



The perceived impact of accreditation on the quality of academic accounting education: students' perspective

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Abstract

The last few years have been a period of intensive accreditation processes concerning accounting majors in Polish universities by institutions which confirm accounting qualifications. Our paper aims to investigate the quality of academic education in the context of ACCA accreditation from the perspective of a critical stakeholder group – students. The identification of their views contributes to the ongoing discussion surrounding the quality of accounting education, and how it relates to practice. The study is based on an online survey questionnaire. There was a total of 384 responses used in the study, provided by students of three leading Polish universities. We took into consideration the characteristics of our respondents such as gender, age, type of studies, and work experience. The multiple regression analysis allows us to conclude that accreditation is a factor that moderately influences the quality of accounting education. Students indicate the subject coverage and difficulties in preparing for accredited exams as highly important factors influencing the education quality. Accreditation and its impact on the quality of education are important and current issues; at the same time, these issues have not been addressed in academic research. The presented study is an attempt to fill the gap in the literature of this field, while also being relevant for practice. The results contribute to a better understanding of accreditation processes and students' expectations. They may also be useful to more successfully design and develop accounting curricula at higher education institutions which have already been accredited or are considering such a possibility.

Keywords: accounting education, quality, higher education, accreditation.

Streszczenie

Postrzeganie wpływu akredytacji na jakość kształcenia w obszarze rachunkowości z perspektywy studentów

Ostatnie lata to okres wzmożonych procesów akredytacji kierunków związanych z rachunkowością w uczelniach wyższych w Polsce przez instytucje certyfikujące zawód księgowego. Celem artykułu jest ocena jakości nauczania rachunkowości w kontekście akredytacji ACCA z punktu widzenia ich najważniejszych interesariuszy – studentów. Identyfikacja poglądów badanej grupy stanowi ważny głos w dyskusji na

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temat jakości kształcenia w obszarze rachunkowości oraz jej związków z praktyką. W badaniach wykorzystano kwestionariusz ankiety online. Objęto nimi 384 studentów trzech wiodących uczelni publicznych. W badaniach wzięto pod uwagę takie cechy jak: płeć, wiek, rodzaj studiów, doświadczenie zawodowe. Przeprowadzona analiza regresji pozwoliła stwierdzić, że akredytacja umiarkowanie wpływa na jakość kształcenia w zakresie rachunkowości. Studenci wskazali zmiany w zakresie wiedzy przekazywanej na zajęciach w związku z procesem akredytacji kierunków oraz trudności związane z przygotowaniem się do akredytowanych egzaminów jako istotne czynniki wpływające na jakość edukacji. Akredytacja i jej wpływ na jakość kształcenia to problem ważny i aktualny, a jednocześnie nie podejmowany w pracach naukowych. Przeprowadzone przez autorów badania stanowią próbę wypełnienia luki badawczej w tym zakresie, są także istotne dla praktyki. Ich wyniki mogą bowiem przyczynić się do lepszego zrozumienia procesów akredytacji i oczekiwań studentów w tym względzie, jak również mogą być pomocne w opracowywaniu planów studiów dla uczelni wyższych.

Słowa kluczowe: kształcenie w zakresie rachunkowości, jakość, kształcenie wyższe, akredytacja.

Introduction

The provision of academic accounting education is a field in which a set of public and private institutions offering accounting programs compete with one another. They succeed when they can attract the best faculty and students and ensure sufficient funding for operations and growth (Fombrun and Shanley, 1990; Fogarty et al., 2016). This competition occurs, to a large extent, through the promotion of an institutional reputation for quality of education.

Quality, the defining element of education in the 21st century, has become an inherent part of academic reality (Khanna and Goyal, 2016). At the same time, there is evidence suggesting that current programs fail to teach students a number of important skills and that numerous accounting educators and practitioners are dissatisfied with the nature of education and the quality of skills possessed by graduates (Madsen, 2015). Therefore, improving the quality of education has become a major contemporary concern in numerous higher education institutions which prepare their students for the labour market.

Within higher education, it is difficult to distinguish any one statement defining what quality truly means (McChlery, Paisey, 2003), and various methods of defining or categorising ways of thinking about quality have evolved in the literature (Watty, 2005). As Olaskoaga-Larrauri et al. (2016) argue, one reason for the lack of consensus can be found in the variety of interests that exist in the sector of education. For example, the quality of a university is measured by how successful it is in meeting objectives, so there are as many meanings of “quality” as there are university objectives. Similarly, the quality of an accounting course can be assessed based on how demanding it is for students. As Khanna and Goyal (2016, p. 56) claim, “student evaluation of teaching is the most common source used to measure quality”. This is also an approach we employ in this paper.

There are several factors that might influence the quality of accounting education, and accreditation is one of them. In Poland, accreditation procedures regarding courses conducted by professional entities and provided by higher education institutions do not

have a long history. Being accredited by such organisations such as the Association of Chartered Certified Accountants (ACCA) has recently become the goal of many institutions which offer accounting programs, in large part because it signals differentiable educational quality. In this way, accounting courses can have their high quality formally acknowledged and, at the same time, institutions with accreditation can boast quality not found in institutions that lack accreditation.

Our paper aims to investigate the quality of academic education in the context of ACCA accreditation from the perspective of a critical stakeholder group – students. We test the main hypothesis stating that accreditation has a positive influence on the quality of accounting education. Moreover, we formulate four auxiliary hypotheses intended to identify possible factors connected with the process of accreditation that influence the quality of education, such as subject coverage, difficulties involved in preparing for classes and assessments, and difficulties concerning successfully passing the assessments. The data for the study was collected with a survey carried among students at selected universities in Poland. The respondents were asked to provide answers on a Likert scale. In total, 384 responses were analysed. We took into consideration the characteristics of the respondents, such as gender, age, type of studies, and work experience. We have examined the effect of ACCA accreditation on accounting using descriptive and inferential statistics.

Our study makes several important contributions to accounting education research. It is the first to research the impact of accreditation in Poland. Our results indicate that students view accreditation as a factor that moderately influences the quality of accounting education. In particular, the subject coverage and difficulties in preparing for accredited exams are found to be important for the studied problem. Thus, the results of our study can serve as a guide for higher education institutions in the design and development of curricula. Moreover, the findings provide valuable input into the discussion around the design of quality assurance and improvement systems in higher education generally, and for accounting education specifically.

We divide the rest of our study into four additional parts. In the next section, we review the literature on the quality of accounting education. Section three presents the impact of accreditation and certification on quality of accounting education. Section four focuses on our empirical research; it contains the study purpose, hypotheses development, methodology and results. It is followed by the study's conclusions in section five.

1. Quality of accounting education

“Quality” is a key notion in a number of fields of research (e.g. quality of life, quality of service provision, and quality of corporate disclosures). The multifaceted, context-sensitive and subjective nature of this concept is apparent in all cases (Beattie et al., 2004). Therefore, defining quality is not an easy task (Watty, 2005).

Our study focuses on the quality of accounting education. As Watty (2005) points out, various definitions of *quality* in higher education began to emerge in the mid- to late 1980s. This term has been referred to as added value, value for money, fitness for purpose, client satisfaction, transformation, or service (Vroeijenstijn, 1995; Lander, 2000; Biggs, 2001; McChlery, Paisey, 2003). Oliver (1992) defines quality in education as effective teaching. According to him, effective teaching requires that lessons have appropriate content, and the process by which skills and knowledge are developed has to be accepted by a reasonably wide range of stakeholders. As Cheng and Tam (1997, p. 23) claim, “education quality is a rather vague and controversial concept”. Higher education institutions provide educational services, and the definition of higher education quality is dependent on various stakeholders who experience them. Students are the main stakeholders of any higher education institution; therefore, their experiences in engaging with the different services provided during their studies can be referred to as service (education) quality (Jancey, Burns, 2013; Ali et al., 2016).

Accounting is unique among disciplines taught at higher education institutions. The accounting curriculum is closely tied to professional accounting practice and the evolving regulatory environment. It is also unusual in the volume of new information that must periodically be worked into various courses, as accounting standards and financial reporting requirements are continuously being updated. Therefore, maintaining high-quality accounting education is not an easy task. On the basis of the conducted literature review, Madsen (2015) argues that the demands of accounting work have changed due to the evolution of the business environment, and accounting education has not adapted sufficiently to prepare students to meet these new demands. Furthermore, accounting education has become excessively focused on teaching the application of well-specified rules to unrealistically well-specified business problems while neglecting other important skills. There are also views stating that accounting education lacks intellectual rigor and has become too job-related. University accounting programs are also criticised as being bloated, inefficient, obsessed with research, and inadequate to the task of preparing students for the labour market (Mastrachcio, 2017).

The problem of the quality of education has been approached in the literature on a theoretical basis, seeking to achieve a minimum consensus between presented concepts, or with the use of opinion surveys conducted among academics (Olaskoaga-Larrauri et al., 2016). The Harvey and Green (1993) model stands out in the first context. According to the authors, quality can be viewed as exceptional, perfection (or consistency), fitness for purpose, value for money, or transformation. Watty (2005) uses the framework provided by Harvey and Green (1993) in a study which focuses on the stakeholder perspective of quality and accounting in higher education. Each category of quality proposed by Harvey and Green (1993) is defined as follows:

- *Exception*. Distinctive, embodied in excellence, passing a minimum set of standards.
- *Perfection*. Zero defects, getting things right the first time (focus on process as opposed to inputs and outputs).

- *Fitness for purpose*. Relates quality to a purpose, defined by the provider.
- *Value for money*. Focuses on efficiency and effectiveness, measuring outputs against inputs. A populist notion of quality (government).
- *Transformation*. A qualitative change; education is about doing something to the student as opposed to doing something for the consumer; it includes concepts of enhancing and empowering; it's a democratisation of the process, not just outcomes" (Watty, 2005).

Watty's (2005) study focuses on the academic accountants employed in Australian universities. According to the research results, they perceive that an overall view of quality in accounting education in Australia is currently being promoted as *fitness for purpose*. Conversely, the same stakeholder group is of the opinion that quality in accounting education ought to be aligned to the *transformative* notion of quality.

2. Impact of accreditation and certification on the quality of accounting education

The role of professional entities is extremely important in the global economy. They determine the entry requirements for professionals and issue codes of best practices (Montano et al., 2001; McChlery, Paisey, 2003; Van Zante, 2005, 2010). Thus, their impact on educational processes is undeniable. Moreover, in the UK and the United States, the accreditations granted by professional entities to programs provided by higher education institutions have been popular for many years (McGettrick et al., 1997). However, professional education is quite specific and different from higher education (see, among others: Churchman and Woodhouse, 1999, Paisey, Paisey, 2000). Professional courses focus on knowledge and practice, which are taught both in the context of the educational institution and in the field of professional practice (McChlery, Paisey, 2003). Higher education is aimed at extending beyond professional preparation, while professional education is "a passport to practice" (Paisey, Paisey, 2000, p. 29). In light of this, the question arises whether the accreditation of study programs by professional organisation improves their quality.

The requirements of the accrediting institution towards subject coverage and assessment procedures exercise considerable influence on the program curricula, thus impacting the quality of higher education in accounting (Lee, 1989; Bailey, Bentz, 1991). As a result of such common policy, accredited study programs become similar regardless of the institutions providing them (Brown, Balke, 1983). The high percentage of program coverage devoted to indicated subjects by professional institutions limits both the students' and lecturers' opportunities to study other topics and teach other valuable courses, such as accounting history (Paisey, Paisey, 2000). This approach satisfies the current need for practice, but in the long run, it poses a threat to the future of the profession (Langenderfer, 1987; Zeff, 1989). The professional accountant who is proficient

in technical matters can be easily substituted, while it is much more complicated to find a specialist with the ability to exercise judgment and deal with ambiguity (Power, 1991). Furthermore, the assessment procedure required by accreditation limits lecturers' independence to design a course, a freedom which is important for the quality of the teaching process (Rowntree, 1982). Dillard and Tinker (1996, p. 220) claim that accreditation sustains and enhances the prevailing social and economic structures instead of inducing "creative, analytical, critical and socially responsible products". The large number of professional certificates and their incorporation into the accounting curricula represent a challenge for higher educators as they require an appropriate mixture of learning outcomes, as well as securing human and financial resources to deliver the courses. Some universities promote two or more types of professional certifications as worthwhile options, but they fail to teach the skills and expertise included in all of them (Coe, Delanye, 2008). This goes against the idea of a "career-neutral accounting curriculum" (Deines, Valentine, 2007) and it results in a dominance of public accounting at the expense of management accounting (Coe, Delanye, 2008).

On the other hand, the relationship between higher education and practice is dynamic. Especially in recent days, a number of researchers have undertaken to broaden the university curriculum in order to achieve a balance between academic and professional approaches. Accreditation provides a link between higher and professional education. Thanks to incorporating some elements of professional education into academic curricula, students learn technical issues, which may help them to reinforce their legitimacy in any future work, including when they are being assessed critically (Paisey, Paisey, 2000). It also ensures that students are provided with the skills and knowledge necessary in the business world and desired by employers as well as practising professionals. Interactions with professional associations provide opportunities for students and higher education institutions to come into contact with practitioners, as well as utilise the rich resources and materials of the certifying institution for classroom purposes (Coe, Delanye, 2008). As the majority of accrediting institutions promote continuous improvement, the implementation of quality standards as well as a systematic assessment of learning outcomes, accreditation leads to better business education and higher business-related qualities possessed by the graduate. Existing research shows that accreditation is more positively associated with higher program quality in the form of higher CPA (*Certified Public Accountant*) success rates at accredited institutions than at non-accredited schools (Grant et al., 2001, Morgan et al., 2008, Morgan, 2011).

The authors are not aware of any research study which focuses on the impact of the ACCA accreditation on accounting education; however, in the accounting literature there exist several studies which investigate the influence of the AACSB¹ accreditation on the educational process (Apostolou et al., 2016). Fogarty et al. (2016) tested a model of perceived accounting program quality, with several inputs, including an accreditation profile. For both undergraduate and graduate programs, for a number of years, the

¹ The Association to Advance Collegiate Schools of Business.

program had a separate accounting AACSB accreditation, and it was positively associated with quality. Blin et al. (2016) investigated the associations among the accounting faculty and accounting program characteristics as well as the CPA exam performance for first-time test takers. The exam scores were positively correlated with AACSB accreditation, and negatively associated with the candidate's age and gender (female = 1). Gaynor et al. (2016) investigated the association between the CPA exam performance and the time of day the test was taken (circadian rhythm). AACSB accreditation and gender were positively associated with the exam score and pass rate. Age was negatively associated with both outcome metrics. Trinkle et al. (2016) explored the factors associated with CPA exam success. The results showed that the most successful candidates were young, male, and possessed a degree from an AACSB accredited institution. Brody et al. (2016) surveyed undergraduate and graduate accounting students at a US university regarding their awareness of various professional accounting certifications. Tabulated responses indicated that the CPA was the certification recognised by almost all students. Student awareness of the CMA and CIA certifications was lower than that of the CPA, and declined further over time. The CFE certification currently has high recognition among students.

The results of the studies presented above allow us to assume that accreditation adds value to the educational process. Apostolou et al. (2016) call for more research studies in order to identify, measure, and document the benefits obtained from an accredited accounting program to inform the accrediting entities, institutions seeking or maintaining accreditation, and the individuals who participate in the process. We believe that our study is an attempt to answer this call.

3. Empirical findings

3.1. Accounting education and ACCA accreditation in Poland

Education is the pillar for modern complex accounting systems. It has been established that there is a positive relationship between the level of education and the competence of professional accountants (Gernon et al., 1987; Meek, Mueller, 1987). In certain countries, prospective accountants received their education mainly in the economics or finance departments at university, while in others, a large part of their education was supported by professional training in special educational institutions. Also, as a result of the different historical purposes of financial reporting between countries, the accounting profession played different roles in relation to company management, banks and investors, and tax authorities (Nobes, Parker, 2006, p. 459).

In our study, we confront the Polish setting with the ACCA accounting qualification that originates from Great Britain. It should be noted that, despite the important, positive changes that have taken place in recent years, accounting education in Poland is far from that of well-developed, Anglo-Saxon countries. It is mostly due to the historical and

cultural contexts of the development of accounting in the country (Wójtowicz, 2015). The history of Polish accounting includes the times of governmental interventionism in economic development, with the emphasis on the credit protection and tax collection. Therefore, Polish accounting practice has been perceived, to a large extent, in terms of bookkeeping (keeping records) rather than following the true and fair view concept and the idea of the usefulness of financial statements. Changes in Polish accounting in subsequent years were driven by Poland's efforts to join the EU, leading to its successful accession in 2004 (Grabiński et al., 2014). The development of the capital market (with the Warsaw Stock Exchange being the largest stock exchange in CEE countries in one of Europe's most rapidly developing capital markets), implementation of the IFRS, and expansion of accounting shared services centres, as well as the ACCA accreditations procedures, are all important factors that positively influence the overall accounting education in Poland.

In the years 2012–2017, fourteen Polish universities received ACCA accreditation for their fields of study (29 accredited study programs in total). Several other colleges currently work with ACCA, and they are expected to receive accreditation or launch new courses in accounting and finance in the coming years (ACCA, 2017). The ACCA accreditation process is based on comparing syllabus content for subjects with the content required for ACCA exams and making necessary adjustments. Therefore, faculty members who teach accredited courses often need to change the traditional ways of teaching, e.g., by shifting from short examples to more developed case studies or covering new topics. The exam also requires that courses are adapted to ACCA standards (a large part of the exam should take the form of extensive case studies and the duration should be around three hours). Accreditation, therefore, influences the curriculum content of the courses, preparation of students for classes, preparation of students for exams, and the process of taking exams. This allows us to define four independent variables representing the changes in the accounting education due to accreditation: subject coverage, the level of difficulty to prepare for classes, the level of difficulty to prepare for assessments, and the level of difficulty to successfully pass the assessments at the accredited courses.

Accreditation of Polish universities allows students to earn part of their ACCA exams based on credit earned in the course of their studies. Thus, upon completing the studies, they not only hold a university diploma, but also part of the ACCA qualification. Moreover, ACCA undertakes a number of activities with accredited universities to promote qualifications, including, among others, informational meetings, ACCA Academy workshops, and the annual conference Think Ahead Future CFO. Another important aspect of cooperation is the practical workshops (Train the Academics) aimed at supporting academics in the process of teaching the accredited courses, as well as the Exams For Tutors program, which allows faculty members to prepare for the selected ACCA exams.

In our study, we focus on three Polish universities: the University of Lodz, Cracow University of Economics and Wroclaw University of Economics. The Faculty of Management at the University of Lodz has been accredited by ACCA since January 1, 2013.

The *Finance and Accounting* (II cycle program) received ACCA accreditation allowing students to be exempted from the F1, F2, F3, F4, F5, and F7 exams. In the case of *Accounting* (I cycle program), students are entitled to five exemptions (F1, F2, F3, F4 and F6). Accounting courses with the ACCA accreditation have been conducted at the Cracow University of Economics, Faculty of Finance and Law accreditation since October 2014. After passing accredited exams, full-time masters students are entitled to nine exemptions (F1, F2, F3, F4, F5, F7, F8, F9). Both higher institutions hold a license to conduct ACCA CBE (F1, F2, F3, and F4) exams, and conduct open and closed courses preparing for ACCA exams. Moreover, students of the *Accounting and Auditing* (I cycle program) at the Wroclaw University of Economics Faculty of Management, Computer Science and Finance are exempted from the F1, F2, F3, F4 and F6 exams, while the students of the *Finance and Accounting* (II cycle Program) at this university benefit from exemption from F1-F4 as well as F5, F7, F8, and F9 exams. The accreditation at Wroclaw University of Economics was also granted to programs in English: *Bachelor Studies in Finance* (F1–F3, F5, F7, F9) and *Master's Studies in Finance* (F1–F3, F6).

3.2. The purpose, hypotheses and method of research

In view of the above considerations, the study aims to investigate the impact of ACCA accreditation on the quality of accounting education in Poland. The review of the literature allowed us to formulate the following hypothesis:

Main hypothesis H1: Accreditation positively influences the quality of accounting education at the selected universities in Poland.

Auxiliary hypothesis H1.1: The increase in the subject coverage as a result of accreditation positively influences the quality of accounting education at the selected universities in Poland.

Auxiliary hypothesis H1.2: The increase in the level of difficulty to prepare for classes at the accredited courses positively influences the quality of accounting education at the selected universities in Poland.

Auxiliary hypothesis H1.3: The increase in the level of difficulty to prepare for assessments at the accredited courses positively influences the quality of accounting education at the selected universities in Poland.

Auxiliary hypothesis H1.4: The increase in the level of difficulty to pass successfully the assessments at the accredited courses positively influences the quality of accounting education at the selected universities in Poland.

The hypotheses formulated for the study are intended to identify factors which influence the quality of education, with special attention being paid to the effects exerted by the accreditation processes. For each hypothesis, independent variables were created that describe a given factor.

The primary source of data was a questionnaire conducted among the students of accredited courses at the University of Lodz, Cracow University of Economics and

Wroclaw University of Economics in the period from September 2016 to June 2017. 430 students took part in the survey; however, only 384 answers were found to be valid. This difference stems from the fact that not all of the students who chose to participate in the study responded to all survey questions. Incomplete questionnaires were eliminated. The first part of the survey contained questions related to the personal characteristics of the students, such as gender, age, type of studies, work experience. The second part focused on the students' opinions on the impact of accreditation on the different aspect of the quality of accounting education. The respondents were asked to assess this impact on a Likert scale, attributing the following answers to various elements: 1 – lack of impact, 2 – slight impact, 3 – medium impact, 4 – significant impact, 5 – extremely significant impact². For analysis of the obtained results, descriptive and inferential statistics were used.

It is assumed that the relationship between variables is linear and the residuals (predicted minus observed values) are distributed normally. An important element of each equation is the regression coefficient, which indicates how much the explanatory variable will change following a change in the respective independent variable. The direction of the relationship between particular variables indicated by the sign of the appropriate regression coefficient is also significant. In all cases, a positive sign of the pertinent regression coefficient is expected. To test Hypothesis 1 and H1.1 – H1.4, the following equation is estimated:

$$Y_1 = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \beta_3 * X_3 + \beta_4 * X_4 + \beta_5 * X_5 + \beta_6 * X_6 + \beta_7 * X_7 + \beta_8 * X_8 + \varepsilon$$

Where:

- Y1 – quality of accounting education at the accredited courses (variable measured from 1–5, where 1 – the lowest rating, 5 – the highest rating),
- X1 – subject coverage at the accredited courses (variable measured from 1 - 5, where 1 – the lowest rating, 5 – the highest rating),
- X2 – the level of difficulty to prepare for classes at the accredited courses (variable measured from 1–5, where 1 – the lowest rating, 5 – the highest rating),
- X3 – the level of difficulty to prepare for assessments at the accredited courses (variable measured from 1–5, where 1 – the lowest rating, 5 – the highest rating),
- X4 – the level of difficulty to successfully pass the assessments at the accredited courses (variable measured from 1–5, where 1 – the lowest rating, 5 – the highest rating),

² The Likert scale (1932) is in addition to the Stapel or Thurstone scale most commonly used in the measurement of complex socio-economic phenomena (see Tarka, 2015). From the point of view of applications, Kozyra (2004) states that “operational measurement theory enables one to classify the results obtained using individual scales of measurement of psychological characteristics based on, among others, the Likert scale, to strong scales”. The same conclusions can also be found in the work of Węziak-Białowolska (2011), where the Likert scale is seen as a continuous scale. According to Kozyra (2004, p. 75), Likert scale figures can be considered a measure of the compartment scale (so, strong) if the differences in the results of the measurements approximate the differences in the severity of the psychological traits. Other examples of the use of the Likert scale in research include Aiken, West (1991), Sagan (1998).

X5 – age (in years),
 X6 – gender (0-man, 1-woman),
 X7 – cycle of studies (1–I cycle, 0–II cycle),
 X8 – professional experience (0-no, 1-yes),
 β_i – (where $i = 1, \dots, 8$) regression coefficient.

3.3. Descriptive statistics

In our study, 82% of the respondents were women and 18% were men. 47% of the students were I cycle students and 53% of II cycle students. Only 36% of the participants had professional experience. According to the students, accreditation has the greatest impact on the subject coverage. It is worth noting, however, that the ratings are between the medium and large impact of accreditation on these elements. The coefficients of variation show a small variation of analysed variables. The table below summarises the impact of accreditation on selected aspects of education.

Table 1. Assessment of the impact of accreditation on selected aspects of education at accredited courses

Impact of accreditation on:	Average (1 – lack of impact, 2 – slight impact, 3 – medium impact, 4 – significant impact, 5 – extremely significant impact)	Standard deviation	Coefficient of variation
Subject coverage	3.805	0.840	0.221
Quality of education	3.792	0.835	0.220
The level of difficulty to successfully pass the assessments on the accredited courses	3.763	0.899	0.239
The level of difficulty to prepare for assessments on the accredited courses	3.753	0.893	0.238
The situation of students of the accredited courses on the labour market	3.688	0.920	0.250
The level of difficulty to prepare for classes on the accredited courses	3.508	0.888	0.253

Source: own study.

The students' assessment of the impact of accreditation on individual learning outcomes can be described as moderately optimistic. In the remainder of the study, an equation estimation was performed in order to answer the research questions and to verify the hypotheses.

3.4. The results of the estimation of equation

We estimate the constructed equation using the *Statistica20* software package. The results are presented in Table 2 below.

Table 2. The results of the estimation of equation

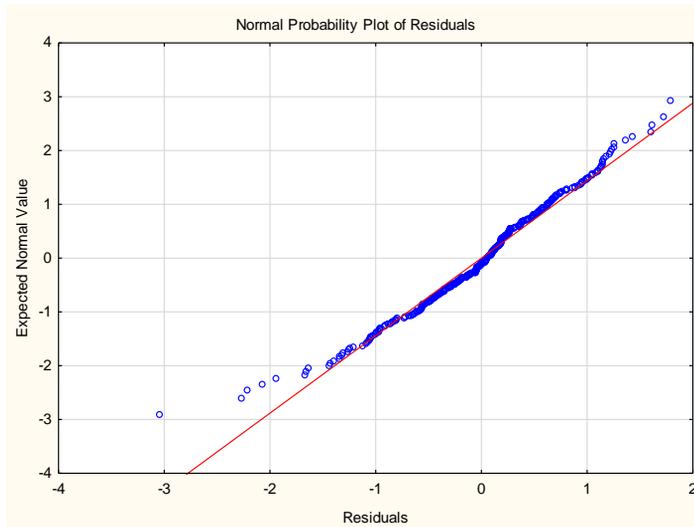
Multiple Regression Results		
Dependent Y1	Multiple R = 0.57535086 F = 23.19526	
	R ² = 0.33102862 df = 8.375	
No. of cases: 384	Adjusted R ² = 0.31675723 p = 0.000000	
Std. error of estimate: 0.690581108		
Intercept	1.171783407	Std.error.: 0.7099710 t (375) = 1.6505 p = 0.0997
X1 b* = 0.526	X2 b* = -0.09	X3 b* = 0.199
X4 b* = -0.01	X8 b* = 0.001	X5 b* = 0.023
X6 b* = -0.03	X7 b* = 0.098	
b* stands for standardized regression coefficients, significant betas* are bolded		

Source: *Statistica* estimates.

The results of the multiple regression revealed that only the estimates of two independent variables are statistically significant: subject coverage on the accredited courses (X1) and the level of difficulty to prepare for assessments on the accredited courses (X3). This means that increasing the subject coverage as a result of the accreditation and increasing the level of difficulty to prepare for the accredited exams improve the quality of education. Thus, only hypothesis H1.1 and H1.3 have been supported.

The statistical results provided by the equation testing the hypothesis show that equation 1 represents a relatively high degree of explanation, because the R-squared (R²) equals 0.33, therefore, changes in the quality of education are explained by the proposed independent variable in 33% of cases variables. The Fisher-Snedecor statistics (F = 23.19526) also indicate that at a significance level of 0.001, the null hypothesis should be rejected in favour of the alternative hypothesis, according to which the combined effect that all independent variables in the presented equation exert on the endogenous variable is statistically significant. The model standard error of estimate is 0.6906, which is less than one, but more than 0.5 on the scale. Testing the random term for normal distribution does not produce positive results; however, the distribution is close to normal, which confirms Exhibit 1 and 2, as well as the Shapiro-Wilk test (SW-W = 0.9805 and p = 0.00005) and the Kolmogorow-Smirnow test (D = 0.0774 at p < 0.05 and at p-Lillefors < 0.01 which can be found in Exhibit 2.

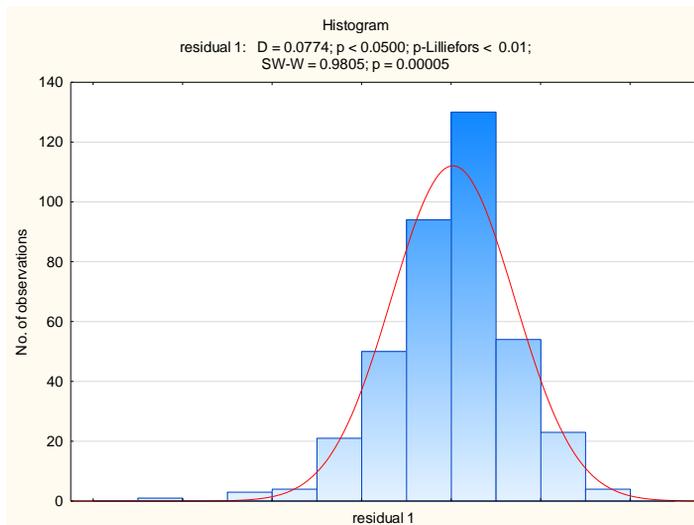
Exhibit 1. Testing the normality of residuals for equation



Source: *Statistica* estimates.

From the graph, we can see that the deviation from the normal distribution is skewed-right, that is, the position is much above the starting and ending points of the graph.

Exhibit 2. Residual distribution with SW-W test and D test



Source: *Statistica* estimates.

The multiple regression model specified and calculated independently for different respondent groups also provides interesting results. In the case of grouping by gender (X6), it is observable that for women, as for all respondents, the estimates of two independent variables are statistically significant: subject coverage on the accredited courses (X1) and the level of difficulty to prepare for assessments on the accredited courses (X3). In the case of the men, only the estimate of independent variable subject coverage on the accredited courses (X1) is statistically significant. According to them, only the increased subject coverage as a result of accreditation influences the quality of education. Table 3 presents the result of multiple regression by gender.

Table 3. The result of multiple regression by women (1) and men (0)

Itemization	Aggregated results						
	Regression for dependent variable: Y1						
X6	b* (standardized regression coefficients)	Std. error	b (raw regression coefficients)	Std. error	t(63) value	p value	
Intercept	0		1.029153	1.394283	0.738123	0.463180	
X1	0	0.433619	0.106837	0.365974	0.090170	4.058704	0.000139
X2	0	0.065311	0.138787	0.057150	0.121443	0.470587	0.639561
X3	0	0.164719	0.149791	0.144796	0.131674	1.099660	0.275664
X4	0	0.053140	0.130969	0.047050	0.115960	0.405745	0.686305
X5	0	0.040531	0.133319	0.016949	0.055751	0.304012	0.762121
X7	0	0.249311	0.137544	0.386359	0.213152	1.812596	0.074659
X8	0	-0.101222	0.109803	-0.160471	0.174075	-0.921850	0.360124
Intercept	1		1.088566	0.805373	1.35163	0.177495	
X1	1	0.539498	0.048285	0.557348	0.049883	11.17318	0.000000
X2	1	-0.114302	0.063548	-0.109197	0.060710	-1.79869	0.073057
X3	1	0.211426	0.075024	0.201197	0.071394	2.81812	0.005146
X4	1	-0.023173	0.069337	-0.021755	0.065095	-0.33420	0.738459
X5	1	0.019622	0.066658	0.009749	0.033117	0.29437	0.768679
X7	1	0.063583	0.069240	0.107935	0.117538	0.91830	0.359187
X8	1	0.016659	0.053203	0.029443	0.094029	0.31313	0.754396

Source: *Statistica* estimates.

In the case of grouping by the variable of the cycle of studies (X7), for students of the II cycle, as for all respondents, the estimates of two independent variables are statistically significant: subject coverage on the accredited courses (X1) and the level

of difficulty to prepare for assessments on the accredited courses (X3). In the case of students of the I cycle, only the estimate of independent variable subject coverage on the accredited courses (X1) is statistically significant. According to them, only the increased subject coverage as a result of accreditation influences the quality of education. Table 4 presents the result of multiple regression by the cycle of studies.

Table 4. The result of multiple regression by I cycle (1) and II cycle (0)

Itemization	Aggregated results Regression for dependent variable: Y1						
	X 7	b* (standard- ized regression coefficients)	Std. error	b (raw regression coefficients)	Std. error	t(194) value	p value
Intercept	0			0.859770	0.850764	1.01059	0.313474
X1	0	0.543670	0.061186	0.566814	0.063790	8.88559	0.000000
X2	0	-0.122644	0.077361	-0.123936	0.078176	-1.58535	0.114516
X3	0	0.221161	0.086001	0.220743	0.085839	2.57159	0.010872
X4	0	0.007139	0.079486	0.007345	0.081779	0.08981	0.928531
X5	0	0.017857	0.058681	0.010183	0.033463	0.30431	0.761218
X6	0	0.047237	0.057873	0.109225	0.133819	0.81621	0.415379
X8	0	-0.037841	0.058921	-0.067448	0.105022	-0.64223	0.521482
Intercept	1			1.813814	1.378494	1.31579	0.189974
X1	1	0.503785	0.064992	0.464643	0.059942	7.75148	0.000000
X2	1	-0.078600	0.085234	-0.067590	0.073295	-0.92217	0.357717
X3	1	0.169830	0.105946	0.145729	0.090911	1.60299	0.110750
X4	1	-0.004141	0.096505	-0.003418	0.079645	-0.04291	0.965821
X5	1	0.007173	0.065220	0.006997	0.063615	0.10999	0.912545
X6	1	-0.117634	0.064799	-0.227575	0.125359	-1.81539	0.071186
X8	1	0.079508	0.064283	0.170547	0.137890	1.23684	0.217815

Source: *Statistica* estimates.

Finally, grouping by the variable of professional experience (X8) provides an interesting view of the researched population. For students with professional experience, not only are the estimates of two independent variables statistically significant – subject coverage on the accredited courses (X1) and the level of difficulty to prepare for assessments on the accredited courses (X3) – but so are the estimate of variables for age (X5) and the cycle of studies (X7). This means that people in this group assume that increasing the subject coverage due to accreditation and increasing

the difficulty of preparing for an accredited assessment improve the quality of education. As already mentioned, the assessment is also determined by age and cycle of studies. Older students in this group (students with professional experience) more favourably assess the quality of education. It is worth underlining that the sign of the regression coefficient for the age variable is different in each analysed group. In the case of students without professional experience, the estimates of two independent variables, subject coverage (X1) and age (X5), are statistically significant. Thus, they regard that the increase in subject coverage as a result of accreditation impacts the quality of education. The younger members of this group (students without professional experience) generally more favourably assess the quality of education. However, students with professional experience are more critical, as they consider both subject coverage as well as increased difficulty to prepare for assessment as essential for the quality of education. Professional experience leads to a higher assessment of the quality of education by older students, who are more aware of the usefulness of international qualifications and their impact on education. Younger people without experience are less critical in their assessments. Table 5 presents the result of the multiple regression by professional experience.

Table 5. The results of the multiple regression for the group of students with professional experience (1) and for students without professional experience (0)

Itemization	Aggregated results						
	Regression for dependent variable: Y1						
	X8	b* (standardized regression coefficients)	Std. error	b (raw regression coefficients)	Std. error	t(132) value	p value
Intercept	1			-1.12634	0.988622	-1.13931	0.256638
X5	1	0.155933	0.075029	0.08312	0.039992	2.07831	0.039618
X6	1	0.053849	0.064963	0.12901	0.155638	0.82892	0.408648
X7	1	0.204768	0.075000	0.49737	0.182171	2.73022	0.007194
X1	1	0.613913	0.066079	0.67377	0.072522	9.29055	0.000000
X2	1	-0.125766	0.083690	-0.12883	0.085726	-1.50276	0.135289
X3	1	0.228272	0.105012	0.22581	0.103878	2.17377	0.031506
X4	1	-0.051094	0.097584	-0.05269	0.100639	-0.52358	0.601446
Intercept	0			4.057127	1.018038	3.98524	0.000090
X5	0	-0.181565	0.082572	-0.091038	0.041402	-2.19886	0.028859
X6	0	-0.099281	0.056031	-0.195565	0.110370	-1.77190	0.077702
X7	0	-0.097906	0.082811	-0.152652	0.129117	-1.18228	0.238286
X1	0	0.443988	0.058081	0.407990	0.053372	7.64433	0.000000

Table 5. The results of the multiple regression for the group of students with professional experience (1) and for students without professional experience (0) (*cont.*)

Itemization	Aggregated results						
	Regression for dependent variable: Y1						
X8	b* (standardized regression coefficients)	Std. error	b (raw regression coefficients)	Std. error	t(132) value	p value	
X2	0	-0.070922	0.075591	-0.063438	0.067614	-0.93823	0.349083
X3	0	0.162684	0.085688	0.146519	0.077174	1.89856	0.058842
X4	0	0.038769	0.078423	0.033264	0.067287	0.49435	0.621518

Source: *Statistica* estimates.

Conclusions

For decades, accounting practitioners, academics, and professional entities have expressed concern that the quality of accounting education is in decline (Madsen, 2015). The findings of this study provide an interesting input into the discussion around the design of quality assurance and improvement systems in higher education generally, and for accounting education specifically. The results contribute to a better understanding of accreditation processes and students' expectations, as well as to a more tailored design and development of accounting curricula at higher education institutions.

The research results support only two out of four auxiliary hypotheses, thus confirming the main hypothesis only partially. According to the students, the only two factors that positively influence the quality of education are increasing the subject coverage as a result of the accreditation and increasing the level of difficulty to prepare for the accredited exams. The level of difficulty to prepare for classes as well as to successfully pass the assessments on the accredited courses are not significant for the quality of education. Moreover, the general opinions about accreditation are moderately optimistic.

Our study also reveals some discrepancies in the opinions among respondents. Women find both subject coverage and preparation for accredited assessment important for the quality of education, while men only value the former. The students of I cycle programs consider only subject coverage to be an important factor for the quality of education, whereas their older colleagues also indicate the level of difficulty in preparing for assessments on the accredited courses as being important. Finally, work experience determines the valuation of accreditation, as more experienced respondents are more critical in their opinions.

We believe that this paper enriches the literature on the quality of accounting education in the context of accreditation processes. It is also relevant for practice, as it can

be used not only by universities but also by the ACCA and faculty members who conduct accredited courses. However, like other studies, the proposed study is not free from limitations, which are linked to the use of a questionnaire as the main research method. The reliability of survey data may depend on how the respondents are encouraged to provide accurate, honest answers or on the different interpretation of certain questions and the subsequent answers. Therefore, the mere use of questionnaire-based surveys is not sufficient in thoroughly assessing the quality of education. It might be supplemented by an interview-based approach.

Although the results of this study provide a greater understanding of academic accounting education and accreditation, further research is needed. It would be worth expanding the study on academic teachers and analysing their opinions on the impact of accreditation. Furthermore, research studies could be conducted to identify explicit costs and at least identify alternative costs of accreditation so that institutions and administrators can more thoroughly understand the true cost of accreditation processes.

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APPENDIX 1: SURVEY

Survey on ACCA accreditation

The survey is anonymous and will be used for the purpose of improving the quality of education. It will not be possible to identify the respondents.

Thank you in advance for your time.

Part 1:

Age:

Gender: a. Woman b. Man

Study program:

Cycle of studies: a. I cycle b. II cycle c. postgraduate

Average of grades in the last semester:

Part 2:

1. Do You have any professional experience in finance and accounting?

- a. Yes (If you selected yes, go to question 2)
- b. No (If you selected no, go to question 3)

2. Is Your professional experience in the field of:

- a. Financial accounting
- b. Management accounting
- c. Taxation
- d. Financial analysis
- e. Auditing
- f. Investments
- g. Finance of the company
- h. Other.....

3. In what area would you plan your career in the future?

- a. Financial accounting
- b. Management accounting
- c. Taxation
- d. Auditing
- e. Investments
- f. Finance of the company
- g. I do not plan career in the finance and accounting
- h. Other.....

4. Assess from 1–5 (1 – lack of impact, 2 – slight impact, 3 – medium impact, 4 – significant impact, 5 – extremely significant impact) the impact of ACCA on:

Area	Assessment 1–5
Quality of accounting education on the accredited courses	
Subject coverage on the accredited courses	
The level of difficulty to prepare for classes on the accredited courses	
The level of difficulty to prepare for assessments on the accredited courses	

Area	Assessment 1–5
The level of difficulty to successfully pass the assessments on the accredited courses	
Prestige of studies	
Situation of graduates of the accredited courses on the labour market	
Planning and career development	
Other.....	