



W kierunku umiędzynarodowienia / Towards internationalization

Socio-ethical determinants of operational and accounting manipulation. Empirical research results

Společno-etyczne determinanty manipulacji operacyjno-księgowych. Wyniki badań empirycznych

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Abstract


Purpose: This article assesses the impact of personal moral philosophies, ethics, and ethical judgment on operational and accounting manipulation among accounting students.

Methodology/approach: An analysis of the literature on the research subject was used, and a survey on perceptions of accounting manipulations (ACC) and operational manipulations (OM) was conducted among a group of accounting students studying at two universities in Poland. A linear regression model, Mann-Whitney, and Wilcoxon signed rank test were used to verify the research hypotheses.

Findings: The research results offer insights into how accounting students perceive accounting and operational manipulation, revealing differences in the ethical assessment of these phenomena depending on the respondent's moral attitude. We found that age significantly influences the assessment of accounting manipulations and that ethical ideologies influence the manipulation of moral judgments in the case of unemployed people.

Research limitations/implications: A significant limitation is that the study focused on students, which may bias findings. To draw broader conclusions, it would be necessary to include working people in the study, with further differentiation based on their profession and position in the organisation.

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Originality/value: The article contributes to behavioural accounting thanks to pioneering insights into students' perceptions of accounting and operational manipulation in Poland. The results serve as a foundation for future research. They also raise awareness of future accounting specialists on behavioural and ethical issues they may encounter during the educational process. Professional associations may also use the material when working on ethical standards.

Keywords: accounting manipulations, operational manipulations, behavioural accounting, accounting students.

Streszczenie

Cel: Celem artykułu jest ocena wpływu osobistych filozofii moralnych, etyki i osądu etycznego na manipulacje w zakresie decyzji operacyjnych i księgowych wśród studentów rachunkowości.

Metodyka/podejście badawcze: Do realizacji celu wykorzystano analizę literatury przedmiotu oraz przeprowadzono badania ankietowe na grupie studentów rachunkowości studiujących na dwóch uniwersytetach w Polsce pod kątem postrzegania manipulacji księgowych (ACC) i manipulacji operacyjnych (OM). Do weryfikacji hipotez badawczych wykorzystano model regresji liniowej, test Manna-Whitneya oraz test Wilcozona.

Wyniki: Wyniki badań dają perspektywę postrzegania przez studentów rachunkowości zjawiska manipulacji księgowych i operacyjnych. Jednocześnie pokazują różnice w ocenie etycznej tego zjawiska w zależności od prezentowanej postawy moralnej przez respondentów. Stwierdzono m.in. istotny wpływ wieku oraz doświadczenia zawodowego na ocenę manipulacji księgowych.

Ograniczenia/implikacje badawcze: Istotnym ograniczeniem jest zawężenie badanej populacji do grupy studentów, co może generować ustalenia z badań w określonym kierunku. W celu przeprowadzenia szerszego wnioskowania należałoby włączyć do badań osoby pracujące, różnicując dodatkowo respondentów pod kątem wykonywanej profesji oraz zajmowanego stanowiska w organizacji.

Originalność/wartość: Artykuł stanowi istotny wkład w obszar rachunkowości behawioralnej, dzięki pionierskim ustaleniom w zakresie postrzegania przez studentów w Polsce manipulacji księgowych i operacyjnych. Dokonane ustalenia mogą być przyczynkiem do kontynuacji przedmiotowego wątku, a także podnoszenia świadomości przyszłych specjalistów księgowych w kwestiach behawioralnych i etycznych w czasie procesu edukacyjnego. Materiał może być również wykorzystany przez stowarzyszenia zawodowe podczas pracy nad standardami etycznymi.

Słowa kluczowe: manipulacje księgowe, manipulacje operacyjne, rachunkowość behawioralna, studenci rachunkowości.

Introduction

The modern business world, which is influenced by growing competition in the market and the fight for customers, means that companies do not always adhere to professional ethics and the rules related to it. Numerous factors and conditions in the business environment in which companies operate may lead to manipulation by employees and management. The definition of "manipulation" according to

Collins Dictionary is: to manage or influence skillfully, esp. in an unfair manner; to adapt or change (accounts, figures, etc.) to suit one's purpose or advantage (Collins Dictionary, 2024). Sensitive areas include the company's operating activity, where certain decisions may cause operational manipulation, and its financial activity, where activities such as falsifying data on documents, providing false information in financial statements or improperly applying accounting policy result in accounting manipulations (ACC).¹

The prevalence of manipulation and the ongoing discussions in the media regarding unethical behaviour have inspired many researchers to address the subject in their works. Empirical evidence related to accounting (ACC) and operational manipulation (OM) is multidimensional, including the rationale and causes of manipulation in various types of organisations (Trussel, 2003; Gabrić, Miljko, 2018; Balaciu, Pop Cosmina, 2008; Judson, Volker, 2017), manipulation areas (Hussain Al-Hashimy, 2022), types and techniques of manipulation (Gowthorpe, Oriol, 2005; Voinea, Dimitriua, 2014), analysis of the gaps in accounting standards that are used by firms to manipulate various accounting areas (Bhasin, 2016; Dye, 2002), manipulation of operations (Amoah et al., 2012; Cardoso Rocha et al., 2022) or anti-manipulation (Carp, Georgescu, 2019; Kurtanović, Golub, 2023). A separate area of research concerns how accounting education shapes students' ethical and moral attitudes (Ciolek, Emerling, 2019; Ciolek, 2018b; Ciolek, 2018a; Cygańska et al., 2019; Szadzińska, Kujawski, 2018).

Although the research conducted in this area has a multidimensional aspect, the literature documents little research into ethical attitudes, the tendency to commit accounting and operational manipulations, or how various groups of people view the phenomenon of manipulation. This constitutes a significant research gap in this area. To date, empirical evidence in this area can be found in a few works, for example, Fischer and Rosenzweig (1995), Kaplan (2001), Clikeman et al. (2001), Belski et al. (2008), Fischer et al. (2013), Cuzdriorean (2013), Herbei (Cernusca (2015), and Chiaravutthi (2020). Fischer et al. (2013) provided valuable empirical insight when they examined "[...] differences in the admissibility of decisions made by certified public accounting practitioners (CPAs) and students studying to become a CPA in East Texas". The study confirmed that "[...] practitioners and students have a greater ethical acceptability for operating manipulations than for accounting manipulations. This could be based on the accounting profession's concern with ethical codes and generally accepted accounting practices that does not exist for the managerial activities". Their results also confirmed the previous observations of Grasso et al. (2009).

In professional practice, several factors affect employee behaviour, the most important of which are gender, age, and professional experience. Chudzicka-

¹ Balaciu and Pop Cosmina (2008) also use the term "manipulation of financial information" in relation to the phenomenon of *manipulation*, adding that other terms related to this issue are also indicated in the literature, i.e., *earnings management*, *income smoothing*, *creative accounting practices*, *aggressive accounting* or *account manipulation*.

-Czapala (2013) indicated which behaviours are appropriate and which are not essential. This is achieved through codes of ethics in many modern companies and training for students preparing to start various professions. A model of moral philosophy that divides people into four groups (situationists, absolutists, subjectivists, or utilitarians), depending on how they approach idealism and relativism, may also be important (Schlenker, Forsyth, 1977). In this context, how a person views and evaluates manipulation can be multidirectional, depending on how a particular moral attitude is presented.

The reason for the emergence of various types of manipulations in organisations can be seen in the daily challenges faced by employees. Often, the need to meet certain standards or adapt operations to specific legal regulations can lead to adverse phenomena and manipulation (cf. Miciuła et al., 2021, p. 1).

In our opinion, the formation of ethical attitudes and the direction of conduct towards the phenomenon of manipulation should take place primarily in the educational process. This is particularly important for accounting students because raising awareness of behavioural and ethical issues among this group of people as future accounting specialists will result in the right attitude towards this issue in later business practice. With the above in mind, we attempt to ascertain how accounting students view manipulation. The article aims to identify and assess the impact of personal moral philosophies, ethics, and ethical judgment on operational and accounting manipulations among accounting students. It is assumed that the rating might depend on the respondents' personalities. Therefore, the evaluators should be classified according to a specific taxonomy of moral philosophies.

Following the division presented by Schlenker and Forsyth (1977),² it was established that students assessing the phenomenon of manipulation would be classified into one of the following subgroups: situationist, absolutist, subjectivist, or utilitarian. To achieve the goal, we asked the following research question: How do accounting students assess operational manipulation and accounting manipulations? Does the perceived manipulation depend on age, gender and professional activity? Does the presentation of a given moral philosophy by accounting students affect their assessment of a manipulation? The research questions were directed by the formulation of the following five research hypotheses:

H1: Accounting manipulation is perceived as less ethical than (OM) manipulation.

H2: Ethical ideologies influence ethical judgments in manipulation.

H3: Age influences ethical judgments of manipulation.

H4: Gender does not influence ethical judgment manipulation.

H5: Work experience affects ethical judgment manipulation.

In previous research, little attention was paid to the ethics of accounting students in the context of accounting manipulation and their attitudes towards this phenomenon. This issue has still not been thoroughly studied, especially in Poland.

² A description of the division of individual subgroups is given in Chapter 2. Research methodology, subsection 2.1. Used measures of ethical ideologies.

Therefore, this paper fills a research gap and contributes to the literature on operational and accounting manipulation and accounting students' perceptions of this issue.

The paper uses a literature review of the topic and surveys conducted among accounting students studying at two universities in Poland on their perceptions of accounting manipulation (ACC) and operational manipulation (OM). A linear regression model, Mann-Whitney, and Wilcoxon tests were used to verify the research hypotheses. The article is structured as follows. Following the introduction, the first section reviews the literature, while the second section looks at the methodology used in that research, describing the measures adopted and the samples. The last section contains the results and a discussion of the results. The paper ends with a conclusion. That section also identifies the study's limitations and ideas for future research.

1. Literature review

The multifaceted exploration of the subject of accounting and operational manipulations, which has been discussed by numerous authors, investigates the causes, areas, and impact on specific organisational elements. In the case of accounting manipulation, a frequent violation occurs in financial statements, with the most common strategy being to manipulate the information presented to stakeholders and shareholders (Hussain Al-Hashimy, 2022). According to Gabrić and Miljko (2018), the most common accounting manipulations are related to contract incentives.

As Voinea and Dimitriu (2014) pointed out, accounting information is sometimes processed to manipulate the behaviour of its users. Accountants who control the form and content of corporate reports ensure that they present a favourable picture of the company. Such action is usually associated with the ability to use specific techniques to manipulate accounting information, which may include, for example, adjusting the level of performance or changing the debt ratio (Voinea, Dimitriu, 2014).

Implementing the activities above may be due to the flexibility of accounting regulations and standards in this area, as confirmed by Bhasin (2016). He pointed out that the existing "gaps" in accounting and auditing standards motivate accounting professionals to manipulate corporate financial statements frequently. Meanwhile, Dye (2002) cited "classification manipulation" as an example where accountants choose their preferred type of accounting classification.

It is not only the financial area that is subjected to manipulation. Amoah et al. (2012) suggested that manufacturing companies with weak internal controls mainly use overproduction and excessive price discounts to manipulate actual activities to achieve target profits. In this case, operational activities are initiated by specific decisions made by the managerial staff.

Some authors propose solutions to prevent the manipulation of companies. For example, Al-Hashima (2022) suggested developing ethical and behavioural commitments, while Judson and Volker (2017) believed that adequate reporting supervision has reduced the problem. Carp and Georgescu (2019) emphasise the importance of a statutory auditor assessing financial data in terms of the degree of manipulation of operational activities. Kurtanović and Golub (2023) stated that the introduction of forensic accounting and forensic audits may be a way to prevent or counteract manipulation.

There can be many reasons for manipulation, including the emphasis on achieving high results. According to Balaciu and Pop Cosmina (2008), companies are pressured to appear profitable and attract investors. Private companies use manipulation to hide their income and thus pay less tax, and public enterprises raise share prices (Al-Hashima, 2022). As Bhasin (2016) noted, greed, desperation, immorality, and poor judgment lead some directors to falsify financial statements and ledgers. On the other hand, Kamela-Sowińska (2006) added that it is human nature – and his unfettered creativity: a lack of professional ethics, dishonesty, a conflict of loyalty, greed, a lack of scruples, and an elementary sense of responsibility are the fundamental reasons for accounting manipulation. A breach of ethical rules within corporate financial practice through financial misstatements usually damages an organisation's reputation, customer satisfaction, and investors' trust (Jaijairam, 2017). Gowthorpe and Oriol (2005) analysed two main categories of manipulative behaviour at the micro and macro scales while considering them in an ethical context. Both were assessed poorly, indicating that such activities can be seen as attempts at creativity by the preparers of financial statements.

Belski et al. (2008) researched how students regard manipulation. They investigated business school students regarding the acceptability of specific income management activities. The study found that revenue management intent matters. According to the respondents, managers who engage in income management that was considered opportunistic or selfish were considered more unethical than income management behaviours aimed at increasing company efficiency. In addition, research shows that the method of manipulation was also important. Manipulating accounting estimates was considered the least ethical, while changes in the accounting method were considered the least unethical.

Cuzdriorean (2013) surveyed accounting students to ascertain how they assess the ethics of managing short-term income. The results demonstrate that the ethical acceptance of short-term income management depends on the type of manipulation. The research also showed that students with higher moral development rates in short-term income management practices are less ethical and less likely to accept them.

Herbei and Cernusca (2015) conducted a study exploring students' and professional accountants' views regarding various forms of creative accounting in Romania. Both groups had similar opinions, rejecting the idea of using creative accounting to manipulate accounting figures and distort the portrayal of financial statements

and results. They believe that recourse to ethics in accounting is necessary because, based on professional judgment, the accounting policy of the enterprise is developed.

A similar study to ours was conducted by Chiaravutthi (2020). His research focused on the differences between students at universities in Thailand in terms of their ethical orientation and how these differences determine their perception of business ethics. As in our study, he classified respondents into four groups based on their dimensions of relativism and idealism. He showed that most Thai students are classified as situationists because they do not rely on moral codes to make ethical judgments despite concerns about the welfare of others. Absolutists, who follow the rules and principles and care for others, seem to have strong and positive views on the importance of business ethics.

There has been a lack of research into how accounting students in Poland view accounting and operational manipulation in relation to moral attitudes. Our research showing accounting students' ethical assessment of manipulation fills this gap.

2. Research methodology

2.1. Measures of ethical ideologies used

We assessed the idealism and relativism of the respondents using Forsyth's Ethics Position Questionnaire. It measures individual differences in moral thought by indicating the agreement status using a scale ranging from 1 (disagreement) to 9 (agreement). Forsyth (1980) proposed two dimensions in the ethical evaluation of individuals: idealism and relativism. "Relativism" describes the degree to which individuals reject universal moral norms. "Idealism," on the other hand, is the individual's belief that "other divisive actions can always determine a desired state of affairs" (cf. Chudzicka-Czupala, 2013).

To determine the respondents' personal moral philosophies, we used a median from Forsyth's (1980) study. He stated that individuals can be classified into four categories depending on their moral philosophies of idealism and relativism. The first category is "situationists", who advocate a contextual analysis of morally questionable actions. The second is "absolutists", who use inviolate, universal moral principles to formulate moral judgments. The third group are "subjectivists", who argue that moral judgments should depend primarily on one's values. The last category is "exceptionists", who admit that exceptions must sometimes be made to moral absolutes. Taking the above taxonomy as a model, situationists score highly on idealism and relativism. Subjectivists have a low level of idealism but high relativism, while absolutists score highly on idealism and low on relativism. Finally, utilitarians tend to deviate from ethical principles and reject them with low idealism and low relativism.

2.2. Operational and accounting manipulation measures

The questionnaire used in this study involved scenarios of realistic earnings management activities to analyse ethical judgments on earnings management. The questionnaire was adapted from the one developed by Bruns and Merchant (1990) and translated into Polish. The complete questionnaire, including each question and alternative, was published in "Harvard Business Review". The scenarios addressed different earnings management practices, including choosing and timing operating events and recognising specific revenues and expenses. Therefore, they covered both operating and accounting manipulations. In the original questionnaire and the translation used in this survey, neutral wording was used, which means that the manager's behaviour was not described with words that could suggest an opinion or cause an unconscious or deliberate bias among respondents.

We distinguished two types of manipulation according to Merchant (1989), operating and accounting. Operating decisions affect cash flows and net income, such as easing credit terms to increase sales. Accounting manipulations use the flexibility in accounting standards to alter earnings numbers (Merchant, 1989, as cited in Elias, 2002). Merchant developed a questionnaire comprising 13 common earnings management scenarios, of which six questions dealt with operating manipulations and seven dealt with accounting manipulations. The respondent plays the role of a manager's supervisor engaging in the earnings management activity and rates the ethics of the action on a 5-point scale ranging from ethical to not ethical (Merchant, 1989, cited in Elias, 2002).

2.3. Determining the sample

The sample consisted of 219 accounting students from the University of Warmia and Mazury in Olsztyn ($n = 160$) and the University of Gdansk ($n = 59$). The mean age was approximately 24.7 years, and students aged 19 to 25 were the predominant group (89%). The majority of the respondents were female (85%). In terms of work experience, most (61%) did not work (NW), 33 respondents claimed to be working in the accounting profession (PK), and 53 – in other occupations (PP).

The justification for the selection of the target group is that these are people in the process of education, and, as future accounting specialists, awareness of behavioural and ethical issues should be raised. Thus, accounting students constitute future human resources whose attitudes towards manipulation are of great importance in counteracting the problem.

3. Research results

3.1. Data analysis

We used multiple linear regression models to analyse the effects of age, gender, and education level on operation decisions and accounting manipulation judgments. Firstly, two regression equations were generated, one with the accounting manipulation (ACC) score as the dependent variable and the other with the operational decision manipulation (OM) score as the dependent variable. In these regression equations, age, gender, work experience, relativism, and idealism score were the independent variables. We coded the qualitative variables as follows: (i) the gender dummy was assigned the value 0 if the respondent was male or 1 if the respondent was female; (ii) the work experience dummy was assigned 1 for NW, 2 for PP, and 3 for PK.

Secondly, we classified the respondents into one of the four ethical ideologies (absolutists, subjectivists, situationists, and exceptionists). We again used multiple linear regression models to analyse the effects of age, gender, education level, and the four ideologies on decision and accounting manipulation judgments. The ethical ideologies dummy we coded as follows: 1 – sit; 2 – exc; 3 – abs; 4 – sub.³

The Mann-Whitney test was performed to test for significant differences in the type of ACC and OM manipulation; to test for significant differences in the ethical ideologists, a Wilcoxon signed-rank test was performed. A p-value of less than 0.05 was considered statistically significant. All calculations were performed using STATISTICA 13.3 (2011).

3.2. Findings and discussion

3.2.1. Determinants of ethical judgements (manipulation)

In the first step, we tested accounting and decision operation manipulation determinants. Initially, we built two regression models with relativism and idealism as the independent variables (Table 1). The adjusted R^2 for the ACC score model was 0.04, while the OM score model had an adjusted R^2 of 0.051. The F-statistics for the ACC model and the OM model were 1.791 and 2.269, respectively, with the probability value of the F-statistic < 0.05 for the OM score model.

³ The abbreviations are as follows: sit – situationists, exc – exceptionists, abs – absolutists; sub – subjectivists. A detailed description of the measures is included in section 2.1.

Table 1. Determinants of ACC and OM-manipulation (idealism and relativism)

Independent variables	ACC score		OM score	
	Coeff.	t-Stat	Coeff.	t-Stat
Constant	3.057	8.484	3.943	8.866
Idealism score	0.060	1.859	0.044	1.086
Relativism score	−0.045	−1.391	−0.119 ^a	−3.008
Gender	0.024	0.205	0.080	0.545
Work experience	−0.049	−0.842	−0.081	−1.132
Age	−0.019 ^a	−2.075	−0.014	−1.246
N	219		219	

^a Statistically significant at the 0.05 level.

Source: authors' own elaboration.

Second, we built two regression models with more detailed ethical ideologies (situationist, absolutist, subjectivist, and exceptionist) as the independent variables (Table 2). The adjusted R² for the ACC score model was 0.043, while the OM score model had an adjusted R² of 0.011. The F-statistics for the ACC model and the OM model were 2.427 and 0.581, respectively. The probability value of the F-statistic was < 0.05 for the ACC score model.

Table 2. Determinants of ACC and OM manipulation (ethical ideologies)

Independent variables	ACC score		OM score	
	Coeff.	t-Stat	Coeff.	t-Stat
Constant	3.287	12.069	3.479	10.127
Ethical ideologies	−0.082 ^a	−2.249	−0.021	−0.451
Gender	0.024	0.205	0.099	0.671
Work experience	−0.005	−0.096	−0.013	−0.191
Age	−0.019 ^a	−1.916	−0.014	−1.209
N	219		219	

^a Statistically significant at the 0.05 level.

Source: authors' own elaboration.

Age had a significant influence on assessments of accounting manipulation, which is consistent with Bekiaris and Papachristou (2017). Their research indicated that people aged 41–60 make more manipulations than employees under 31. Such an approach to manipulation may result from the fact that young people starting their professional careers are not interested in this type of practice, which, if detected, will negatively affect their future careers. This then translates

into how they assess the kind of manipulation (i.e., accounting or operational) (see Table 4). However, we did not confirm the influence of idealism or relativism on accounting manipulation. This suggests that both a high idealist who cares about the welfare of others, so he will avoid harming others at all costs, and a relativist, who does not have a strong belief in universal ethical principles, will similarly assess accounting manipulation (Chiaravutthi, 2020).

On the other hand, the influence of age on OM manipulation was not significant, in contrast to the relativism score. These results suggest that relativists, who do not firmly believe in universal ethical principles, view operational manipulation as a practice akin to ethical behaviour. This confirms hypothesis **H3**: “Age influences ethical judgments of manipulation” but only in terms of ACC manipulation. The result is also consistent with Chiaravutthi (2020), which shows that students with a high degree of relativism tend to agree that success requires some dishonesty and that results are more important than the method used.

3.2.2. Ethical ideologies and ethical judgments of manipulation

In the next step, we tested the respondents’ perception of accounting and operational manipulations depending on the moral philosophy presented. The mean answers on the ethical judgements for ACC and OM manipulation across the four different ethical ideologies are shown in Table 3. Students with all analysed ethical doctrines perceive Accounting manipulation as less ethical than OM manipulation. It can, therefore, be assumed that “Accounting manipulation is perceived as less ethical than OM manipulation” (**H1**), although our findings differ from those of Belski et al. (2008). In their research, the respondents considered income management through changes to accruals or estimates to be the most unethical. On the other hand, they considered changes in accounting methods to be the least dishonest of the whole group of manipulations. This demonstrates that the students in their study believe operational manipulation to be more unethical than accounting manipulation.

Table 3. Ethical ideologies and ethical judgements on manipulation

Variable ^a	n	ACC	OM
		Average (SD)/Median [Q1–Q3]	
sit	116	3.15 (0.78)/3.25 [2.50–3.75]	2.78 (0.62)/2.75 [2.44–3.25]
exc	21	3.25 (0.67)/3.25 [2.75–3.50]	2.64 (0.62)/2.75 [2.37–3.00]
abs	51	3.29 (0.74)/3.50 [2.75–4.00]	2.69 (0.59)/2.75 [2.37–3.00]
sub	31	2.89 (0.71)/3.00 [2.50–3.50]	2.45 (0.57)/2.50 [2.00–2.87]

^a OM vs. ACC: statistically significant at the 0.05 level; scale from 1 (ethical); 5 – not ethical.

Source: authors’ own elaboration.

Table 4. Ethical ideologies and manipulation of ethical judgements according to age

Variable		ACC	OM
Ethical ideology	Age ^a	Average (SD)/Median [Q1–Q3]	
sit	19–24	3.16 (0.78)/3.25 [2.50–3.75]	2.80 (0.59)/2.75 [2.50–3.25]
	25–45	3.00 (0.79) /3.00 [2.25–3.75]	2.60 (0.85)/ 2.50 [2.00–3.12]
exc	19–24	3.25 (0.66)/3.25 [2.75–3.50]	2.76 (0.51)/2.87 [2.37–3.12]
	25–45	3.25 (1.06)/3.25 [2.50–4.00]	1.50 (0.35) /1.50 [1.25–1.75]
abs	19–24	3.28 (0.74)/3.00 [2.50–3.50]	2.73 (0.61)/2.75 [2.37–3.25]
	25–45	3.34 (0.80)/3.62 [2.50–4.00]	2.47 (0.40)/2.62 [2.31–2.75]
sub	19–24	2.97 (0.68)/3.50 [2.75–3.75]	2.53 (0.54)/2.62 [2.06–2.93]
	25–45	2.08 (0.52)/2.25 [1.50–2.50]	1.75 (0.33)/1.87 [1.37–2.00]

^a OM vs. ACC: statistically significant at the 0.05 level; scale from 1 (ethical); 5 – not ethical.

Source: authors' own elaboration.

The absolutist group was the most restrictive, assessing accounting manipulation as the least ethical behaviour ($p < 0.01$). Subjectivists were the least restrictive. Regarding operational manipulation, situationists were a significantly more stringent group than the other respondents. In this case, the subjectivists ($p > 0.01$) considered operational manipulation to be the most ethical practice among the different groups studied, confirming hypothesis **H2**: “Ethical ideologies influence the ethical judgment in manipulation”.

Considering our assumption that factors such as age, labour force participation, and gender may influence different perceptions of accounting and operational manipulation by students presenting different moral philosophies, we analysed data in this area. Our findings show that in terms of age, only older situationists did not perceive ACC and OM manipulation significantly differently. In other cases, all individualists perceived ACC manipulation as less ethical than OM manipulation. Thus, we confirmed hypothesis **H3**: “Age influences ethical judgments of manipulation”.

Our study also verified the perception of manipulation among various ethical groups, considering the respondent's professional activity (i.e., works in accounting, works outside accounting, does not work). Our research shows that ethical ideologies influenced the manipulation of ethical judgements in the case of non-working individuals. Surprisingly, students who worked in accounting did not perceive accounting manipulation more harshly than OM manipulation, except for absolutists. This indicates that absolutists and subjectivists working in other professions found ACC manipulation to be less ethical than OM (see Table 5). Therefore, we confirm hypothesis **H5**: “Work experience influences ethical judgment manipulation”.

Table 5. Ethical ideologies and manipulation of ethical judgements according to professional activity

Variable		ACC	OM
Ethical ideology	Professional activity	Average (SD)/Median [Q1–Q3]	
sit	PP	3.24(0.80)/3.25 [2.87–3.87]	2.99(0.73)/ 3.12 [2.68–3.56]
	PK	2.92 (0.69)/3.12 [2.37–3.37]	2.74(0.56)/2.75 [2.50–3.12]
	NW ^a	3.16 (0.79)/3.25 [2.50–3.75]	2.73 (0.59)/2.75 [2.37–3.12]
exc	PP	3.28 (0.94)/3.00 [2.62–3.87]	2.61 (0.86)/ 2.81 [1.93–3.25]
	PK	3.19 (0.51)/3.12 [2.75–3.62]	2.87 (0.31)/2.94 [2.62–3.12]
	NW ^a	3.25 (0.48)/ 3.25 [3.00–3.50]	2.55 (0.50)/2.62 [2.37–3.00]
abs	PP ^a	3.27 (0.74)/3.50 [3.25–3.75]	2.78 (0.60)/ 2.87 [2.50–3.25]
	PK ^a	3.19 (0.69)/3.25 [2.75–3.75]	2.49 (0.65)/2.50 [2.12–2.75]
	NW ^a	3.39 (0.80)/2.62 [2.75–4.00]	2.78 (0.50)/2.75 [2.56–2.93]
sub	PP ^a	2.91 (0.58)/3.00 [2.50–3.50]	2.25 (0.60)/ 2.12 [1.87–2.87]
	PK	–	–
	NW	2.87 (0.79)/3.00 [2.50–3.50]	2.56 (0.53)/2.69 [2.06–3.06]

^a OM vs. ACC: statistically significant at the 0.05 level; scale from 1 (ethical); 5 – not ethical.

Note: Professional activity is marked with the following symbols: PP – works outside accounting; PK – works in accounting; NW – does not work.

Source: authors' own elaboration.

We investigated how men and women perceive accounting and operational manipulation in terms of their ideological attitudes. We believe that the ethical assessment of manipulation may translate into initiating this type of practice in business practice in the future, which is why we examined whether gender is relevant in the assessment of accounting and operational manipulations. We reject hypothesis **H4**: “Gender does not influence ethical judgment manipulation”. Our research shows that gender is an important factor in perceptions of manipulation, with respondents' attitudes varying regarding their perceptions of accounting and operational manipulation. Women with different ethical ideologies found ACC manipulation to be less honest than OM manipulation. For men, on the other hand, it did not matter what kind of manipulation was committed. However, it can be assumed that if we extend our research sample, which we set at 219 respondents, the results could indicate significance in the perception of a given type of manipulation in the case of men.

Our findings align with those of Klietnik et al., who indicated that gender affects how a company's accounting is managed. If a woman is a director, the company is considered non-manipulative. In contrast, if a man is in charge, the company has

a solid incentive to falsify financial reports (Kliestik et al., 2022). This observation may explain why men do not care if or what manipulations are committed, as they regard such phenomena to be standard practices. Clikeman et al. (2001) found that for students of both sexes, the type, direction, significance of manipulation, and the intentions of the manager have a similar influence. They found no statistically significant differences between female students in these categories.

Our detailed analysis, which considered ethical ideologies, allows us to conclude that women, depending on their moral attitude, evaluate accounting manipulation differently. Absolutists are the least tolerant of accounting manipulations, while subjectivists sit somewhere in the middle (Table 6). This confirms the finding of Chiaravutthi (2022), who claimed that subjectivists are inclined to believe that dishonesty is an integral part of interests, and companies do not care so much about the method as about the consequences. On the other hand, the assessment made by absolutists, who usually use inviolable, universal moral principles in formulating moral judgments, is not surprising. In contrast, the type of manipulation does not matter for men, no matter their ideology.

Table 6. Ethical ideologies and manipulation of ethical judgements according to gender

Variable		ACC	OM
Ethical ideology	Gender	Average (SD)/Median [Q1–Q3]	
sit	M	2.75 (0.64)/3.00 [2.50–3.00]	2.71 (0.64)/2.62 [2.50–2.75]
	F ^a	3.19 (0.78)/3.25 [2.50–2.50]	2.80 (0.61)/2.75 [2.50–3.25]
exc	M	3.37 (0.48)/3.50 [3.00–3.75]	2.72 (0.41)/2.75 [2.37–3.06]
	F ^a	3.20 (0.73)/3.00 [2.75–3.50]	2.61 (0.69)/2.81 [2.12–3.06]
abs	M	3.65 (0.78)/3.50 [3.25–4.00]	2.92 (0.51)/2.75 [2.75–3.00]
	F ^a	3.23 (0.73)/4.00 [2.75–3.75]	2.66 (0.60)/2.75 [2.19–3.00]
sub	M	2.75 (0.94)/2.50 [2.25–3.50]	2.40 (0.60)/2.75 [2.00–2.87]
	F ^a	2.90 (0.60)/3.00 [2.50–3.25]	2.43 (0.55)/2.50 [2.00–2.87]

^a OM vs. ACC: statistically significant at the 0.05 level; scale from 1 (ethical); 5 – not ethical.

Source: authors' own elaboration.

Conclusion, limitations and future research

The purpose of the study was to assess the impact of personal moral philosophies, ethics, and ethical judgment on operational and accounting manipulation among accounting students. Our study revealed that accounting manipulation is perceived as less ethical than operational manipulation, with gender being an important factor. Age has a significant influence on accounting manipulation

assessment; however, we did not confirm the influence of idealism or relativism on accounting manipulation. The absolutist group was the most restrictive when assessing accounting manipulation as the least ethical behaviour. Finally, work experience was a significant factor that influences ethical judgment manipulation.

Due to the ever-growing concerns about unethical business practices, there is an increasing demand to emphasise Chiaravutthi's business ethics (2020). Therefore, our findings fill the research gap in the ethical assessment and attitudes of accounting students in Poland towards the phenomenon of accounting and operational manipulation. This target groups' scrutiny of manipulative practices is critical given their future role in human resources in the business world.

We believe that two main conclusions can be drawn from our research. First, the education process is invaluable. Students' attitudes towards unfair practices, such as accounting or operational manipulations, need to be shaped. Thus, the results of our research may contribute to updating the accounting education system by raising awareness about ethics in future accounting specialists. We share the opinion of Herbei and Cernusca (2015) regarding the introduction of elements of "creative accounting" into the curriculum. Including an indication of types, techniques, and areas of manipulation, both accounting and operational, contributes to the acquisition of knowledge by students in this field while discouraging the adoption of such practices in the future.

Secondly, the results can provide a scientific information base to help professional associations when working on ethical standards. We hope that the findings will contribute to the continuation of this thread. Thus, we recommend expanding the research to include a broader target group and differentiating respondents regarding their profession and position in the organisation.

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