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Analysis of the contract cheating market in Czechia

Tomáš Foltýnek*  and Veronika Králíková

* Correspondence: foltynec@pef.mendelu.cz
Faculty of Business and Economics,
Mendel University in Brno,
Zemědělská 1, 613 00 Brno, Czech
Republic

Abstract

Contract cheating is currently one of the most serious academic integrity issues around the globe. Numerous studies have been conducted, mostly in English speaking countries. So far, no such research has been conducted in Czechia, and consequently there have been no specific data available on Czech students' fraudulent behaviour. For this study, we created a questionnaire to obtain primary data on student usage of essay mills and their self-reported exposure to contract cheating. The questionnaire focused on students and graduates of Czech universities and collected a total of 1016. Of that number, 8% of respondents admit having engaged in contract cheating. The questionnaire responses yielded useful information and insight into students' attitudes regarding contract cheating and the extent of this phenomenon in Czechia. We now know more about their reasons for contract cheating and have insight into their thoughts regarding possible discovery.

Keywords: Academic ghost writing, Contract cheating, Plagiarism, Academic integrity, Academic dishonesty, Czechia

Introduction

Contract cheating has become one of the most severe problems in academia across the globe. In virtually all fields of study, students asked to complete an assignment, essay, thesis, project or any other kind of student work frequently encounter offers from companies or individuals who offer to do the work for them. For various reasons, which will be discussed below, some percentage of students trying to take shortcuts regarding their studies, are open to the practice of using work done by someone else. For students in that situation, there are countless options. First are file sharing sites, where a wide variety of previously written student works are available, free of charge, or for a fee (Králíková 2017). Many of the authors of these files have agreed to have their work used by other students. Besides these essay file-sharing sites, there are websites where documents of many other types – scientific papers, theses, etc., are also publicly available and ready for instant download. Regardless of the type of document or method of procurement, using any source without proper acknowledgement of authorship is known as plagiarism. While most university students have been taught what plagiarism is and how to avoid it, there is a nontrivial group of students who tend to submit the work of others rather than produce their own texts. Universities address plagiarism in a variety of ways, including the use of more or less sophisticated text-matching software tools, which are able to detect certain portion of plagiarized

documents by comparing them to other texts and previously submitted papers. There is, however, an increasingly popular method of plagiarising that is specifically designed to get around these methods of detection and it has become a quite serious problem.

The terms “academic ghost writing” and “contract cheating” apply to situations in which students hire someone else to produce an original work for them and then, pretending that the work is their own, submitting it under their own name (Clarke and Lancaster 2006; Lancaster and Clarke 2014). These cases are, of course, plagiarism, – using someone else’s work as one’s own. However, as this work has been created as an original, text-matching software is usually unable to detect it. In such cases, even if cheating is discovered, it is very difficult to prove (Tomar 2015). Moreover, the underlying student behaviour is different. Students engaged in contract cheating are not copying someone else’s texts and integrating them into their own work; they are contracting a third party to create a whole new work for them. Given these differences, this kind of behaviour has its own designation: – academic ghost writing, sometimes also referred to as obtaining “bespoke essays”. As these terms indicate academic ghost writing is a subset of the wider category of contract cheating behaviours.

While contract cheating is a broader category that includes behaviours such as paying another person to take an exam in one’s place and other forms of paid cheating behaviours, this paper will focus solely on academic ghost writing: Hiring a third party to produce work intended to be turned in as if it were the students’ own. These third parties can include a companies (usually via financial contract), or peers (school-mates or friends, which typically do not involve a financial contract).

There is some confusion in the current literature concerning the two most common terms for the phenomenon we are dealing with: ghost writing and contract cheating. Technically, contract cheating, is a broader term including completion not only of written assignments, but also generally of any type of assessment (Clarke and Lancaster 2006), however “contract cheating” is very commonly used to refer to academic ghost writing specifically. A further complicating factor, as Curtis and Clare (2017) point out the issue of payment, which is inherently assumed by the word “contract”. For our purposes, even though this paper in fact deals with academic ghost writing, we will use term “contract cheating” in compliance with Walker and Townley (2012) and later papers of Thomas Lancaster and Robert Clarke (Lancaster and Clarke 2012, 2014). We also believe that “contract” can function as an agreement between individuals yet have non-financial character, and therefore, an assignment that a friend or relative agrees to complete for a student can fall within the definition. Moreover, this term also corresponds better to the Czech term, which can be literally translated as “fraudulent assignments and theses”.

This paper provides partial results of a large qualitative and quantitative study of the contract cheating market in Czechia (Králíková 2017). The web pages of contract cheating companies were analysed; and prices, services, and delivery times were compared. The quality of the work was also assessed by ordering a sample assignment from various companies. Additionally, the number of unique accesses from the university network to the web pages of companies offering such services were compiled and analysed; interviews with both ghost-writers and students who had used their services were conducted. Last but not least a quantitative study of student involvement with such services was conducted using an online questionnaire. This paper shares many of

the results of this study and adds comparison of cheating rates across various groups of respondents.

Literature review

There are many definitions of plagiarism (Cizek 2003). The Oxford English Dictionary defines plagiarism as “*the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own; literary theft*”. Tomar (2015) defines ghost writing as a phenomenon where “*an unseen writer is compensated for work that will never bear his name*”. Tomar adds, that this phenomenon has many forms in academia. For purpose of this paper, we will consider academic ghost writing related to students’ actions only, i.e. students who hire ghost-writers to complete their schoolwork for them.

Plagiarism, ghost writing, contract cheating, as well as student’s motivation for breaching academic integrity have been the subject of numerous studies. Many, recently, have dealt specifically with the extent of contract cheating. Clarke and Lancaster (2006) examined a site RentACoder where computer solutions are being contracted both for legitimate uses and for cheating. They conclude that 236 posts requesting services (more than 12%) were published to facilitate cheating. The same authors evaluated number of postings and their attributes at one of the contract cheating sites. They found out that the number of postings requesting ghost writing services had been rising (Lancaster and Clarke 2012).

For this paper, studies examining relative number of cheating students are also relevant. In a large North American survey, Donald McCabe (2005) found that 7% of undergraduate and 3% of graduate students reported cheating on written assignments by turning in work done by another person. Australian studies reported that in 2004, 1.1% of students surveyed admitted to being involved with ghost writing, whereas in 2009 the ratio increased to 3.5% (Curtis and Popal 2011). Zafarghandi et al. (2012) surveyed students in Iran and found that 7.9% of them reporting having engaged in contract cheating. An even higher number came from a study conducted by Hosny and Fatima (2014) – 22% of students admitted paying someone else for completing an assignment for them. (Note: this study included only female students from one institution in Saudi Arabia.)

A study claiming to be the first economic investigation of essay market was conducted at 3 UK universities in 2013. Researchers examined behaviour of 90 students using a hypothetical discrete choice experiment and found that half of the students revealed a willingness to buy an essay. Some of them responded that they would not hesitate to pay up to \$445 for a 1st grade essay (Rigby et al. 2015). An earlier study dealt with the crowd working markets (crowd-sourcing). Researchers found that “79.0% of crowd workers agreed to provide their work for assistance on exams or homework assignments without additional incentive; this increased to 81.4% when additional incentives were offered” (Harris and Srinivasan 2012).

Many researchers have also addressed the reasons students give for engaging in contract cheating. Devlin and Gray (2007) conducted focus groups with students at Melbourne University and identified eight main motivators: Inadequate admission criteria, poor understanding of plagiarism, poor academic skills, teaching/learning issues, laziness/convenience, pride in plagiarizing, pressures, education costs (Devlin and Gray 2007).

Another list of students' reasons for plagiarism more generally is provided by Gullifer and Tyson (2010): lacking the time to complete tasks (poor time management), perceived disjuncture between award (grade) and effort required, too much work to complete over too many subjects, pressure to do well, perceptions that students will not get caught, anomie, motivation, and individual factors (age, grade point average, gender, personality type) (Gullifer and Tyson 2010).

Mary Walker and Cynthia Townley add the growth of technologies, Internet fora, and contract cheating companies to the list of possible reasons (Walker and Townley 2012). Mark Brimble (2016) explains following reasons for students' cheating: Changing attitudes, lack of knowledge, poor curriculum design, ethical content, perception of fairness, life of the modern student and several individual students' characteristics. Wallace and Newton (2014) discussed some means of preventing students from contract cheating. They specifically argued that shorter turnaround time would not help because contract cheating providers are able to work with very short deadlines.

We are not aware of previously conducted studies of the contract cheating market in Central Europe. Czechia witnessed several publicly known cases of contract cheating that received wide media attention (Česká televize 2014; Jarkovská 2015; Kabátová 2015a, b), yet the news coverage contained no references to data or related studies, leading us to believe that this paper describes the first study on this topic in Czechia.

Methodology

An online questionnaire was used to obtain the primary data. The survey instrument was prepared using Google forms and was available during March 2017. In total, 1016 responses were gathered.

The survey was publicized mainly using social media, specifically Facebook. Groups of students, graduates, and teachers from the most of the public universities in Czechia were invited to participate. This method was used mostly because it is easy, fast and efficient. Our original hope was to gather between 400 and 500 responses. Our number of responses exceeded twice our goal. Students were invited through the direct links from the university websites to the social media. We chose this method to ensure students' anonymity in order to make them more likely to self-report their behaviour truthfully. We believe that if the students were approached officially and directly through individual universities, the questionnaire return would not have to be so high because they would be afraid to respond.

We processed the data collected from the survey using Microsoft Excel with XLSTAT add-on. Incomplete answers were excluded; the survey was evaluated using pivot tables. The test of independence between rows and columns (chi-square) was applied to the pivot tables to find out whether there are any differences in cheating rates between specific groups of respondents.

The survey instrument itself was designed to be as simple as possible to minimize respondents' time. Questions were divided into four sections. The first section contained only one question: "Have you ever let anyone (friend, classmate) write any school work (seminar, final) on your behalf?" Even though it might not be clear from the English translation, the wording in Czech language inherently contains the fact that students obtained a school assignment from a third party and submitted it as their own. Based on the answer to this question, either the second or third section of questions was

provided. Therefore, those who had had let someone else to write a schoolwork for them, received different questions than those who hadn't. The fourth section was the same for all respondents and contained demographic data. In order to maintain anonymity, only questions regarding gender, age, education, field of study and financial income were asked.

Survey results

Sociodemographic

In total, we received 1016 responses. Out of them, 199 were men (20%) and 817 were women (80%). The distribution according to age can be seen in Table 1. Table 2 presents the distribution according to the highest degree achieved.

Cheating rates by different groups

The first question asked whether respondents let a third party to write a school work or final thesis for them. (As noted above, based on the answer to this question, different questions followed.) Overall, 77 respondents (8%) replied that they had let someone else to write their work for them. On the other hand, the vast majority, 939 respondents (92%), did not.

We analysed the different cheating rates according to several different sociodemographic groups. Table 3 is the contingency table of gender and engagement in contract cheating.

A Chi-square test with Yates' continuity correction showed statistically significant difference between men and women (chi-square 16.064, $p < 0.0001$). We conclude, therefore, that the men in the study report engaging in contract cheating significantly more often than the women.

Analysis of contingency tables did not show any significant difference in cheating rates between the groups with different education achieved (see Table 4). Only those with master degree reported contract cheating slightly more often than other groups.

If we look at the relationship between engagement in contract cheating and age, we can see differences (chi-square 9.793, $p < 0.02$). The youngest respondents reported cheating less often, whereas those in age group 27 to 29 years reported cheating more often. See Table 5 for details.

The respondents were also asked about the family income, but no significant difference was found between the income and engagement in contract cheating.

The rates of engagement in contract cheating according to various fields of studies can be seen in Table 6. As we can see, the highest percentage of students engaged in contract cheating is among engineering students, followed by IT and law. The lowest

Table 1 Age distribution of the respondents

Age group	Number	Percentage
19–22 years	272	27%
23–26 years	518	51%
27–29 years	106	10%
30 years or more	120	12%
Total	1016	100%

Table 2 Distribution according to the highest achieved education

Education achieved	Number	Percentage
Secondary school	358	35%
Bachelor or similar	430	42%
Master	212	21%
Ph.D.	16	2%

proportion is among humanities. Note that students could choose more than one field of study.

Respondents not reporting contract cheating

Let us now focus on respondents who did not reported contract cheating (939 people). The first question for this group was, why they did not do it, and they could choose multiple reasons. See results in Table 7.

The responses to this question most often indicated that this kind of cheating is immoral, so they wanted to be honest and not to cheat. Respondents also included having never had a reason to do so, or not believing that someone would write a better paper than they did.

The next question asked under what circumstances these respondents *would* have let a third party write an assignment for them. More than half of the non-contract-cheating group (53%) responded that they would never let anyone else to write the work instead of them under any circumstances. See Table 8 for details.

The other answers were very diverse, however, they agreed that they *would* let someone to write their work if they did not like the topic or if they were threatened with being excluded from school. Some individuals also mentioned cases of having a health problem that would cause them to ask someone to help.

Of the vast majority of respondents who did not report contract cheating, 813 (87%) are aware of the companies that compile documents. However, 71% of these respondents are only generally aware of the existence of such companies – not aware of any specific web page. Fewer than 15% (141) of non-contract-cheating group were aware of a particular company’s website.

It is notable that when asked whether those who have never let anyone to write their papers, many do at least know someone who has done so. A total of 322 respondents (34%) answered that they did. As we can see, even most of the students do not use contract-cheating services are aware of them and every third student know someone who use them. These findings dispel the idea that we shouldn’t talk about such services for fear of letting students know they exist.

Table 3 Gender and engagement in contract cheating

Gender	Did not contract cheat	Contract cheated	Total
Male	170	29	199
Female	769	48	817
Total	939	77	1016

Table 4 Highest achieved education and engagement in contract cheating

	Did not contract cheat	Contract cheated	Total
Secondary school	336	22	358
Bachelor or similar	399	31	430
Master	189	23	212
Ph.D.	15	1	16
Total	939	77	1016

Respondents engaged in contract cheating

Regarding the respondents who admitted to contract cheating (let’s call them contract cheating group) – in total these include 77 respondents, which is 8% overall. The first question for the contract-cheating group was about the reasons for their decision to cheat. According to the answers to the questionnaire, the most frequent reason was lack of time followed by the misunderstanding of the issue. Answers are summarized in Table 9.

The next question asked who completed the school work for them. Forty six respondents (60%) of the contract cheating group said that they preferred to ask a classmate or a friend. The rest (31 respondents, 40%) used online essay mill services.

The next question asked why they chose the friend/classmate, or a company. It was an open question so the respondents could answer in their own words. Those who opted for the companies reported having done so because of anonymity. They also hoped that companies would have more experience and expected higher quality; had received recommendations; or they didn’t know anyone who would do the assignment for them.

The other group asked help from their partners, friends or classmates because of a lower price, personal experience with given person, reliability and more confidence.

The next question asked about their satisfaction with the work they received. 39 (51%) people responded that they think they would not write it better, 30 (39%) were happy, but had some reservations, and 8 (10%) said that they were not satisfied with the work at all.

Another question asked, whether they were afraid of the possibility that it might be revealed that it was not their own work. Out of 77 people, 48 (62%) were not afraid of the deception being revealed, the rest (29, i.e. 38%) were afraid. We found a relationship between age and fear of reveal. Generally, the fear of reveal increases together with age (see Table 10). There was one exception, the age group of 30 or more years old, in which the fear of reveal decreased according to those between 27 and 29 years, but still being significantly higher than for younger respondents. The link between age and fear of reveal is statistically significant (chi-square 35.906, $p < 0.0001$).

Table 5 Age and engagement in contract cheating

Age group	Did not contract cheat	Contract cheated	Total
19–22 years	259	13	272
23–26 years	481	37	518
27–29 years	92	14	106
30 years or more	107	13	120
Total	939	77	1016

Table 6 Field of study and engagement in contract cheating

	Did not contract cheat	Contract cheated	Total	Percentage
Engineering	44	11	55	20%
IT	57	10	67	15%
Law	36	4	40	10%
Pedagogy	212	19	231	8%
Medicine	34	3	37	8%
Economics	236	19	255	7%
Natural sciences	87	7	94	7%
Humanities	320	11	331	3%

Limitations

Before we discuss the results, we should point out several limitations of our study, which may have affected our data.

The first limitation refers to anonymous self-reporting of unethical behaviour. Even though we ensured anonymity to the respondents, some people may still be reluctant to report such behaviour and therefore real proportion of students’ cheating may be higher (Curtis and Clare 2017).

The second aspect is a significant gender imbalance among the respondents in our survey. It is important to mention that the data collection was independent to respondent’s gender. We targeted as many higher education institutions as possible with as many fields of study as possible. During the dissemination of the survey, the gender aspect was not considered at all. As male and female student population in Czechia is more or less equal, men and women were given the same chance to participate in the survey, however the responses were not proportional.

The explanation of significantly higher female participation might be a greater willingness to help their colleagues to collect data for diploma thesis, because they know they might need similar favour from their peers some other time. This willingness is much more prevalent in female population (Smith 2008). Jackson et al. (2001) found out that in online space, men tend to search for information, whereas women are more likely to exchange information. Our online survey fits into the latter category.

Even though the disproportion of male and female population is inherent to online surveys (Smith 2008), we are aware that it might be a cause of data bias and prod the reader to interpret the results carefully.

Discussion

As we can see, the percentage of students who reported engaging in contract cheating falls within the upper boundary of the results of similar studies from other countries

Table 7 Reasons for not being engaged in contract cheating

	Number	Percentage
I wanted to write the work by myself	732	78%
I was afraid of being detected	216	23%
It is too expensive	140	15%
Other	10	1%

Table 8 Under what circumstances the non-cheating group would possibly cheat

	Number	Percentage
Never	497	53%
Lack of time	179	19%
More money	19	2%
Low probability of detection	66	7%
Misunderstanding the topic	131	14%
Other	47	5%

(McCabe 2005; Curtis and Popal 2011; Zafarghandi et al. 2012). Likewise, the fact that men reported having been more often engaged in contract cheating corresponds with other studies (Brimble 2016). Moreover, the most important reasons provided by Czech students committing contract cheating overlap with the reasons provided by students from other countries (Devlin and Gray 2007; Gullifer and Tyson 2010). For the educators, the good news is that approximately half of the students report that they would not use contract cheating services under any circumstances.

We can conclude that Czech students are not special in this regard. The only difference is the limitation of the market, which is focused on assignments and theses in the Czech language. Therefore, this indicates that recommendations made by researchers in this area abroad can be generally applied to the Czech educational environment. Czech universities should therefore immediately start to apply measures that have been found to be effective in other contexts, such as emphasizing students' intrinsic motivation. As Newton and Lang warn, *“a failure to address the underlying motivation of students who use paid third parties (or, indeed, who commit any form of academic misconduct) will fundamentally undermine any attempts to deal with it, especially given the rapidly evolving nature of the issue, powered by advances in technology and access to services provided online”* (Newton and Lang 2016). Focusing on and intrinsic student motivation rather than on detection techniques, which can be easily bypassed, is also highlighted by Walker and Townley (2012). These authors also recommend using personalized and sequential assessment and emphasizing skills gained by academic writing. Based on the proportion of students who are already aware of contract cheating services, we would also add not being afraid of discussions about this issue to build a community, where contract cheating is spurned.

Researchers agree that there is no single solution that can successfully eliminate contract cheating from academic environment, however, a set of measures complementing each other, including all stakeholders and working together may help to limit this

Table 9 Reasons for engagement in contract cheating

Reason	Number	Percentage
Lack of time	32	41%
Misunderstanding the issue	25	32%
Laziness	10	14%
I prefer to work	7	9%
Other	3	4%

Table 10 Age and fear of reveal

Age group	Not afraid of reveal	Afraid of reveal	Total	Percentage of those being afraid
19–22 years	12	1	13	8%
23–26 years	31	6	37	16%
27–29 years	1	13	14	93%
30 years or more	4	9	13	69%
Total	48	29	77	38%

phenomenon. The following measures for reducing the threat posed by contract cheating, proposed by Králíková (2017) are adapted from the set of recommendations by Bretag and Mahmud (2016):

- Encourage better communication and cooperation between students and their supervisors;
- Treat students as partners, not as just passive acceptors of education;
- Foster the culture of academic integrity in student community;
- Provide purposeful, personalized assignments including specific research question rather than simply requiring description of general topic;
- Explain to students that the paper or assignment serves a useful purpose and will help them develop the skills they need for their future jobs.

Králíková (2017) interviewed a student who successfully defended contract-cheated thesis. In the interview, the student endorses these recommendations.

Conclusion

This paper represents the first quantitative study on contract cheating conducted in Central European region. The main findings are:

- According to survey, 8% of Czech students have submitted assignment or thesis written by someone else, most of which were written by a friend or class-mate. 34% of students know someone who has engaged in contract cheating and 87% of students are aware of companies providing ghost writing services.
- According to the survey, the most important reasons leading students to engage in contract cheating were lack of time, not understanding the topic, and laziness.
- Out of the students who did not report contract cheating, more than half say that they would never do it; almost one fifth would do it in the event of time pressure and approximately one seventh would do it if they did not understand the topic properly.

Based on these findings, the similarity of these results to responses obtained from other countries, and recommendations provided by researchers in these countries, we recommend improving cooperation and communication between teachers and students and focusing on intrinsic motivation of students. We are convinced

that these measures would improve the situation in Czech higher education and decrease the tendencies of students to be tempted to rely upon contract cheating.

Appendix

Copy of the full survey instrument, translated from the Czech language

Dear respondents,

I would like to ask you to fill the questionnaire, which will serve as a resource for elaboration of my diploma thesis dealing with market analysis of fraudulent thesis. The questionnaire is strictly anonymous and serves to the data collection only. To make sure the result is as accurate as possible, please be entirely honest. I guarantee that the data will serve for the diploma thesis only and I will not make any attempt to identify any respondent.

The questionnaire is for the students or graduates of higher education institutions. It takes about 3 min to fill.

Thank you for your time,

Veronika Králíková.

1) Have you ever let anyone (friend, classmate) write any school work (seminar, final) on your behalf?

- Yes (go to question number 7)
- No

PART 1 – For those who answered No to question 1.

2) For what reason you have not ask anyone to write your school work? (Check all valid options)

- Fear of reveal
- I wanted to write it by myself
- It is expensive
- Other:

3) Under what circumstances would you use the services of someone who would write the work for you?

- If I couldn't write it in deadline
- If I had more money
- If I couldn't understand the topic
- In case of low probability of detection
- Never, under no circumstances
- Other:

4) Did you know that there are companies that can prepare materials for assignment or thesis for you?

- Yes, I know their web pages
- Yes, I heard about them, but don't know any particular one

- No, I didn't.

5) Could you please estimate, how much a 12 pages long essay costs.

- up to 1000 CZK
- 1000–1999 CZK
- 2000–2999 CZK
- 3000–3999 CZK
- more than 4000 CZK

6) Do you know anyone, who let anyone (friend, classmate) write any school work (seminar, final) on their behalf?

- Yes, I do.
- No, I don't.

PART 2 – For those who answered Yes to question 1.

7) What led you to let anyone write a school work on your behalf?

- Lack of time.
- I didn't understand the topic.
- I was lazy.
- I was rather at work.
- Other:

8) Where you satisfied with the quality of the work?

- Yes, I couldn't write it better.
- Yes, but it could be better.
- No, I had some objections.
- Other:

9) Did you rather choose the anonymous order from the company or you asked your classmates/friends to do it?

- classmates/friends
- company
- Other:

10) Why you choose this form? (open question).

11) Were you afraid of the reveal, that it was not your work?

- Yes
- No

12) Would you take the opportunity to get your work done this way repeatedly?

- Yes
- No
- Maybe

13) Why would/wouldn't you take the opportunity to get your work done this way repeatedly? (open question).

PART 3 - all respondents.

14) Are you:

- Man
- Woman

15) Your age:

- 19–22
- 23–26
- 27–29
- 30 or more

16) What is your field of study?

- Economics
- Engineering
- Natural Sciences
- Pedagogy
- Medicine
- Law
- IT
- Other:.....

17) Your highest education achieved:

- secondary school education
- bachelor
- master
- Ph.D.
- Other:

18) Regarding economic activity, which group you would be included in?

- Employee
- Self-employed
- Student
- Maternity leave
- Unemployed
- Other:.....

19) Please indicate the net monthly income of your household in CZK:

- up to 9 999Kč
- 10,000–19 999Kč
- 20,000–29 999Kč
- 30,000–39 999Kč
- 40,000 and more

20) Please state the structure of your household. I live:

- By myself
- With parents (grandparents)
- With roommates in rent
- In the dorm
- With a partner
- With your wife/husband

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Availability of data and materials

All data gathered in the survey is stored for further re-use. The data is not available publicly, but the authors are ready to provide it upon request.

Authors' contributions

TF diploma thesis supervision, translation to English, literature review, data analysis, discussion. VK data collection, data analysis, description of findings, translation to English. Both authors read and approved the final manuscript.

Authors' information

Tomáš Foltýnek – research assistant and academic integrity coordinator at Faculty of Business and Economics, Mendel University in Brno. President of the Board of the European Network for Academic Integrity.

Veronika Králíková – PhD student at Faculty of Business and Economics, Mendel University in Brno.

Competing interests

The authors declare that they have no competing interests.

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