistically significant for the validation of the formulated hypotheses. Moderating effects were assessed by creating interaction terms and evaluating their significance using bootstrapping.

5. Findings and discussion

Employing Anova, it was established that there were significant differences between the sample population in cynicism within psychological factors based on class of study ($F = 4.368$, $p = 0.013$) and type of employment ($F = 4.533$, $p = 0.011$), while intellectual intelligence ($F = 4.589$, $p = 0.011$) within psychological factors also varied based on job experience. Similarly, there were statistically significant variation in idealism ($F = 3.084$, $p = 0.047$) and utilitarianism ($F = 3.384$, $p = 0.035$) within moral reasoning based on the type of employment and job experience, respectively. Moreover, moral sensitivity ($F = 3.220$, $p = 0.041$) and moral motivation ($F = 3.367$, $p = 0.036$) within ethical sensitivity, ethical climate ($F = 3.714$, $p = 0.025$), and ethical motivation ($F = 3.384$, $p = 0.035$) varied based on job experience. Ethical behavior was found to vary based on the level of religiosity ($F = 3.794$, $p = 0.023$). However, there were no statistically significant variation in the study variables based on the age, gender or marital status of the accounting students.

PLS-SEM was found to be particularly suitable for such kind of explanatory research, where the models deal with complex relationships and non-normal data (Henseler et al., 2009). The findings of the SEM for this study have been presented through the measurement model, structural model, and hypothesis testing. The tables for construct reliability and validity, Fornell-Larcker criterion, Heterotrait-Monotrait Ratio (HTMT), R square, model summary, predictive relevance, and F square values, along with figure showing measurement model and predictive relevance has been presented in the Appendix.

5.1 Reliability and validity analysis

Reliability and validity analyses were performed for each of the reflective constructs. It was found that the Cronbach's Alpha, composite reliability, and Dijkstra-Henseler's rho (rho_A) values for all study constructs exceeded the cut-off limit of 0.7 (Hair et al., 2017). Consequently, the measurement scales demonstrate strong internal consistency and high reliability. Moreover, the indicator reliability values for all constructs exceeded 0.4, affirming the scale's reliability. The results also indicated that the AVE (Average Variance Extracted) was above 0.5 for all constructs including ethical reasoning (0.715), internal locus of control (0.689), self-esteem (0.648), cynicism (0.640), emotional intelligence (0.658), spiritual intelligence (0.772), intellectual intelligence (0.695), ethical education (0.648), idealism (0.731), relativity (0.731), justice or moral equity (0.714), egoism (0.700), utilitarianism (0.714), deontology or contractualism (0.642), moral characteristic (0.691), moral sensitivity (0.595), moral judgment (0.815), moral motivation (0.749), ethical climate (0.694), motivation (0.713), and ethical behavior (0.805), denoting a high validity of the factors that were used to measure these constructs. The convergent validity conditions were fulfilled, and the constructs could be used to generate the final model (Hair et al., 2014). Additionally, VIF (Variance Inflation Factor) values were utilized to assess collinearity, and for

this study, all VIF values were found to be less than 5, signifying the absence of collinearity among the variables. The VIF ranged from 1.490 (Self-esteem and Ethical education) to 3.223 (Motivation).

In the next step, the Fornell-Larcker Criterion and Heterotrait-Monotrait (HTMT) ratio were utilized to assess the discriminant validity of the test. The findings from the Fornell-Larcker Criterion revealed that all factors had correlations higher than the highest correlation of the specific variable with other variables in the model, thereby establishing the discriminant validity of the constructs. In addition, the HTMT values for all constructs were lower than the cutoff value of 0.85 (Cheung et al., 2023). This indicates an optimal distinction between the constructs, therefore, assures the validity of the factors

5.2 Structural model

Figure 2 presents the reflective structural model for this study. The coefficient of determination (R2) value indicates that 60.3% of the variation in ethical behavior can be accounted for by moral reasoning, ethical sensitivity, and ethical climate. Similarly, 73.5% of the variation in ethical sensitivity can be explained by individual characteristics, psychological factors, and ethical education.

The Stone-Geisser's (Q2) value serves as a measure of predictive relevance of the model (Geisser, 1974; Shmueli & Koppius, 2011). When the Q2 value exceeds zero, it indicates that the model is predictive (Hair et al., 2016). In this context, the Q2 value for ethical behavior (0.566) and ethical sensitivity (0.488) was greater than requisite levels, demonstrating the strong predictive relevance of the model. The standardized root mean square residual (SRMR) was employed to assess the goodness of fit for the model, with a value less than 0.08 indicated a good fit. In the present study, an SRMR value of 0.063, a d_ULS value of 2.99, a d_G value of 2.98, a Chi-Square value of 3972.89, and an NFI value of 0.904 collectively indicated a good fit for the model.

The effect size is indicated by the impact of exogenous constructs on the endogenous constructs (f2 values). The f2 square values of 0.02, 0.15 and 0.35 implies to small, medium, and large effect size, respectively. The effect of individual characteristics (f2 = 0.096) was found to be medium, while the effect of psychological factors (f2 = 0.365) was large and the effect of ethical education was found to be small (f2 = 0.008) on ethical sensitivity. The effect of moral reasoning (f2 = 0.023) and ethical sensitivity (f2 = 0.229) was moderate on ethical behavior, while the effect of ethical climate (f2 = 0.019) and motivation (f2 = 0.008) was observed to be small on ethical behavior.

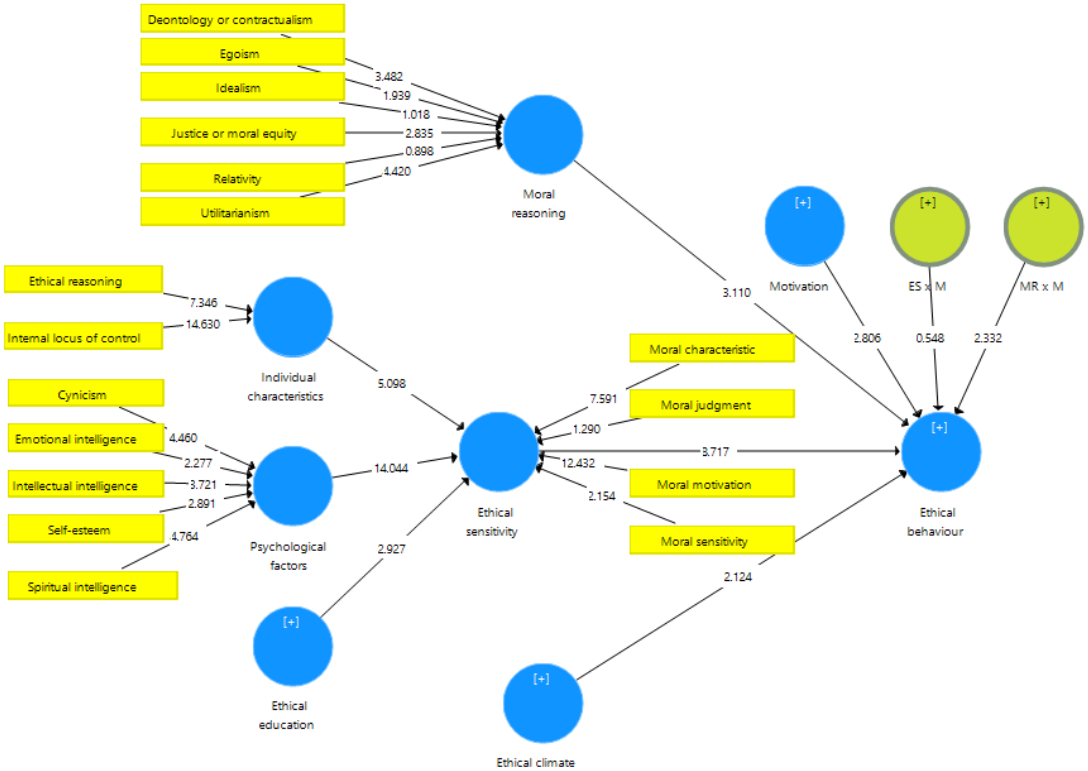

Figure 2. Structural model for the study.

5.3 Hypotheses testing

For the proposed model, bootstrapping was conducted with 336 samples and 5000 repetitions to acquire the path coefficients and assess the significance level (Table 2). Considering the critical t-value's criterion of more than 1.96 for two tailed test ($p < 0.05$), the testing of the model showed that the values of the path coefficients were majorly significant. The results of the hypothesis testing demonstrate that individual characteristics have a significant impact on ethical sensitivity ($t = 5.098$, $p<0.05$), therefore, hypothesis *H1: The individual characteristics of the accounting students comprising of ethical reasoning and internal locus of control significantly impacts their ethical sensitivity*, stands accepted.

Similarly, psychological factors also have a significant impact on ethical sensitivity ($t = 14.044$, $p<0.05$), therefore hypothesis *H2: Psychological factors are significantly related to the ethical sensitivity of accounting students*, is accepted.

Coming to ethical education, it was found to have a statistically significant and positive impact on ethical sensitivity ($t = 2.927$, $p<0.05$), therefore hypothesis *H3: Ethical education positively influences the ethical sensitivity of accounting students*, stands accepted. This was also implied by Ariail et al. (2021) and many others (Martinov-Bennie & Mladenovic, 2015; Muslichah et al., 2022; Nadaraja & Mustapha, 2017; Taylor, 2013), where it was reported that business ethics courses effectively increase the ethical sensitivity of accounting students. However, it was also construed that merely providing a framework will not improve the levels of ethical sensitivity (Martinov-Bennie & Mladenovic, 2015), which may remain inadequate among the accounting students (Ariail et al., 2021).

The direct interaction of moral reasoning on ethical behavior was found to be statistically significant ($t = 3.110$, $p <0.05$), therefore hypothesis *H4: Moral reasoning of the accounting students influences their ethical behavior*, has been accepted. Along with this, ethical sensitivity also had a significant and positive impact on ethical behavior ($t = 8.717$, $p <0.05$), therefore *H5: Ethical sensitivity positively affects the ethical behavior of the accounting students*, was accepted. Moreover, ethical climate had a statistically significant impact on ethical behavior ($t = 2.214$, $p <0.05$), therefore *H6: Perceived ethical climate has a significant influence on the ethical behavior of the accounting students*, stands accepted. Similar outcomes were also reported in various studies on accounting students (Ariani & Zulhawati, 2021; Hermawan & Sari, 2018; Hidayat, 2019; Nadilla et al., 2021).

Coming to the moderating effects, even though the direct effect of motivation revealed a statistically significant influence on the ethical behavior ($t = 2.806$, $p<0.05$); however, the interaction of motivation and ethical sensitivity (ES × M) was found to be insignificant ($t = 0.548$, $p>0.05$). Therefore, hypothesis *H7: Motivation has a moderating relationship between ethical sensitivity and ethical behavior of the accounting students*, stands rejected. The interaction of motivation and moral reasoning (MR × M) is significant ($t= 2.332$, $p<0.05$). Therefore *H8: The motivation moderates the impact of moral reasoning on ethical behavior of accounting students*, stands accepted. This implies that motivation could moderate the influence of moral reasoning but not ethical sensitivity on ethical behavior. These results contradict the findings reported by Hermawan & Sari (2018), where motivation moderated the impact of moral reasoning on ethical behavior.

From the above findings, it can be implied that encouraging ethical conduct among students can equip them to sustain high ethical standards in their future professional jobs by creating a supportive and ethically oriented atmosphere. Consequently, this enhances the general credibility and honesty of the accounting field.

Table 2.

Path coefficients.

Hypothesis	Path	Path coefficient (β)	t	p value	Decision
	Direct effects				
H1	Individual characteristics -> Ethical sensitivity	0.301	5.098	0.000	Positive and significant
H2	Psychological factors -> Ethical sensitivity	0.671	14.044	0.000	Positive and significant
H3	Ethical education -> Ethical sensitivity	0.097	2.927	0.004	Positive and significant

H4	Moral reasoning -> Ethical behavior	0.195	3.110	0.002	Positive and significant
H5	Ethical sensitivity -> Ethical behavior	0.550	8.717	0.000	Positive and significant
H6	Ethical climate -> Ethical behavior	0.125	2.124	0.034	Positive and significant
	Motivation -> Ethical behavior	0.103	2.806	0.005	Positive and significant
	Indirect effects: Moderating effect of Motivation				
H7	ES × M -> Ethical behavior	-0.030	0.548	0.584	Negative and insignificant
H8	MR × M -> Ethical behavior	0.110	2.332	0.020	Positive and significant

6. Conclusions, limitations, and future scope of research

It can be concluded from this study that ethics and its elements play a critical role in building ethical sensitivity and improved ethical behavior of accounting students from Kuwait. Understanding these individual characteristics and their psychosocial factors through targeted educational interventions can positively influence their ethical sensitivity. Moreover, motivation moderates the impact of moral reasoning on ethical behavior. It can be recommended from this study that ethical education is crucial for development of ethical reasoning skills. Even though this study was the first study to test the factors of ethical behavior in accounting students, it is bound by some limitations mostly related to its quantitative nature such as small sample size, self-reported bias, cross-sectional design. By addressing these issues, educators, policy makers, and practitioners can better prepare accounting students to navigate ethical challenges and uphold the integrity of the profession. Further studies should include qualitative methods, longitudinal time frame, diverse populations, and even interdisciplinary approaches, which can provide deeper insights in the experiences that shape ethical behavior.

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Appendix

Differences in study variables based on demographics

Table A1. Difference in study variables based on age

Factors	Sub factors	Age (Years)	Mean ± SD	F	p value
Individual characteristics	Ethical reasoning	Under 21	4.029±0.630	0.071	0.975
		21-30	3.999±0.593		
		31-40	4.025±0.345		
		Over 40	4.000±0.365		
	Internal locus of control	Under 21	3.932±0.651	0.577	0.631
		21-30	3.847±0.624		
		31-40	3.825±0.420		
		Over 40	4.000±0.365		
Psychological factors	Self-esteem	Under 21	3.881±0.611	0.756	0.519
		21-30	3.813±0.586		
		31-40	3.975±0.225		
		Over 40	4.100±0.825		
	Cynicism	Under 21	3.751±0.443	1.629	0.182
		21-30	3.655±0.482		
		31-40	3.650±0.382		
		Over 40	3.950±0.412		
	Emotional intelligence	Under 21	3.838±0.614	0.305	0.822
		21-30	3.859±0.547		
		31-40	3.900±0.545		
		Over 40	4.100±0.622		
	Spiritual intelligence	Under 21	3.809±0.721	0.147	0.931
		21-30	3.769±0.688		
		31-40	3.875±0.632		
		Over 40	3.850±0.719		
	Intellectual intelligence	Under 21	3.855±0.586	0.124	0.946
		21-30	3.849±0.602		
		31-40	3.925±0.501		
		Over 40	4.000±0.490		
Ethics education		Under 21	2.119±0.611	0.756	0.519
		21-30	2.187±0.586		
		31-40	2.025±0.225		
		Over 40	1.900±0.825		
Moral reasoning	Idealism	Under 21	3.831±0.517	1.520	0.209
		21-30	3.811±0.515		
		31-40	3.450±0.518		
		Over 40	3.975±0.299		
	Relativity	Under 21	3.871±0.497	0.339	0.797

Factors	Sub factors	Age (Years)	Mean ± SD	F	p value
		21-30	3.835±0.513		
		31-40	3.713±0.409		
		Over 40	3.875±0.096		
	Justice or moral equity	Under 21	3.926±0.649	0.201	0.896
		21-30	3.898±0.582		
		31-40	3.950±0.573		
		Over 40	4.100±0.258		
	Egoism	Under 21	4.047±0.585	1.011	0.388
		21-30	3.936±0.633		
		31-40	4.094±0.582		
		Over 40	4.000±0.289		
	Utilitarianism	Under 21	3.519±0.700	0.294	0.830
		21-30	3.455±0.810		
		31-40	3.600±0.595		
		Over 40	3.600±0.542		
	Deontology or contractualism	Under 21	3.812±0.697	0.464	0.708
		21-30	3.818±0.649		
		31-40	3.906±0.421		
		Over 40	3.438±1.638		
Ethical sensitivity	Moral characteristic	Under 21	3.839±0.582	0.933	0.425
		21-30	3.771±0.574		
		31-40	3.875±0.413		
		Over 40	3.450±0.342		
	Moral sensitivity	Under 21	3.587±0.509	0.225	0.879
		21-30	3.544±0.496		
		31-40	3.575±0.406		
		Over 40	3.500±0.476		
	Moral judgment	Under 21	3.468±0.667	0.650	0.583
		21-30	3.470±0.629		
		31-40	3.775±0.345		
		Over 40	3.350±0.443		
	Moral motivation	Under 21	3.930±0.666	0.146	0.932
		21-30	3.929±0.590		
		31-40	4.000±0.605		
		Over 40	3.750±0.737		
Ethical climate		Under 21	3.710±0.508	0.190	0.903
		21-30	3.701±0.476		
		31-40	3.638±0.370		
		Over 40	3.550±0.412		
Ethical motivation		Under 21	2.481±0.700	0.294	0.830

Factors	Sub factors	Age (Years)	Mean ± SD	F	p value
Ethical behavior		21-30	2.545±0.810	0.485	0.693
		31-40	2.400±0.595		
		Over 40	2.400±0.542		
		Under 21	4.084±0.717		
		21-30	4.078±0.678		
		31-40	4.200±0.709		
		Over 40	3.700±0.258		

Table A2. Difference in study variables based on gender

Factors	Sub factors	Male	Female	t	p value
Individual characteristics	Ethical reasoning	4.010±0.609	4.013±0.584	-0.045	0.964
	Internal locus of control	3.881±0.670	3.879±0.540	0.028	0.978
	Self-esteem	3.850±0.621	3.837±0.533	0.191	0.849
Psychological factors-	Cynicism	3.685±0.492	3.711±0.412	-0.508	0.612
	Emotional intelligence	3.864±0.603	3.837±0.509	0.419	0.675
	Spiritual intelligence	3.788±0.733	3.784±0.625	0.059	0.953
	Intellectual intelligence	3.864±0.616	3.835±0.543	0.443	0.658
Ethics education		2.150±0.621	2.163±0.533	-0.191	0.849
Moral reasoning	Idealism	3.787±0.508	3.863±0.527	-1.339	0.181
	Relativity	3.841±0.501	3.856±0.506	-0.273	0.785
	Justice or moral equity	3.920±0.625	3.897±0.565	0.345	0.730
	Egoism	3.961±0.622	4.024±0.592	-0.938	0.349
	Utilitarianism	3.440±0.797	3.569±0.684	-1.544	0.124
	Deontology or contractualism	3.831±0.663	3.780±0.705	0.673	0.501
Ethical sensitivity	Moral characteristic	3.807±0.579	3.773±0.561	0.551	0.582
	Moral sensitivity	3.545±0.523	3.590±0.445	-0.816	0.415
	Moral judgment	3.477±0.666	3.471±0.578	0.084	0.933
	Moral motivation	3.925±0.642	3.937±0.574	-0.180	0.857
Ethical climate		3.699±0.489	3.706±0.477	-0.121	0.904
Ethical motivation		2.560±0.797	2.431±0.684	1.544	0.124
Ethical behavior		4.051±0.705	4.132±0.659	-1.064	0.288

Table A3. Difference in study variables based on gender

Factors	Sub factors	Single	Married	t	p value
Individual characteristics	Ethical reasoning	4.013±0.592	3.975±0.716	0.303	0.762
	Internal locus of control	3.885±0.629	3.817±0.624	0.513	0.608
Psychological factors-	Self-esteem	3.859±0.586	3.650±0.657	1.676	0.095
	Cynicism	3.701±0.460	3.600±0.550	1.022	0.308

Factors	Sub factors	Single	Married	t	p value
	Emotional intelligence	3.858±0.568	3.808±0.639	0.410	0.682
	Spiritual intelligence	3.792±0.699	3.717±0.693	0.510	0.611
	Intellectual intelligence	3.867±0.583	3.683±0.698	1.470	0.142
Ethics education		2.141±0.586	2.350±0.657	-1.676	0.095
	Idealism	3.818±0.522	3.733±0.404	0.779	0.436
	Relativity	3.847±0.499	3.842±0.557	0.048	0.962
Moral reasoning	Justice or moral equity	3.905±0.608	4.008±0.548	-0.807	0.420
	Egoism	3.982±0.606	3.990±0.705	-0.061	0.952
	Utilitarianism	3.485±0.761	3.458±0.795	0.168	0.867
	Deontology or contractualism	3.814±0.675	3.802±0.718	0.086	0.932
	Moral characteristic	3.796±0.576	3.792±0.526	0.035	0.972
Ethical sensitivity	Moral sensitivity	3.567±0.501	3.475±0.448	0.872	0.384
	Moral judgment	3.485±0.636	3.333±0.645	1.127	0.261
	Moral motivation	3.936±0.621	3.825±0.585	0.851	0.395
Ethical climate		3.705±0.482	3.654±0.532	0.493	0.622
Ethical motivation		2.515±0.761	2.542±0.795	-0.168	0.867
Ethical behavior		4.079±0.692	4.075±0.669	0.027	0.978

Table A4. Difference in study variables based on college major

Factors	Sub factors	Accounting	Other	t	p value
Individual characteristics	Ethical reasoning	3.991±0.605	4.079±0.581	-1.178	0.240
	Internal locus of control	3.877±0.656	3.890±0.527	-0.168	0.866
	Self-esteem	3.839±0.611	3.867±0.528	-0.375	0.708
	Cynicism	3.686±0.482	3.721±0.408	-0.614	0.540
Psychological factors-	Emotional intelligence	3.855±0.594	3.852±0.494	0.041	0.967
	Spiritual intelligence	3.792±0.702	3.769±0.687	0.267	0.790
	Intellectual intelligence	3.855±0.614	3.852±0.514	0.040	0.968
Ethics education		2.161±0.611	2.133±0.528	0.375	0.708
	Idealism	3.801±0.507	3.851±0.543	-0.782	0.435
	Relativity	3.846±0.506	3.848±0.490	-0.024	0.981
	Justice or moral equity	3.917±0.619	3.895±0.556	0.290	0.772
Moral reasoning	Egoism	3.957±0.618	4.068±0.586	-1.473	0.142
	Utilitarianism	3.462±0.787	3.557±0.673	-1.007	0.314
	Deontology or contractualism	3.801±0.676	3.854±0.682	-0.627	0.531
Ethical sensitivity	Moral characteristic	3.806±0.565	3.762±0.600	0.615	0.539

Factors	Sub factors	Accounting	Other	t	p value
	Moral sensitivity	3.567±0.507	3.538±0.468	0.473	0.637
	Moral judgment	3.468±0.661	3.498±0.551	-0.373	0.710
	Moral motivation	3.916±0.635	3.974±0.565	-0.756	0.450
Ethical climate		3.701±0.493	3.701±0.457	0.004	0.997
Ethical motivation		2.538±0.787	2.443±0.673	1.007	0.314
Ethical behavior		4.041±0.705	4.205±0.622	-1.915	0.056

Table A5. Difference in study variables based on Academic class

Factors	Sub factors	Academic class	Mean ± SD	F	p value
Individual characteristics	Ethical reasoning	First year	4.033±0.714	2.272	0.105
		Junior	4.105±0.542		
		Senior	3.960±0.612		
	Internal locus of control	First year	3.942±0.768	0.357	0.700
		Junior	3.909±0.632		
		Senior	3.859±0.612		
Psychological factors-	Self-esteem	First year	4.000±0.521	1.462	0.233
		Junior	3.883±0.548		
		Senior	3.810±0.619		
	Cynicism	First year	3.833±0.516	4.368	0.013
		Junior	3.772±0.432		
		Senior	3.639±0.471		
	Emotional intelligence	First year	3.900±0.531	1.938	0.146
		Junior	3.934±0.523		
		Senior	3.809±0.598		
	Spiritual intelligence	First year	3.892±0.649	1.523	0.219
		Junior	3.862±0.734		
		Senior	3.737±0.682		
	Intellectual intelligence	First year	3.942±0.427	1.527	0.219
		Junior	3.919±0.616		
		Senior	3.812±0.592		
Ethics education		First year	2.000±0.521	1.462	0.233
		Junior	2.117±0.548		
		Senior	2.190±0.619		
Moral reasoning	Idealism	First year	3.804±0.550	0.192	0.826
		Junior	3.837±0.512		
		Senior	3.801±0.515		

Factors	Sub factors	Academic class	Mean ± SD	F	p value
	Relativity	First year	3.971±0.469	1.499	0.225
		Junior	3.883±0.452		
		Senior	3.815±0.528		
	Justice or moral equity	First year	3.942±0.609	0.819	0.442
		Junior	3.967±0.589		
		Senior	3.881±0.612		
	Egoism	First year	4.073±0.451	0.724	0.485
		Junior	4.019±0.553		
		Senior	3.954±0.655		
	Utilitarianism	First year	3.475±0.784	0.300	0.741
		Junior	3.440±0.801		
		Senior	3.507±0.741		
	Deontology or contractualism	First year	3.865±0.684	2.425	0.090
		Junior	3.920±0.574		
		Senior	3.753±0.719		
Ethical sensitivity	Moral characteristic	First year	3.892±0.373	1.670	0.190
		Junior	3.859±0.634		
		Senior	3.753±0.554		
	Moral sensitivity	First year	3.675±0.416	1.598	0.204
		Junior	3.603±0.558		
		Senior	3.527±0.470		
	Moral judgment	First year	3.467±0.623	1.567	0.210
		Junior	3.560±0.665		
		Senior	3.432±0.622		
	Moral motivation	First year	4.058±0.542	1.114	0.329
		Junior	3.969±0.599		
		Senior	3.895±0.636		
Ethical climate		First year	3.763±0.412	1.627	0.198
		Junior	3.759±0.498		
		Senior	3.665±0.483		
Ethical motivation		First year	2.525±0.784	0.300	0.741
		Junior	2.560±0.801		
		Senior	2.493±0.741		
Ethical behavior		First year	4.233±0.536	1.954	0.143
		Junior	4.152±0.665		
		Senior	4.025±0.713		

Table A6. Difference in study variables based on Subjects studied

Factors	Sub factors	Subjects studying	Mean ± SD	F	p value
Individual characteristics	Ethical reasoning	Cost and management accounting	4.041±0.578	0.439	0.725
		Financial information system	3.900±0.741		
		Internal auditing	3.950±0.681		
		Other	3.993±0.607		
	Internal locus of control	Cost and management accounting	3.931±0.641	0.802	0.494
		Financial information system	3.820±0.716		
		Internal auditing	3.750±0.526		
		Other	3.834±0.604		
Psychological factors	Self-esteem	Cost and management accounting	3.864±0.611	0.364	0.779
		Financial information system	3.880±0.541		
		Internal auditing	3.600±0.490		
		Other	3.826±0.582		
	Cynicism	Cost and management accounting	3.704±0.452	0.687	0.560
		Financial information system	3.750±0.580		
		Internal auditing	3.400±0.283		
		Other	3.683±0.471		
	Emotional intelligence	Cost and management accounting	3.897±0.581	1.173	0.320
		Financial information system	3.750±0.420		
		Internal auditing	3.500±0.416		
		Other	3.829±0.580		
	Spiritual intelligence	Cost and management accounting	3.767±0.747	0.843	0.471
		Financial information system	3.680±0.513		
		Internal auditing	3.400±0.712		
		Other	3.833±0.658		
	Intellectual intelligence	Cost and management accounting	3.891±0.603	0.933	0.425
		Financial information system	3.670±0.703		
		Internal auditing	3.850±0.597		

Factors	Sub factors	Subjects studying	Mean ± SD	F	p value
		Other	3.836±0.563		
Ethics education		Cost and management accounting	2.136±0.611	0.364	0.779
		Financial information system	2.120±0.541		
		Internal auditing	2.400±0.490		
		Other	2.174±0.582		
Moral reasoning	Idealism	Cost and management accounting	3.860±0.460	1.230	0.299
		Financial information system	3.780±0.545		
		Internal auditing	3.950±0.759		
		Other	3.759±0.562		
	Relativity	Cost and management accounting	3.886±0.486	0.911	0.436
		Financial information system	3.785±0.563		
		Internal auditing	3.650±0.580		
		Other	3.814±0.511		
	Justice or moral equity	Cost and management accounting	3.941±0.610	0.528	0.664
		Financial information system	3.790±0.673		
		Internal auditing	3.750±0.790		
		Other	3.899±0.587		
	Egoism	Cost and management accounting	3.996±0.613	0.683	0.563
		Financial information system	4.013±0.588		
		Internal auditing	3.563±0.515		
		Other	3.973±0.617		
	Utilitarianism	Cost and management accounting	3.488±0.789	0.587	0.624
		Financial information system	3.550±0.506		
		Internal auditing	3.000±0.864		
		Other	3.483±0.757		
	Deontology or contractualism	Cost and management accounting	3.816±0.702	0.623	0.600
		Financial information system	3.675±0.669		
		Internal auditing	3.500±0.736		
		Other	3.836±0.649		

Factors	Sub factors	Subjects studying	Mean ± SD	F	p value
Ethical sensitivity	Moral characteristic	Cost and management accounting	3.836±0.562	0.850	0.467
		Financial information system	3.680±0.517		
		Internal auditing	3.600±0.432		
		Other	3.769±0.593		
	Moral sensitivity	Cost and management accounting	3.543±0.534	0.344	0.794
		Financial information system	3.650±0.399		
		Internal auditing	3.650±0.500		
		Other	3.568±0.468		
	Moral judgment	Cost and management accounting	3.486±0.658	0.768	0.512
		Financial information system	3.300±0.610		
		Internal auditing	3.750±0.500		
		Other	3.478±0.619		
	Moral motivation	Cost and management accounting	3.957±0.642	0.438	0.726
		Financial information system	3.810±0.500		
		Internal auditing	4.000±0.816		
		Other	3.910±0.604		
Ethical climate		Cost and management accounting	3.746±0.495	1.233	0.297
		Financial information system	3.595±0.555		
		Internal auditing	3.550±0.580		
		Other	3.668±0.460		
Ethical motivation		Cost and management accounting	2.512±0.789	0.587	0.624
		Financial information system	2.450±0.506		
		Internal auditing	3.000±0.864		
		Other	2.518±0.757		
Ethical behavior		Cost and management accounting	4.086±0.705	0.085	0.968
		Financial information system	4.030±0.524		
		Internal auditing	3.950±0.823		
		Other	4.080±0.693		

Table A7. Difference in study variables based on type of university

Factors	Sub factors	Public	Private	t	p value
Individual characteristics	Ethical reasoning	4.017±0.595	3.981±0.625	0.435	0.664
	Internal locus of control	3.892±0.615	3.825±0.689	0.775	0.439
Psychological factors-	Self-esteem	3.838±0.580	3.878±0.650	-0.487	0.627
	Cynicism	3.683±0.467	3.744±0.464	-0.940	0.348
	Emotional intelligence	3.833±0.580	3.956±0.527	-1.567	0.118
	Spiritual intelligence	3.775±0.719	3.841±0.587	-0.678	0.498
	Intellectual intelligence	3.828±0.607	3.981±0.499	-1.892	0.059
Ethics education		2.162±0.580	2.122±0.650	0.487	0.627
Moral reasoning	Idealism	3.796±0.494	3.889±0.605	-1.309	0.191
	Relativity	3.844±0.490	3.859±0.562	-0.226	0.821
	Justice or moral equity	3.920±0.599	3.875±0.633	0.539	0.590
	Egoism	3.999±0.594	3.902±0.690	1.150	0.251
	Utilitarianism	3.493±0.745	3.438±0.844	0.532	0.595
	Deontology or contractualism	3.799±0.656	3.883±0.766	-0.902	0.368
Ethical sensitivity	Moral characteristic	3.785±0.574	3.844±0.565	-0.740	0.460
	Moral sensitivity	3.542±0.493	3.647±0.512	-1.529	0.127
	Moral judgment	3.450±0.623	3.594±0.692	-1.648	0.100
	Moral motivation	3.919±0.612	3.978±0.655	-0.699	0.485
Ethical climate		3.678±0.480	3.813±0.496	-2.029	0.043
Ethical motivation		2.507±0.745	2.563±0.844	-0.532	0.595
Ethical behavior		4.065±0.709	4.144±0.591	-0.830	0.407

Table A8. Differences in study variables based on f current employment status

Factors	Sub factors	Current employment status	Mean ± SD	F	p value
Individual characteristics	Ethical reasoning	Full-time	3.935±0.660	0.718	0.488
		Part-time	3.910±0.780		
		Unemployed	4.027±0.579		
	Internal locus of control	Full-time	3.715±0.732	1.630	0.197
		Part-time	3.850±0.652		
		Unemployed	3.904±0.611		
Psychological factors-	Self-esteem	Full-time	3.720±0.716	1.317	0.269
		Part-time	3.760±0.631		

Factors	Sub factors	Current employment status	Mean ± SD	F	p value
		Unemployed	3.867±0.571		
	Cynicism	Full-time	3.535±0.565	4.533	0.011
		Part-time	3.520±0.492		
		Unemployed	3.726±0.445		
	Emotional intelligence	Full-time	3.790±0.650	0.291	0.748
		Part-time	3.850±0.615		
		Unemployed	3.863±0.560		
	Spiritual intelligence	Full-time	3.630±0.792	1.301	0.274
		Part-time	3.720±0.788		
		Unemployed	3.812±0.678		
	Intellectual intelligence	Full-time	3.700±0.693	1.675	0.189
		Part-time	3.940±0.581		
		Unemployed	3.869±0.577		
Ethics education		Full-time	2.280±0.716	1.317	0.269
		Part-time	2.240±0.631		
		Unemployed	2.133±0.571		
Moral reasoning	Idealism	Full-time	3.743±0.540	3.084	0.047
		Part-time	3.565±0.729		
		Unemployed	3.838±0.492		
	Relativity	Full-time	3.728±0.535	2.445	0.088
		Part-time	3.695±0.518		
		Unemployed	3.872±0.494		
	Justice or moral equity	Full-time	3.810±0.589	0.656	0.519
		Part-time	3.900±0.709		
		Unemployed	3.926±0.600		
	Egoism	Full-time	3.831±0.785	1.373	0.255
		Part-time	4.013±0.691		
		Unemployed	4.000±0.580		
	Utilitarianism	Full-time	3.310±0.793	1.244	0.289
		Part-time	3.570±0.729		
		Unemployed	3.501±0.760		
	Deontology or contractualism	Full-time	3.713±0.917	0.674	0.510
		Part-time	3.913±0.832		
		Unemployed	3.820±0.629		
Ethical sensitivity	Moral characteristic	Full-time	3.600±0.608	2.808	0.062

Factors	Sub factors	Current employment status	Mean ± SD	F	p value
		Part-time	3.750±0.576		
		Unemployed	3.824±0.564		
	Moral sensitivity	Full-time	3.535±0.533	0.361	0.698
		Part-time	3.480±0.479		
		Unemployed	3.569±0.495		
	Moral judgment	Full-time	3.355±0.677	1.060	0.347
		Part-time	3.590±0.603		
		Unemployed	3.483±0.634		
	Moral motivation	Full-time	3.755±0.663	1.884	0.153
		Part-time	3.890±0.685		
		Unemployed	3.954±0.607		
Ethical climate		Full-time	3.580±0.556	1.884	0.153
		Part-time	3.615±0.492		
		Unemployed	3.723±0.473		
Ethical motivation		Full-time	2.690±0.793	1.244	0.289
		Part-time	2.430±0.729		
		Unemployed	2.499±0.760		
Ethical behavior		Full-time	3.920±0.667	1.711	0.182
		Part-time	4.250±0.689		
		Unemployed	4.088±0.691		

Table A9. Difference in study variables based on work experience

Factors	Sub factors	Work experience	Mean ± SD	F	p value
Individual characteristics	Ethical reasoning	No or less than 1 year	4.007±0.605	0.748	0.474
		2-5	4.080±0.531		
		6-10	3.875±0.719		
	Internal locus of control	No or less than 1 year	3.881±0.644	1.368	0.256
		2-5	3.948±0.542		
		6-10	3.650±0.559		
Psychological factors-	Self-esteem	No or less than 1 year	3.841±0.591	1.159	0.315
		2-5	3.928±0.493		
		6-10	3.675±0.848		
	Cynicism	No or less than 1 year	3.709±0.463	2.619	0.074
		2-5	3.684±0.418		
		6-10	3.438±0.603		

Factors	Sub factors	Work experience	Mean ± SD	F	p value
	Emotional intelligence	No or less than 1 year	3.849±0.567	2.376	0.094
		2-5	3.964±0.559		
		6-10	3.613±0.663		
	Spiritual intelligence	No or less than 1 year	3.791±0.698	2.054	0.130
		2-5	3.864±0.686		
		6-10	3.463±0.676		
	Intellectual intelligence	No or less than 1 year	3.856±0.582	4.589	0.011
		2-5	3.972±0.547		
		6-10	3.463±0.761		
Ethics education		No or less than 1 year	2.159±0.591	1.159	0.315
		2-5	2.072±0.493		
		6-10	2.325±0.848		
Moral reasoning	Idealism	No or less than 1 year	3.802±0.528	1.082	0.340
		2-5	3.904±0.468		
		6-10	3.725±0.397		
	Relativity	No or less than 1 year	3.844±0.503	1.145	0.319
		2-5	3.910±0.514		
		6-10	3.694±0.427		
	Justice or moral equity	No or less than 1 year	3.890±0.613	1.874	0.155
		2-5	4.064±0.543		
		6-10	3.850±0.577		
	Egoism	No or less than 1 year	3.967±0.611	1.780	0.170
		2-5	4.120±0.581		
		6-10	3.844±0.700		
	Utilitarianism	No or less than 1 year	3.482±0.755	3.384	0.035
		2-5	3.628±0.776		
		6-10	3.063±0.744		
	Deontology or contractualism	No or less than 1 year	3.798±0.665	2.252	0.107
		2-5	3.975±0.574		
		6-10	3.609±1.053		
Ethical sensitivity	Moral characteristic	No or less than 1 year	3.806±0.573	2.940	0.054
		2-5	3.840±0.563		

Factors	Sub factors	Work experience	Mean ± SD	F	p value
		6-10	3.463±0.525		
	Moral sensitivity	No or less than 1 year	3.547±0.505	3.220	0.041
		2-5	3.700±0.428		
		6-10	3.375±0.489		
	Moral judgment	No or less than 1 year	3.481±0.635	2.027	0.133
		2-5	3.536±0.672		
		6-10	3.175±0.511		
	Moral motivation	No or less than 1 year	3.938±0.625	3.367	0.036
		2-5	3.996±0.549		
		6-10	3.550±0.609		
Ethical climate		No or less than 1 year	3.698±0.484	3.714	0.025
		2-5	3.806±0.460		
		6-10	3.431±0.494		
Ethical motivation		No or less than 1 year	2.518±0.755	3.384	0.035
		2-5	2.372±0.776		
		6-10	2.938±0.744		
Ethical behavior		No or less than 1 year	4.093±0.709	2.568	0.078
		2-5	4.116±0.591		
		6-10	3.700±0.516		

Table A10. Difference in study variables based on religiosity

Factors	Sub factors	Religiosity	Mean ± SD	F	p value
Individual characteristics	Ethical reasoning	None	4.000±0.569	0.205	0.815
		Low	4.026±0.587		
		High	3.983±0.633		
	Internal locus of control	None	3.870±0.633	0.503	0.605
		Low	3.905±0.609		
		High	3.834±0.665		
Psychological factors-	Self-esteem	None	3.700±0.651	1.202	0.302
		Low	3.878±0.559		
		High	3.807±0.641		
	Cynicism	None	3.660±0.390	0.189	0.828
		Low	3.705±0.472		
		High	3.678±0.469		

Factors	Sub factors	Religiosity	Mean ± SD	F	p value
	Emotional intelligence	None	3.930±0.478	0.874	0.418
		Low	3.876±0.561		
		High	3.800±0.608		
	Spiritual intelligence	None	3.700±0.801	0.857	0.425
		Low	3.824±0.660		
		High	3.731±0.749		
	Intellectual intelligence	None	3.840±0.590	0.007	0.993
		Low	3.856±0.568		
		High	3.854±0.639		
Ethics education		None	2.300±0.651	1.202	0.302
		Low	2.122±0.559		
		High	2.193±0.641		
Moral reasoning	Idealism	None	3.770±0.431	0.083	0.921
		Low	3.818±0.477		
		High	3.809±0.596		
	Relativity	None	3.795±0.521	0.567	0.568
		Low	3.868±0.490		
		High	3.814±0.524		
	Justice or moral equity	None	3.870±0.735	0.051	0.950
		Low	3.914±0.571		
		High	3.915±0.647		
	Egoism	None	3.813±0.729	1.212	0.299
		Low	4.013±0.587		
		High	3.951±0.637		
	Utilitarianism	None	3.560±0.848	0.639	0.529
		Low	3.510±0.737		
		High	3.420±0.796		
	Deontology or contractualism	None	3.725±0.697	0.218	0.804
		Low	3.811±0.677		
		High	3.833±0.677		
Ethical sensitivity	Moral characteristic	None	3.740±0.515	0.490	0.613
		Low	3.818±0.569		
		High	3.761±0.590		
	Moral sensitivity	None	3.450±0.704	0.876	0.418
		Low	3.551±0.488		
		High	3.598±0.475		
	Moral judgment	None	3.370±0.779	0.520	0.595
		Low	3.464±0.628		
		High	3.514±0.631		

Factors	Sub factors	Religiosity	Mean ± SD	F	p value
	Moral motivation	None	3.640±0.886	2.716	0.068
		Low	3.967±0.608		
		High	3.905±0.577		
Ethical climate		None	3.630±0.558	0.614	0.542
		Low	3.689±0.461		
		High	3.737±0.517		
Ethical motivation		None	2.440±0.848	0.639	0.529
		Low	2.490±0.737		
		High	2.580±0.796		
Ethical behavior		None	3.760±1.041	3.794	0.023
		Low	4.143±0.651		
		High	4.008±0.674		

SEM analysis

Table A11. Construct reliability and validity

Item	Loadings	Indicator reliability	VIF	Cronbach's Alpha	rho_A	CR	AVE
Individual characteristics							
Ethical reasoning				0.900	0.901	0.926	0.715
IC_ER_1	0.877	0.769	2.983				
IC_ER_2	0.859	0.739	3.078				
IC_ER_3	0.867	0.751	3.116				
IC_ER_4	0.796	0.634	2.130				
IC_ER_5	0.824	0.680	2.269				
Internal locus of control				0.886	0.890	0.917	0.689
IC_IL_1	0.741	0.549	1.658				
IC_IL_2	0.813	0.662	2.043				
IC_IL_3	0.878	0.772	2.798				
IC_IL_4	0.879	0.773	2.778				
IC_IL_5	0.830	0.688	2.111				
Psychological factors							
Self-esteem				0.863	0.870	0.902	0.648
PF_SE_1	0.692	0.478	1.490				
PF_SE_2	0.825	0.681	2.121				
PF_SE_3	0.869	0.755	2.526				
PF_SE_4	0.839	0.704	2.183				
PF_SE_5	0.790	0.625	1.869				
Cynicism				0.812	0.817	0.876	0.640
PF_C_1	0.780	0.608	1.899				
PF_C_2	0.834	0.696	2.247				

Item	Loadings	Indicator reliability	VIF	Cronbach's Alpha	rho_A	CR	AVE
PF_C_3	0.758	0.575	1.536				
PF_C_5	0.825	0.680	1.789				
Emotional intelligence				0.827	0.828	0.885	0.658
PF_EI_2	0.810	0.656	1.770				
PF_EI_3	0.802	0.644	1.767				
PF_EI_4	0.831	0.690	1.885				
PF_EI_5	0.801	0.641	1.700				
Spiritual intelligence				0.926	0.928	0.944	0.772
PF_SI_1	0.833	0.693	2.319				
PF_SI_2	0.830	0.690	2.321				
PF_SI_3	0.913	0.833	2.923				
PF_SI_4	0.918	0.843	2.890				
PF_SI_5	0.894	0.800	2.756				
Intellectual intelligence				0.890	0.891	0.919	0.695
PF_II_1	0.835	0.697	2.228				
PF_II_2	0.836	0.700	2.508				
PF_II_3	0.879	0.772	3.098				
PF_II_4	0.755	0.570	1.732				
PF_II_5	0.859	0.738	2.685				
Ethical education				0.863	0.871	0.902	0.648
E_1	0.686	0.471	1.490				
E_2	0.823	0.677	2.121				
E_3	0.868	0.753	2.526				
E_4	0.840	0.706	2.183				
E_5	0.797	0.635	1.869				
Moral reasoning							
Idealism				0.877	0.877	0.916	0.731
MR_I_1	0.873	0.762	2.455				
MR_I_2	0.858	0.737	2.277				
MR_I_3	0.845	0.714	2.091				
MR_I_6	0.843	0.711	2.072				
Relativity				0.877	0.878	0.916	0.731
MR_R_1	0.849	0.720	2.294				
MR_R_2	0.892	0.795	2.842				
MR_R_3	0.871	0.759	2.422				
MR_R_4	0.806	0.650	1.839				
Justice or moral equity				0.867	0.870	0.909	0.714
MR_J_1	0.835	0.697	2.205				
MR_J_2	0.839	0.703	2.246				

Item	Loadings	Indicator reliability	VIF	Cronbach's Alpha	rho_A	CR	AVE
MR_J_4	0.866	0.750	2.282				
MR_J_5	0.840	0.706	2.078				
Egoism				0.857	0.858	0.903	0.700
MR_E_1	0.823	0.677	1.955				
MR_E_2	0.868	0.754	2.293				
MR_E_3	0.804	0.647	1.796				
MR_E_4	0.849	0.721	2.085				
Utilitarianism				0.901	0.921	0.926	0.714
MR_U_1	0.828	0.686	2.208				
MR_U_2	0.905	0.819	2.698				
MR_U_3	0.879	0.772	2.873				
MR_U_4	0.790	0.624	3.010				
MR_U_5	0.817	0.668	3.223				
Deontology or contractualism				0.814	0.821	0.877	0.642
MR_D_1	0.766	0.587	1.638				
MR_D_2	0.850	0.722	2.139				
MR_D_3	0.770	0.593	1.646				
MR_D_4	0.816	0.666	1.651				
Ethical sensitivity							
Moral characteristic				0.851	0.851	0.899	0.691
ES_MC_1	0.794	0.630	1.708				
ES_MC_2	0.815	0.665	1.871				
ES_MC_3	0.868	0.753	2.286				
ES_MC_4	0.847	0.717	2.177				
Moral sensitivity				0.771	0.778	0.854	0.595
ES_MS_1	0.798	0.637	1.913				
ES_MS_2	0.827	0.685	1.901				
ES_MS_3	0.764	0.583	1.495				
ES_MS_5	0.688	0.473	1.277				
Moral judgment				0.924	0.928	0.946	0.815
ES_MJ_1	0.877	0.770	2.800				
ES_MJ_2	0.916	0.838	3.087				
ES_MJ_3	0.931	0.866	3.150				
ES_MJ_5	0.885	0.784	2.874				
Moral motivation				0.916	0.916	0.937	0.749
ES_MM_1	0.860	0.739	3.154				
ES_MM_2	0.877	0.768	3.047				
ES_MM_3	0.861	0.741	2.899				
ES_MM_4	0.888	0.788	3.042				

Item	Loadings	Indicator reliability	VIF	Cronbach's Alpha	rho_A	CR	AVE
ES_MM_5	0.842	0.708	2.308				
Ethical climate				0.890	0.905	0.919	0.694
EC_1	0.843	0.711	2.228				
EC_2	0.852	0.725	2.508				
EC_3	0.890	0.792	3.098				
EC_5	0.720	0.518	1.732				
EC_6	0.851	0.724	2.685				
Motivation				0.901	0.928	0.925	0.713
EM_1	0.832	0.691	2.208				
EM_2	0.909	0.826	2.698				
EM_3	0.875	0.766	2.873				
EM_4	0.788	0.621	3.010				
EM_5	0.813	0.661	3.223				
Ethical behaviour				0.939	0.940	0.954	0.805
EB_1	0.882	0.778	2.961				
EB_2	0.895	0.801	2.866				
EB_3	0.917	0.841	2.589				
EB_4	0.885	0.783	3.188				
EB_5	0.905	0.819	2.789				

CR: Composite Reliability

Table A12 Fornell-Larcker Criterion

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Justice or moral equity (1)	0.845																				
Cynicism (2)	0.674	0.800																			
Deontology or contractualism (3)	0.504	0.448	0.801																		
Egoism (4)	0.702	0.672	0.585	0.837																	
Emotional intelligence (5)	0.532	0.640	0.340	0.579	0.811																
Ethical behaviour (6)	0.570	0.563	0.463	0.578	0.557	0.897															
Ethical climate (7)	0.576	0.661	0.419	0.508	0.642	0.619	0.833														
Ethical education (8)	-0.656	-0.734	-0.487	-0.689	-0.677	-0.592	-0.668	0.805													
Ethical reasoning (9)	0.679	0.613	0.516	0.672	0.620	0.567	0.593	-0.689	0.845												
Idealism (10)	0.573	0.606	0.485	0.588	0.506	0.488	0.559	-0.621	0.639	0.855											
Intellectual intelligence (11)	0.573	0.661	0.413	0.503	0.644	0.610	0.815	-0.671	0.589	0.553	0.834										
Internal locus of control (12)	0.713	0.726	0.440	0.695	0.668	0.586	0.642	-0.773	0.735	0.636	0.644	0.830									
Moral characteristic (13)	0.610	0.684	0.397	0.539	0.643	0.627	0.684	-0.678	0.592	0.516	0.687	0.720	0.831								
Moral judgment (14)	0.400	0.432	0.295	0.339	0.477	0.425	0.448	-0.429	0.414	0.338	0.451	0.446	0.515	0.903							
Moral motivation (15)	0.605	0.642	0.353	0.618	0.636	0.743	0.631	-0.631	0.647	0.482	0.631	0.666	0.683	0.580	0.866						
Moral sensitivity (16)	0.605	0.629	0.410	0.571	0.518	0.536	0.570	-0.585	0.544	0.480	0.574	0.648	0.656	0.510	0.622	0.771					
Motivation (17)	-0.561	-0.596	-0.303	-0.614	-0.587	-0.542	-0.563	0.647	-0.509	-0.476	-0.565	-0.639	-0.637	-0.358	-0.595	-0.498	0.844				
Relativity (18)	0.691	0.725	0.457	0.726	0.624	0.565	0.636	-0.718	0.685	0.722	0.633	0.761	0.619	0.412	0.593	0.588	-0.669	0.855			
Self-esteem (19)	0.657	0.735	0.488	0.691	0.677	0.592	0.668	-1.000	0.689	0.622	0.671	0.774	0.678	0.428	0.631	0.584	-0.647	0.718	0.805		
Spiritual intelligence (20)	0.598	0.646	0.265	0.531	0.685	0.570	0.658	-0.659	0.534	0.420	0.665	0.706	0.688	0.436	0.660	0.606	-0.645	0.574	0.657	0.879	
Utilitarianism (21)	0.560	0.594	0.301	0.613	0.586	0.540	0.560	-0.645	0.508	0.473	0.563	0.638	0.634	0.356	0.592	0.496	-1.000	0.667	0.644	0.643	0.845

Table A13 Heterotrait-Monotrait Ratio (HTMT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Justice or moral equity (1)																					
Cynicism (2)	0.801																				
Deontology or contractualism (3)	0.591	0.544																			
Egoism (4)	0.811	0.802	0.692																		
Emotional intelligence (5)	0.620	0.777	0.408	0.687																	
Ethical behaviour (6)	0.630	0.640	0.525	0.644	0.629																
Ethical climate (7)	0.647	0.775	0.477	0.575	0.750	0.666															
Ethical education (8)	0.757	0.815	0.578	0.808	0.798	0.656	0.766														
Ethical reasoning (9)	0.766	0.711	0.593	0.763	0.717	0.615	0.656	0.781													
Idealism (10)	0.654	0.711	0.568	0.678	0.592	0.537	0.623	0.717	0.717												
Intellectual intelligence (11)	0.647	0.775	0.477	0.575	0.750	0.666	0.805	0.766	0.656	0.623											
Internal locus of control (12)	0.808	0.850	0.508	0.799	0.775	0.638	0.724	0.818	0.819	0.720	0.724										
Moral characteristic (13)	0.704	0.819	0.473	0.631	0.763	0.700	0.789	0.787	0.674	0.598	0.789	0.825									
Moral judgment (14)	0.442	0.494	0.345	0.379	0.540	0.453	0.495	0.472	0.453	0.375	0.495	0.489	0.577								
Moral motivation (15)	0.677	0.741	0.402	0.699	0.728	0.801	0.698	0.709	0.711	0.538	0.698	0.737	0.774	0.627							
Moral sensitivity (16)	0.728	0.778	0.508	0.692	0.637	0.619	0.678	0.703	0.643	0.576	0.678	0.772	0.797	0.601	0.729						
Motivation (17)	0.602	0.661	0.314	0.670	0.673	0.566	0.612	0.705	0.538	0.506	0.612	0.687	0.706	0.379	0.635	0.558					
Relativity (18)	0.786	0.836	0.535	0.839	0.735	0.623	0.716	0.829	0.769	0.822	0.716	0.826	0.716	0.457	0.664	0.700	0.727				
Self-esteem (19)	0.757	0.828	0.578	0.808	0.798	0.656	0.766	0.816	0.781	0.717	0.766	0.838	0.787	0.472	0.709	0.703	0.705	0.829			
Spiritual intelligence (20)	0.664	0.743	0.297	0.596	0.780	0.609	0.734	0.729	0.580	0.464	0.734	0.775	0.774	0.469	0.715	0.706	0.686	0.636	0.729		
Utilitarianism (21)	0.602	0.661	0.314	0.670	0.673	0.566	0.612	0.705	0.538	0.506	0.612	0.687	0.706	0.379	0.635	0.558	0.811	0.727	0.705	0.686	

Table A14. R square

	R Square	R Square Adjusted
Ethical behaviour	0.603	0.597
Ethical sensitivity	0.735	0.733

Table A15 Model summary and predictive relevance

	SSO	SSE	Q^2 (=1-SSE/SSO)
Ethical behaviour	366.000	158.937	0.566
Ethical sensitivity	1464.000	749.572	0.488

Overall model fit indices: SRMR = 0.063, d_ULS = 2.99, d_G = 2.98, $\chi 2$ = 3972.89, NFI = 0.904

Table A16. F square

	Ethical behaviour	Ethical sensitivity
Individual characteristics		0.096
Psychological factors		0.365
Ethical education		0.008
Moral reasoning	0.023	
Ethical sensitivity	0.229	
Ethical climate	0.019	
Motivation	0.008	

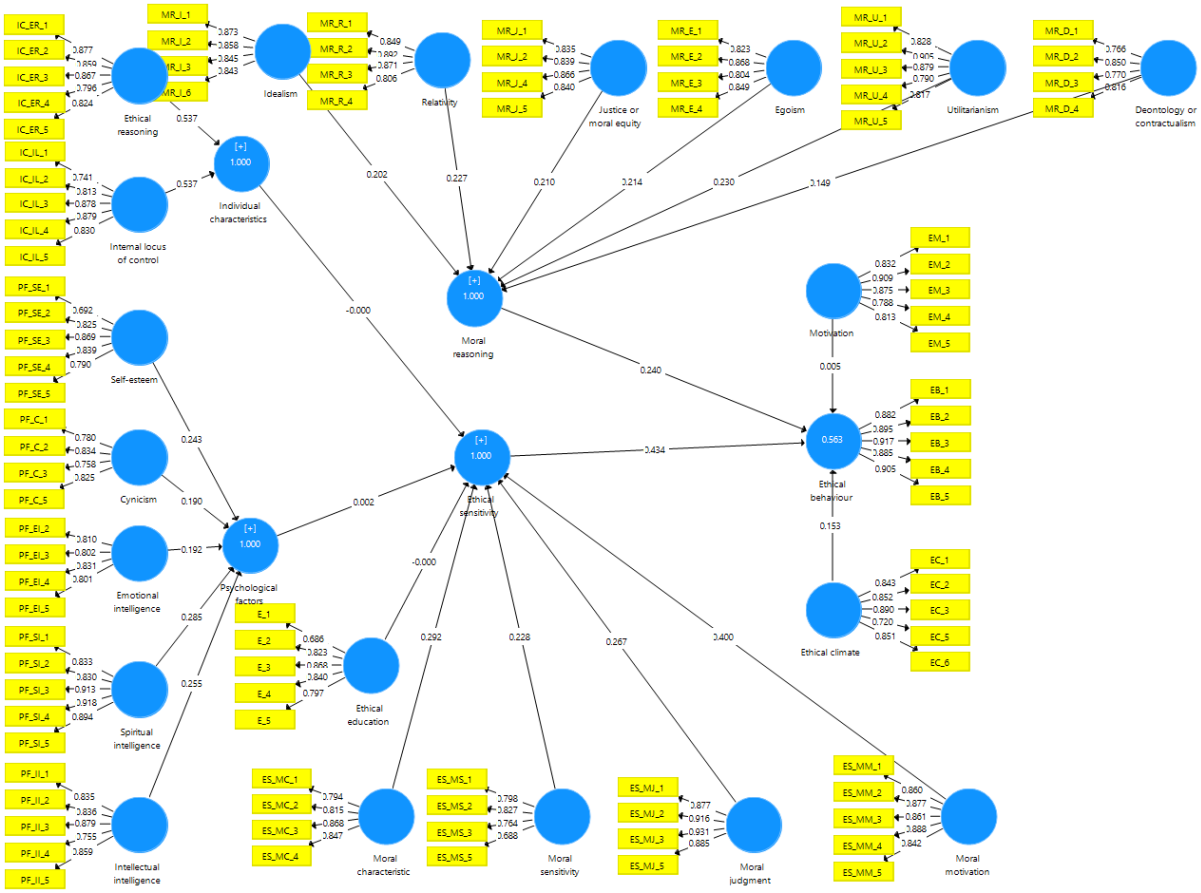

Figure A3. Measurement model

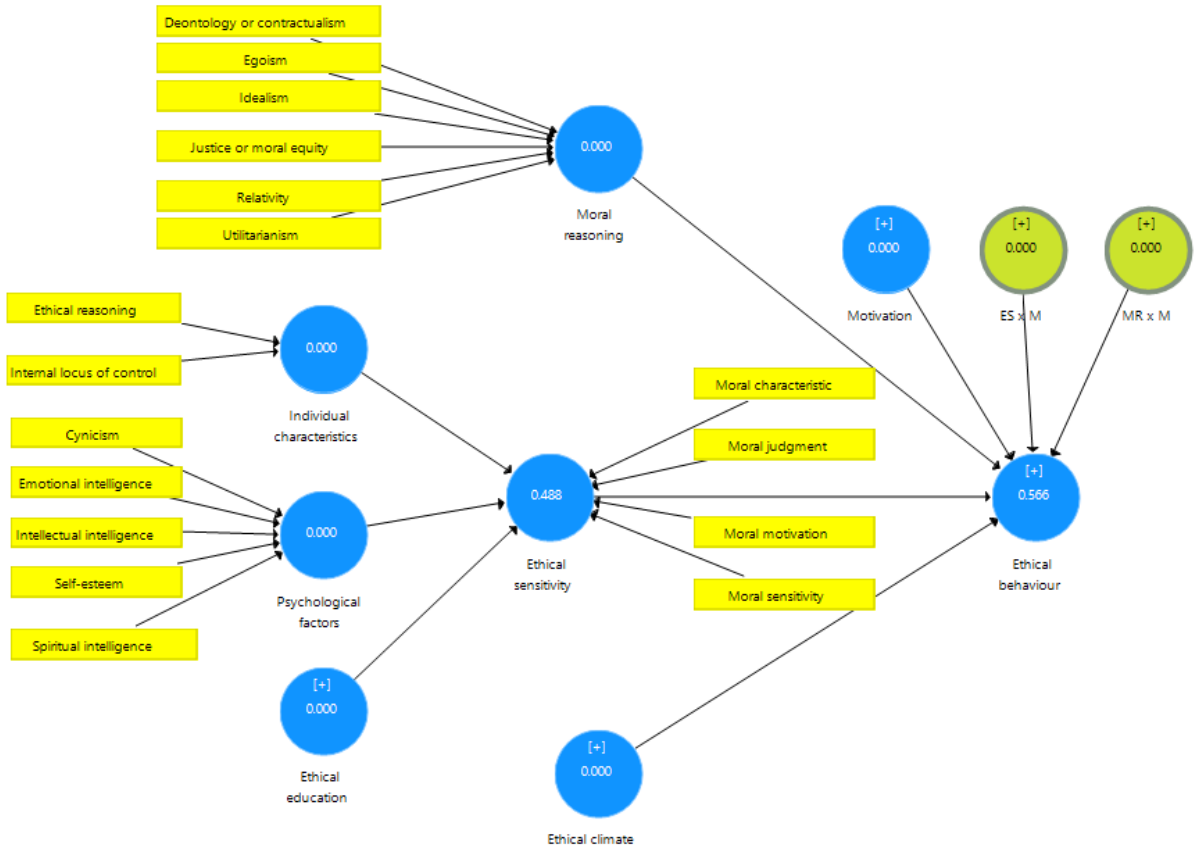

Figure A4. Predictive relevance