

TESTING MASTER STUDENTS PERCEPTION REGARDING JUDGMENT AND DECISION MAKING IN ACCOUNTING

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Abstract: *The human mind is amazing. Judgment and reasoning is also a fascinating and complex world. The purpose of this paper is to link the perception of master students to professional judgment and decision making in accounting and to analyze and test some correlations between endogenous human variables and the act of reasoning. The variables were selected after studying psychology cognition literature based on works conducted by researchers interested in matters like economics or financial reporting. Our research was carried out based on a questionnaire and the investigation was conducted in October-November 2014, being elected economics master students from University of Oradea, Faculty of Economics, majors AABM and FBI. These majors were chosen because their academic curricula contain accounting disciplines. We have received answers from 106 students. Intentionally, the study was conducted on economic master students rather than on professional accountants because for the former making logical judgments for assigning an appropriate accounting treatment of an event requires more effort, more attention. Taking into account works done by previous researchers interested in the topic of heuristics for making accounting judgments we have statistically tested our research hypotheses. The obtained results showed that there is a weak influence between the master students' age and the way they make decisions and their perception on the necessity of existence of a theoretical conceptual framework for professional JDM in accounting and there is a correlation between master students' ability to assume risks and their opinion on the choice of accounting handling. The main finding of this empirical study is that such research topic is worth to be continued to investigate and develop other possible links between psychological triggers and JDM in accounting.*

Keywords: accounting, professional judgment, master students, human variables, statistic tests

JEL classification: M41, M410

1. Introduction

The interest for the present study lies in our previous concerns regarding the impact of psychological factors in accounting and financial reporting and the analysis of the elements that define and determine the exercise of quality professional judgment in accounting. This article describes only part of the study and considers testing the perception of economics master students on the professional accounting judgment. The professional accounting judgment suggests the set of logical judgments usually exercised by a professional accountant (meaning a chartered accountant or a financial auditor) to identify the appropriate accounting treatment assigned to an economic and / or financial event or transaction. Of course, an accounting professional judgment will be influenced by a number of factors or endogenous human variables and exogenous variables that come from the environment. The study carried forward tested mainly some of the correlations between the endogenous human variables and the exercise of a professional accounting judgment. Intentionally, the study is conducted on economics master students rather than on accountants because for the former making logical judgments for assigning an

appropriate accounting treatment of an event requires more effort, more attention. In the case of professional chartered accountants the exercise of professional accounting judgments for economic events frequently encountered in practice represents a professional routine and does not require much attention and sustained effort. To achieve our approach we used the study of some of the endogenous human variables that we considered they could have an influence on a professional accounting judgment and we designed a questionnaire that was given to the master students of the Faculty of Economic Sciences, first and second year of study, majors AABM and FBI. These majors were chosen because their academic curricula contain accounting disciplines. We were interested in investigating whether the master economists of the mentioned majors have a job in the field that relates to accounting, how old they are and how they perceive the professional accounting judgment. A number of questions were focused on the personality traits of an individual, the aim being to analyze the results from a psychological perspective.

This article further summarizes a theoretical foundation for the study proposed and carried forward by us, a description of the methodology and tools of research, the formulation and testing of research hypotheses and in the end the outlining of findings and notes regarding future research on this topic.

2. Background of the study

It is well known the interdisciplinary character of professional judgment. It is to be found in all fields of activity, from medicine, chemistry, physics, law, psychology to accounting. Given that this study relates to the field of accounting at the intersection with cognitive psychology, we care to understand the professional accounting judgment in terms of its positive valences as a concept and decision-making act. As Cernușca rightly noticed (2015), in the field of accounting, the professional judgment, by its nature, is a concept that induces the idea of subjectivity and the way in which it is understood by professional accountants may lead to the proliferation of accounting phenomena of intent. Cernușca (2015) makes this observation in the context of conducting a study whose central objective is to investigate the perception of professional accountants on the manifestation of professional judgment within the accounting perimeter. The results of research conducted by Cernușca (2015) confirms that most of the professional accountants surveyed consider that the current Romanian accounting regulations provide sufficient opportunities for the expression of professional judgment within the accounting field and that most respondents would not respond favorably to the request of the entity's management to manipulate the accounting figures in order to fix the outcome or for tax optimization reasons. The target group used by Cernușca (2015) in his research is made up of the professional accountants members of the Arad CECCAR (BELAR – The Body of Expert and Licensed Accountants of Romania) subsidiary, and the variables that he takes into account in their influence on the exercise of professional judgment, have been identified by us as being the exogenous variables. The results of a study conducted by Cernușca and Balaciu (2014) show that the accounting students believe that modern IT technology working in the accounting area cannot replace professional judgment. It is important the perspective emphasized by Feleagă and Malciu (2002) regarding the manifestation of accounting judgment in designing and developing the company's accounting policies. They noted that the development and substantiation of the company's accounting policies cannot be achieved except by using the judgment, stating that a modern accounting requires the use of accounting policies and estimation techniques and, to an acceptable extent, the use of accounting options. An interesting study is that conducted by Bunea (2015) which analyzes the exercise of professional accounting judgment in the recognition, measurement and use of provisions under the new accounting regulations, such as those approved by Order of the Ministry of Public Finance, n. 1802/2014. The study involves a thorough analysis of exogenous variables, to understand changes in the local accounting regulation, in its

influence on the manifestation of the professional accounting judgment on a case, that of the provisions. In the context of the same action of this exogenous variable, meaning the accounting regulation, is also Groșanu's vision (2013) who considers that the professional judgment is the concept that is found in the application of accrual accounting and in ensuring the business continuity and in this context the professional accountant is the one on which on which the proper application of accounting regulations depends fundamentally in order to accurately represent the economic reality. Unlike the studies mentioned above, our research is based on the fundamental premise that the judgment before being connected to a domain and then to a particular guild, is exercised by an individual. Obviously, the individual has certain characteristics and personality traits, is usually rational in his choices and decisions, lives in a community, has a certain amount of general and specialized knowledge and some living and professional experience. The central idea is that no matter how rational the individual would be in exercising a judgment it involves a certain degree of subjectivity. In our opinion subjectivity is connected to those human endogenous variables we mentioned above. This vision has to do with the fact that the economic reality is only one yet the individuals' perception on it is nuanced / shaped in relation to that system of human endogenous variables. These are related to the individual personality, motivation, knowledge and skills, his beliefs and the pressure of the environmental factors. Thus, our study is based on the international guide for preparers, auditors, regulators and standard setters regarding the professional judgment framework for financial reporting ICAS (2012) and the studies undertaken by Bonner (1999), Ashton R.H. & Ashton A.H. (1999), Kahneman & Frederick (2002; 2005), Libby and Luft (1993) Stanovich and West (2002) and Schiller (2013).

In agreement with the provisions of the ICAS (2012) theoretical framework, a professional judgement is a key skill for preparers, auditors and regulators of financial statements, especially under a principle based accounting regime, but making a judgment can be difficult and there is not necessarily one correct answer. ICAS (2012) pleads for the existence of a theoretical framework based on principles which can be used by preparers, auditors and regulators of financial statements, in order to exercise good judgments within which the economic substance of transactions can be faithfully represented, especially in a complex and changing environment. The definition of such a framework according to ICAS (2012) is the following: "*a professional judgment framework sets out a structured process by which preparers and auditors, with an appropriate level of knowledge, experience and objectivity, can form an opinion on an accounting matter based on the relevant facts and circumstances within the context provided by applicable accounting standards*". As Bonner (1999) highlighted, JDM researchers strived to measure individuals' performance when carrying out judgment and decision making tasks and they examined the determinants of both high and lower quality JDM. In our opinion is relevant what Libby and Luft (1993) and other researchers emphasized that in an accounting and financial reporting setting, errors in JDM may have major significance at a more far-reaching level than the individual level. Schiller (2013) observed that from a preparers' perspective, individual accountants make accounting judgments, while the CEO's make formal decisions regarding accounting and financial reporting; so it is important to make a distinction between judgment and decision. We agree with Bonner's opinion (1999), who considers that the term of judgment characteristically refers to "*forming an idea, opinion, or estimate about an object, an event, a state, or another type of phenomenon*", whereas the term decision refers to "*making up one's mind about the issue at hand and taking course of action*". Yet, of course if the professional accountants are also the financial managers or chief accountants they are practically in a double situation/position. Hence, they need to make up an opinion as objective and neutral about the event as possible but will have to also make decisions on the accounting treatment applied to the event. On the other hand, the research carried out by Kahneman & Frederick (2002; 2005), Stanovich and West (2002) and Schiller (2013) brings to attention issues related to the two systems making up the cognitive process, i.e.

system 1 based on intuition and system 2 based on judgments. Stanovich and West (2002) described that the operations of system 1 are fast, automatic, effortless, associative and difficult to control or modify, whereas the operations of system 2 are slower, serial, effortful and deliberately controlled, but are also relatively flexible and potentially rule-governed. In Schiller's (2013) opinion the two mentioned systems indicated that heuristics are experience-based and by studying processes on which accounting judgments are founded we can learn more about how accountants reason in relation to various accounting standards given different economic situations. In view of the above, our study is characterized by interdisciplinary issues related to professional accounting judgment and cognitive psychology.

3. Research design

Our research is qualitative in nature and aims to investigate and test the perception of economics master students on professional accounting judgment. As shown in the above a professional accounting judgment is influenced by a number of human endogenous variables that refer to the individual's cognitive abilities, personality traits, age, accumulated knowledge, professional experience, etc., and exogenous variables related to influences coming from the environment, such as: accounting standards and regulations, financial reporting framework, code of ethics, accounting policies and procedures manual, code of corporate governance, corporate culture, financial reporting practices, etc. In the present study we analyzed the correlations aimed at the perception of economics master students on professional accounting judgment influenced by several human endogenous variables. The research was carried out based on a questionnaire structured in 2 parts: one part requesting general information on professional status, the existence of a job in accounting or a related field, age and gender and one part containing questions on professional accounting judgment, accounting options and the ability of individuals to make decisions, take risks, choose from options, find creative solutions, etc. The first part contains a number of 7 questions and the second 22 questions. Based on previous similar studies made by us, Bogdan et al (2009), the investigation was conducted in October-November 2014, being elected economics master students from the majors AABM and FBI, for reasons outlined above, forming a total population of 106 students. The questionnaire was applied directly to the classroom and online to ensure an adequate rate of response. A total of 82 AABM students and 24 FBI students answered our survey. Please note that the questionnaire was administered only to FBI students, second year of study, as they are the only students having in their curricula the discipline called IFRS. Over 95% of the master students investigated are between 18 and 25 years old and over 80% of them are women and only 23% of the students investigated are considered to be very optimistic. The questionnaire contains mostly closed questions and a few open questions. For most questions the Likert scale was used with 5 response categories. The economics master students investigated showed interest in the topic of the questionnaire and made direct or written questions where unclear or concerned about the content of the questions. There were selected master students and not undergraduate students because the master students have accumulated more knowledge in the field of accounting and some have jobs related to accounting.

4. Hypotheses development and validation

Taking into account the above mentioned ideas and works we have elaborated the following research hypotheses.

H1: The master students' professional experience in accounting is directly correlated to their perception regarding an accountant's ability to make a professional JDM in accounting.

To test this research proposition, we analyzed the distribution of answers to questions: *I.Q2. Have you ever had an accounting related job?, I.Q3. Do you work at the moment?,*

I.Q4. *If the answer to the previous question was yes, is your job related to accounting?* - on one hand and II.Q2. *In your opinion, the succesful implementation of principles-based accounting standards or regulations depends on the accountants' ability to produce a quality professional JDM in accounting?* II.Q16 *The profesional JDM in accounting is a key ability for the accountants, auditors and regulators?* and II.Q17 *Do accountants have to question economic events and transactions and be able to issue professional JDM in accounting?* - on the other hand. In order to test this research hypothesis, we will assign 0 points to the students that were never employed, 1 points to those that have had a job in other domains than accounting, and 2 points to those that are or were employed in accounting related jobs. For the answer choices to the questions II.Q2, II.Q16 and II.Q17 characterizing their perception regarding an accountant's ability to produce a professional accounting reasoning are *Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree*, we will assign respectively 1 to 5 points to these answers, and then we will compute the average. We will construct the cross tabulation between the points associated to the 2 sets of questions, and we'll use Chi-Square method to validate the research hypothesis, in the sample as well as in the total population. The Chi Square value in the sample is 9,03, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the following hypothesis test:

$$H_0 : \chi^2 = 0$$

$$H_1 : \chi^2 \neq 0$$

In order to decide whether the H_0 hypothesis can be rejected, the calculated value, 9,03, is compared to the critical one, for 12 degrees of freedom and a probability of 95%, which in our case is 21,05. As the calculated value is smaller than the critical one, hypothesis H_0 cannot be rejected, therefore, there is no correlation between the two variables at the level of total population.

Research hypothesis H_1 is validated in the sample but not in the total population.

H2: The master students' age and the way they make decisions in ordinary life influence their perception on the necessity of existence of a theoretical conceptual framework for professional JDM in accounting.

This research proposition will be split into 2 sub-hypothesis. First we analyzed the distribution of answers to questions: I. Q6. *What is your age?* and II.Q9 *A professional JDM in accounting can be issued only after all the information regarding the economic/financial event or transaction have been collected and analyzed.* II.Q10 *A professional JDM in accounting can be issued only within the applicable conceptual accounting framework, accounting standards or regulations and other accounting guides?* II.Q11 *A professional JDM in accounting can be issued only after an appropriate assesment?* II.Q12 *A professional JDM in accounting must be very well documented?*

The master students' perception on their ability to make decisions will be measured by assigning values between 1 to 5 to the answers to questions II.Q9 to II.Q12., the higher the score, the stronger they agree to them. We computed an average score and we constructed a distribution table between the average score and the students' age. In order to validate our hypothesis, we used the Chi Square method. The calculated value in the sample is 9,75, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, 9,75, is compared to the critical one, for 4 degrees of freedom and a probability of 95%, which in our case is 9,48. As the calculated value is higher than the critical one, hypothesis H_0 will be rejected, therefore, there is a correlation between the two variables at the level of total population but the correlation is quite weak, since the difference between the calculated and critical value is small.

The first part of research hypothesis H2 is validated in the sample and in the total population as well.

Second we analyzed the distributions of answers to questions: *II.Q5 Do you take knowledge, intuition or patterns based decisions?* and *II.Q9 A professional JDM in accounting can be issued only after all the information regarding the economic/financial event or transaction have been collected and analyzed.* *II.Q10 A professional JDM in accounting can be issued only within the applicable conceptual accounting framework, accounting standards or regulations and other accounting guides?* *II.Q11 A professional JDM in accounting can be issued only after an appropriate assesment?* *II.Q12 A professional JDM in accounting must be very well documented?*

We constructed a distribution table based on the average score reflecting the master students' perception on their ability to take decisions and their taking decisions way. In order to validate the second part of our research hypothesis, we used the Chi Square method. The calculated value in the sample is 17,88, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, 17,88, is compared to the critical one, for 12 degrees of freedom and a probability of 95%, which in our case is 21,02. As the calculated value is lower than the critical one, hypothesis H_0 cannot be rejected, therefore, there is no correlation between the two variables at the level of total population. The second part of research hypothesis H2 is validated in the sample but not in the total population.

H3: The master students' ability to assume risks is correlated with their perception regarding a professional JDM and with their opinion on the choice of accounting policies.

This research proposition will be split into 2 sub-hypothesis. The first is: **H3a. The master students' ability to assume risks is correlated with their perception regarding a professional JDM.**

First we analyzed the distribution of answers to questions: *II.Q4. Supposing the weather forecast said today might be a rainy day, will you take the umbrella with you?* *II.Q6. Two fans of a rock group plan to go on a 250 km trip in order to take part at their favorite group's concert. One of them (John) has already bought his ticket. The other (Vasile) wanted to buy a ticket as well, but he got one as a gift from a friend. The weather forecast said it will snow on the concert's evening. Which of the two friends is more likely to go to the concert? (Respondents were asked to choose only one answer).*

and *I.Q1. Which aspects do you think influence the professional JDM when choosing an accounting handling for booking economic and/or financial events and transactions. (Respondents were asked to select the degree of agreement to a maximum 3 of the possible answers).*

Students that are not likely to take risks will consider that observing the accounting and financial framework, the general accounting principles and the manual of policies and procedures is crucial when carrying out a JDM process. This is why we computed an average score that measures the aversity towards risk (taking into account responses to questions IIQ4 and IIQ6). that ranges from 0 to 1 (propensity – adversity towards risk). We have also computed an average score that measures the perception regarding the proffessional JDM, using a weighted arithmetical mean of the scores of each item from the above mentioned question.

In order to validate the second part of our research hypothesis, we used the Chi Square method. The calculated value in the sample is 24,93, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, is compared to

the critical one, for 36 degrees of freedom and a probability of 95%, which in our case is 50,99. As the calculated value is smaller than the critical one, hypothesis H_0 cannot be rejected, therefore, there is no correlation between the two variables at the level of total population. The first part of research hypothesis H3 is validated in the sample but not in the total population.

H3b. The master students' ability to assume risks is correlated with their opinion on the choice of accounting handling.

Then we analyzed the distribution of answers to questions: *II.Q4. Supposing the weather forecast said today might be a rainy day, will you take the umbrella with you? II.Q6. Two fans of a rock group plan to go on a 250 km trip in order to take part at their favorite group's concert. One of them (John) has already bought his ticket. The other (Vasile) wanted to buy a ticket as well, but he got one as a gift from a friend. The weather forecast said it will snow on the concert's evening. Which of the two friends is more likely to go to the concert? (Respondents were asked to choose only one answer).*

and II.Q13. The choice of an accounting policy as a result of a JDM process will be taken after consulting the manager? II. Q14. A quality JDM will conduct to relevant financial information?

We have constructed a correlation table between the average scores to questions II.Q4 and II.Q6, computed as mentioned above and the average score associated to questions II.Q13 and II.Q14, as presented below:

Table 1. Cross-tabulation between average scores associated to questions used invalidation of H3b research hypothesis

		Average scores associated to IIQ13 and IIQ14					Total
		3,00	3,50	4,00	4,50	5,00	
Average scores associated to IIQ4 and IIQ6	0,00	0	0	0	0	3	3
	0,50	1	9	17	7	1	35
	1,00	8	21	24	6	9	68
Total		9	30	41	13	13	106

As seen in Table 1, there is a correlation between the average scores associated to questions used invalidation of H3b research hypothesis, as most of the frequencies are grouped in the lower half of the table, under its second diagonal. In order to validate the second part of our research hypothesis, we used the Chi Square method. The calculated value in the sample is 29,9, and since this value is not close to 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, is compared to the critical one, for 8 degrees of freedom and a probability of 95%, which in our case is 16,91. As the calculated value is higher than the critical one, hypothesis null will be rejected, therefore, there is a correlation between the two variables at the level of total population. **The second part of research hypothesis H3 is validated in the sample and in the total population as well.**

H4: Master students' free thinking and their optimistic attitude is correlated to their perception regarding the factors influencing a professional accounting JDM process.

We analyzed the distribution of answers to questions: *I.Q1. Which aspects do you think influence the professional JDM when choosing an accounting handling for booking economic and/or financial events and transactions. (Respondents were asked to select the degree of agreement to a maximum 3 of the possible answers).*

and II.Q15. Do you account yourself as being an optimist? II.Q20. Your personal and professional day to day life choices are taken by yourselves?

We have assigned scores from 1 to 5 to answers to question II.Q15 (1 for the less optimist students, 5 to the optimist ones) as well as to question II.Q20 (1 for the ones that take their choices by letting themselves influenced by others, 5 to the independent ones) and we have computed the average score for each respondent. The scores were used to construct cross tabulations that were used to validate our research hypothesis. In order to validate this hypothesis, we used the Chi Square method. The calculated value in the sample is 78,22, and since this value is much bigger than 0, our conclusion is that there is a strong correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, is compared to the critical one, for 90 degrees of freedom and a probability of 95%, which in our case is 113,14. As the calculated value is smaller than the critical one, hypothesis null cannot be rejected, therefore, there is no correlation between the two variables at the level of total population. Research hypothesis H4 is validated in the sample but not in the total population.

5. Conclusion and future works

Our study conducted on master economic students at University of Oradea studying Accounting, auditing and business management (AABM), and Finance, banking and insurance (FBI) aimed to analyze and investigate their perception on professional accounting judgment and decision making process in correlation with several endogenous human variables. The topic of psychological factors affecting judgments and decision making in accounting was in our attention and focus in previous works too, hence the present research continued our ideas in this research field. It is very intriguing in our vision the study of human variables influencing JDM in accounting in the context of heuristics and biases in relation to accounting reasoning. Regarding the validation of research hypotheses that we have elaborated in this study the obtained results from statistical non-parametric tests showed that there is no correlation between master students' professional experience in accounting and their perception regarding an accountant's ability to make a professional JDM in accounting and also there is no correlation between master students' free thinking and their optimistic attitude and their perception regarding the factors influencing the professional accounting JDM process. Our results also showed that there is a weak influence between the master students' age and the way they make decisions and their perception on the necessity of existence of a theoretical conceptual framework for professional JDM in accounting and there is a correlation between master students' ability to assume risks and their opinion on the choice of accounting handling. Our main finding is that there is much interest in investigating these type of variables in JDM in accounting so we could learn more about how judgments and professional reasonings can be improved in order to obtain more qualitative informations to deliver in financial reports. We intend to continue our work by extending our research sample to professional accountants and auditors and to explore other correlations regarding human variables and intangible assets disclosure practices.

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