



Article

Effectiveness of Regulation of Educational Requirements for Non-Bank Credit Providers in Czech Republic

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Abstract: Educational challenges for companies are created by market regulation less frequently versus market dynamics. Yet when law-enforced educational challenges appear, they have a significant impact on companies and their employees. This empirical study focuses on a new professional qualification regulation on the market of consumer credit in the Czech Republic. We analyze how companies cope with the new law-enforced educational requirements and whether the regulation has been successful. We analyzed more than 1900 certification tests. The sample accounted for approximately 10% of all employees tested in the Czech Republic in the first year of the regulation. All test variants were found unique, the expected point score of each variant had skewed distributions with only a small number of difficult variants. A significant majority of the tests showed expected values in an interval of 60–75% with only several outliers; test difficulty was balanced. The professional qualification tests separated employees with the required knowledge from those without and excluded accidental success. We identified a successful education management system that resulted in success rates above the country average: decentralized regional managers supervision, employee financial participation, and effective e-learning. We found structural changes in the market supply structure. Companies with professionally skilled employees met the regulatory conditions. The regulation combining centrally-provided requirements and questions with the market-based method of preparing for the professional qualification test was successful.

Keywords: training; regulation; professional qualification; consumer credit; financial education; banking sector



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1. Introduction

In this paper, we focus on an educational challenge which has a significant influence on the consumer credit market in the Czech Republic. The challenge was set by the financial market national regulator Czech National Bank (CNB) for all companies and individuals who participated in the process of the provision and intermediation of consumer credit. What is unique in an EU (European Union) context is that professional qualification requirements were set for a wider range of credit products, i.e., including consumer credit other than for house purchase. Therefore, a new professional qualification certification applied to small non-bank consumer credit providers as well.

Firstly, let us introduce a broader context, i.e., why and from where a new educational challenge came from. The Directive 2014/17/EU ([European Parliament and Council 2014](#)), known as a Mortgage Credit Directive (MCD), included an obligatory duty for creditors' staff to meet professional requirements. In general, it was another example of general open-ended standards principles which are typical for the EU legal environment. MCD transposition in the Czech Republic was a part of a wider credit rules amending process which was discussed since a transposition of Directive 2008/48/EC. A new Act No. 257/2016 Coll. ([Parliament of the Czech Republic 2016](#)), known as the Consumer Credit

Act (CCA), introduced that staff has to meet professional requirements for consumer credit other than for house purchase provision as well as for mortgages. Professional qualification requirements were further specified in following CNB regulatory decrees ([Czech National Bank 2016a, 2016b](#)) and supervisory benchmark ([Czech National Bank 2017](#)). The professional qualification had to be proven by 1 December 2018 in order to pursue business in consumer credit provision and intermediation. Such qualification can be proven only by passing a qualification examination organized by CNB-accredited examiners. As a result, thousands of non-bank employees and tied-representatives have had to undergo professional qualifications since 2018 at accredited examiners.

Secondly, let us explain the motivation for our study. The interesting part of the regulation impact comes from a question “who is affected?”. Instead of just bank staff providing mortgages we had a situation of thousands of individual and non-bank providers and intermediaries required to undergo professional qualification examination. Why does the skills requirements regulation go beyond EU rules and include “common” consumer credit? Cases of adverse phenomena were observed for several years in the Czech consumer credit market. Such phenomena included predatory and usurious practices—abuse of the social distress of debtors, regulatory arbitration, credit cost obfuscation, pre-contract payments, and insufficient or even no creditworthiness assessment. Professional qualification requirements set an educational challenge not that easy to overcome¹ for individual and non-bank “predatory” consumer credit providers. It is not uncommon that non-bank providers bear a lack of professional qualification as a competitive disadvantage compared to bank ones ([Da Silva et al. 2017](#)) but there were tens of thousands of credit providers as a tied sole trade suggesting a substantial share of unprofessional providers performing among other things predatory and usurious practices.

Finally, let us conclude the introduction with our goal and hypotheses. As we mentioned in a paragraph above, an educational challenge played a part in cleaning the market process. However, the question is how non-bank market entities coped with the challenge. Such companies do not have access to in-house sophisticated mass-training processes as most the commercial banks do. Non-bank providers usually chose from offers of training and education provided by private institutions. We managed to obtain data about the training and examination process results from one accredited institution, which at the same time provided professional qualification training courses. Non-bank providers trainees who attended these courses were showing results at professional qualification examination above the country average. Our goal is to analyze both sides—trainee preparation and examination test. To do so, we set research questions related to two main criteria needed for examination assessment: fairness and sorting ability. The first relates to examination difficulty consistency, i.e., to a balance of randomized examination tests. The latter one relates to the examination’s ability to sort employees who do not meet the level of qualification criteria set by the regulator.

2. Training

Training is important to keep companies not only competitive, but sometimes being able to continue their business at all. In other words, companies need to be able to adapt to change. Market regulations belong among major factors requiring companies to change along with changes in market demand, workforce, technology, globalization, and new competitors. Although learning is a goal of training, a company seeks to increase human capital as one of its key intangible assets. Let us define human capital as a unit-level resource that is created from the emergence of individuals’ knowledge, skills, abilities, and other characteristics ([Ployhart and Moliterno 2011](#)). The role of human capital and knowledge management in generating sustainable competitive advantage increases as the economy is more and more based on knowledge ([Mahdi et al. 2019](#); [Meister and](#)

¹ Other measures can also be found in CCA to reach this goal such as initial capital requirements, creditworthiness procedures, and consumer procedures in a case of default.

Willyerd 2010). There are opinions that human capital may be more valuable than physical capital (Campbell et al. 2012). Our environment suits it rather well because of the nature of financial services provision and intermediation. Human capital relates strongly to performance when a labor market is not able to provide it at needed capacity (Crook et al. 2011). This argument is valid in our case because, when CCA regulation came into force, there were no workers with appropriate certification. Therefore, companies had to train or let their employees be trained in order to obtain professional qualification certification and pursue their business.

We confirm what Zhang et al. (2019) claimed about employee training; there is a lack of quantitative research on it and it is understandable. Training and educational companies signed confidentiality obligation in their contracts and so they cannot publish how successful their trainees were. Even worse is the situation related to detailed data on individual training success, although training is a crucial part of firms' policies in the financial sector. More than two-thirds of banks in the study (Khan et al. 2017) relied on blended learning. This is explained by learning goals of hard skills as well as soft ones for which e-learning is not the most proficient option. Nevertheless, overall outcomes of e-learning inclusion in training was positive in terms of a higher return on investment. Studies of employees' attitudes and behavior regarding training (Drozdova and Guseva, 2017; Menshikova et al. 2017; Zhang et al. 2019) showed that the bank sector employed a wider range of learning tools including e-learning, proving their willingness and commitment to employee training activities. On the other hand, e-learning efficiency can be decreased in an unexpected way. One study (Kaźmierczyk et al. 2020) suggested that workers who were involved in e-learning initiatives were less loyal than the ones under traditional training. That would bring additional costs for a bank.

3. Methods and Data

We were provided² a set of data related to professional qualification exam tests taken from January 2018 till May 2020. The source was one of 19 accredited institutions at the beginning of 2018, which provided educational and advisory activities. Educational areas include soft skills (rhetoric, over distance communication, building a network, management techniques) as well as hard skills (professional qualification certification). It was founded as a limited liability company in 2003. It meets the definition of a small business but is likely to become a medium-sized business in the next two years. This is due to the growing number of short-term contracts with experts from different sectors, who are involved in background work on courses, exam supervision, and other activities. It provides company education, customer training, and a dealer network. It offers training through tailor-made e-learning, personal training directly at the company or training center. According to the business field, a team of experts, often combining academic and professional spheres, assemble for the contract.

The research was carried out on a trainee sample of $N = 1490$. A failed test could be re-taken during other exam terms and therefore, the sample size of exam tests was higher: $N_t = 2130$. Its structure can be found in the Table 1 below.

Table 1. Frequency table of how many times each trainee took the test.

| Frequency | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----------|------|-----|----|----|---|---|---|
| Trainees | 1027 | 339 | 87 | 25 | 9 | 2 | 1 |

Data provided to us were anonymized by the accredited institution and contained no information identifying a living person participating as a trainee or an exam taker. The same applies to different pieces of information, which collected together also could not

² We disclose that we had no role in a design of any studied training, examination processes, and related e-learning data processing including data extraction.

lead to the identification of a particular person. We were not given permission to publish names of companies using their services.

We set two main criteria for examination test assessment: sorting ability and fairness. The following research issues have been addressed in the quantitative part of the research by research questions:

- Q1: Is the success rate of individual questions balanced?
- Q2: Is the expected (mean) point score for each variant of the test balanced?
- Q3: Does the expected value of each variant point score correspond to an observed point score?
- Q4: Can the test be passed by a mere random selection of answers or when information about a variant set already leaked?

For Q1, we calculated the success rate of each question. Then, we assembled a histogram of the distribution of the individual success rates. For Q2, we calculated the expected point score of each test variant as the sum of the success rates of each question in a particular variant multiplied by the maximum possible point score for that question. Q3 was measured by Spearman's correlation coefficient. If two respondents had the same variant (which occurred in 42 cases, or less than 2% of all analyzed tests), then we used their average point score. For Q4, we calculated the expected point score on a random sample of responses and compared it to the expected point score of individual test variants. We were not able to calculate the reliability and factor structure of the individual test variants, as it is used. The tests were in the vast majority unique due to its random generation process. That resulted in a state when a trainee had a unique test in 98% of all cases.

We employed Shapiro–Wilk test and Spearman's correlation coefficient to quantify and formalize our results. Both methods are well established (Best and Kahn 2006; Cohen et al. 2007; Hair 2014; Myers et al. 2010). We processed data in MS Excel 2016 and JASP³ version 0.14.0.0.

4. Results

Firstly, we provide an analysis of the test results to answer our four research questions. Secondly, we describe the regulatory impact on the number of providers and examination test structure, and thirdly we describe an organization of trainees' preparation.

4.1. Examination Test Assessment

The first part of our professional qualification examination assessment was focused on difficulty consistency, i.e., to a balance of randomized examination tests. Firstly, we were gathering evidence to answer Q1: Is the success rate of individual questions balanced?

The success rate of individual questions grouped into different test variants did not show a normal distribution. We tested a hypothesis that a sample came from a normally distributed population by Shapiro–Wilk test. We were able to reject the hypothesis with alpha 0.05 and p -value < 0.001. See table below for descriptive statistics, histogram is shown in Table 2 and Figure 1.

Table 2. The success rate of questions.

| Success Rate Main Descriptives | | Success Rate Percentiles | |
|--------------------------------|--------|--------------------------|-------|
| Mean | 0.813 | 5th percentile | 0.510 |
| Std. Deviation | 0.153 | 25th percentile | 0.727 |
| Skewness | −1.149 | 50th percentile | 0.849 |
| Minimum | 0.115 | 75th percentile | 0.931 |
| Maximum | 1.000 | 95th percentile | 1.000 |

³ software developed in Department of Psychological Methods, University of Amsterdam.

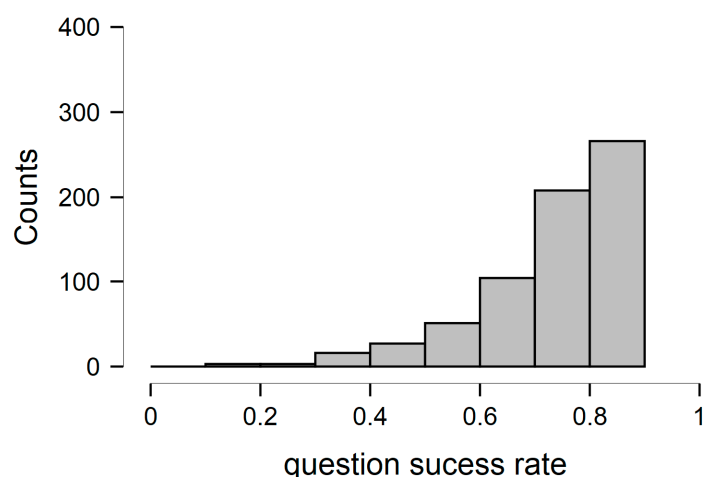


Figure 1. Question success rate histogram.

The success rate showed a strongly skewed distribution, with 95% of questions having a success rate greater than 0.5. Thus, the tests included less difficult questions (success close to 100%) as well as challenging questions (success at 50% or below). The range for the middle half of the questions was from 73% to 93%.

Secondly, we studied expected point scores in Q2: Is the expected (mean) point score for each variant of the test balanced? The number of different test variants was $N_v = 2.088$. We calculated the expected point score value in each variant of the examination test to examine descriptives and distribution, see Table 3 and Figure 2 below.

Table 3. Expected point score.

| Expected Point Score Main Descriptives | | Expected Point Score Percentiles | |
|--|--------|----------------------------------|--------|
| Mean | 78.815 | 5th percentile | 64.528 |
| Std. Deviation | 1.387 | 25th percentile | 75.881 |
| Skewness | −0.021 | 50th percentile | 76.793 |
| Minimum | 71.374 | 75th percentile | 77.770 |
| Maximum | 81.375 | 95th percentile | 79.067 |

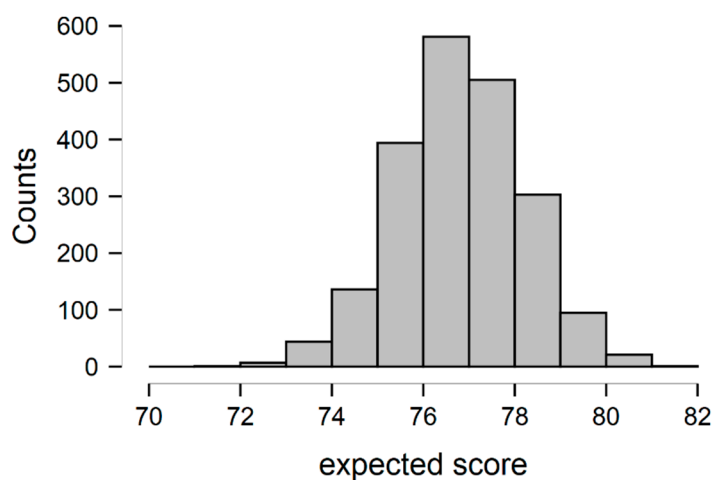


Figure 2. Question success rate histogram.

The histogram and percentiles showed a distribution with a very small skew to the left, see Figure 2. We tested a hypothesis that a sample came from a normally distributed population by Shapiro–Wilk test. We were not able to reject the hypothesis with alpha 0.05 and p -value = 0.677.

Thirdly, we analyzed the observed point score in Q3: Does the expected value of each variant point score correspond to an observed point score? The observed point score showed left-skewed distribution, see Table 4 and Figure 3 below.

Table 4. Observed point score.

| Observed Point Score Main Descriptives | | Observed Point Score Percentiles | |
|--|--------|----------------------------------|--------|
| Mean | 76.788 | 5th percentile | 49.000 |
| Std. Deviation | 12.799 | 25th percentile | 72.000 |
| Skewness | −1.284 | 50th percentile | 75.000 |
| Minimum | 17.000 | 75th percentile | 86.000 |
| Maximum | 95.000 | 95th percentile | 92.000 |

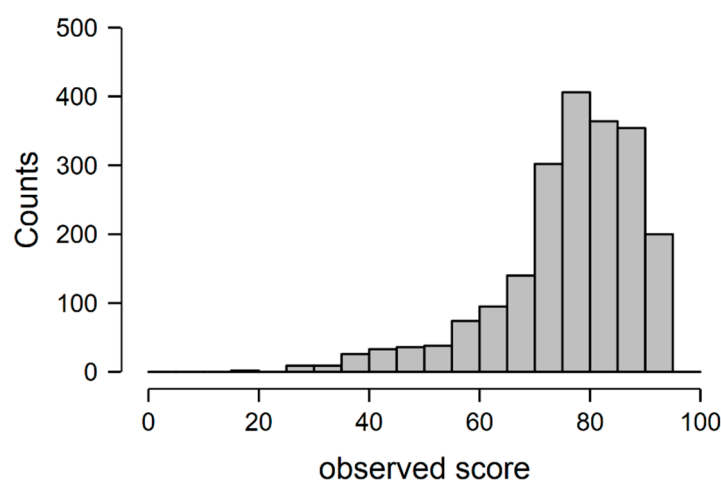


Figure 3. Observed point score histogram.

We were able to reject a normal distribution hypothesis by Shapiro–Wilk test with alpha 0.05 and p -value < 0.001 but result already suggested the shape of the histogram in the Figure 3. The relationship between expected and observed point score showed a statistically significant correlation $\rho = 0.126$ with p -value < 0.001 . The reason for significant but low-effect correlation coefficient is variance, see Figure 4. Distribution around the trend curve is almost symmetrical.

The Q4 research question was related to examination test ability to sort employees who do not meet the level of qualification criteria set by the regulator. By not meeting is meant both passing the test by filling random answers or having knowledge of test variant. Each test variant contained 25 questions and had the expected point score on random answer selection of 25,625 points. Required number of points was 72, and so the probability of passing the test by accident was highly unlikely. This issue relates to cases when the exam is re-taken or cases when order and selection of questions leaked to other trainees, i.e., if exam taker remembers what was in the test and passes this information to others in a company. The total number of analyzed tests was $N_t = 2130$. This set of analyzed contained $N_v = 2088$ unique variants. Therefore, the probability of having two identical variants is limit-zero.

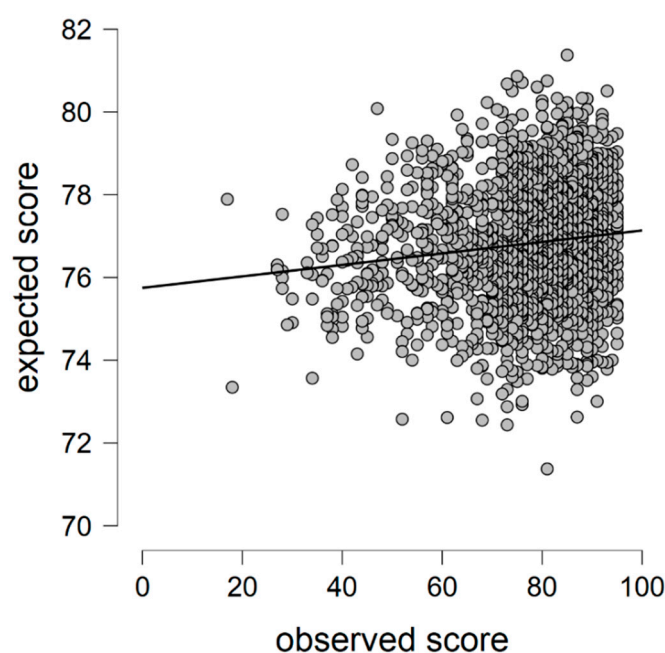


Figure 4. Observed point score and expected point score scatter-plot.

4.2. Regulation Impact and Examination Tests

The regulation combined centrally-provided requirements and questions with the market-based method of preparing for the professional qualification test, see the scheme in the Figure 5 below.

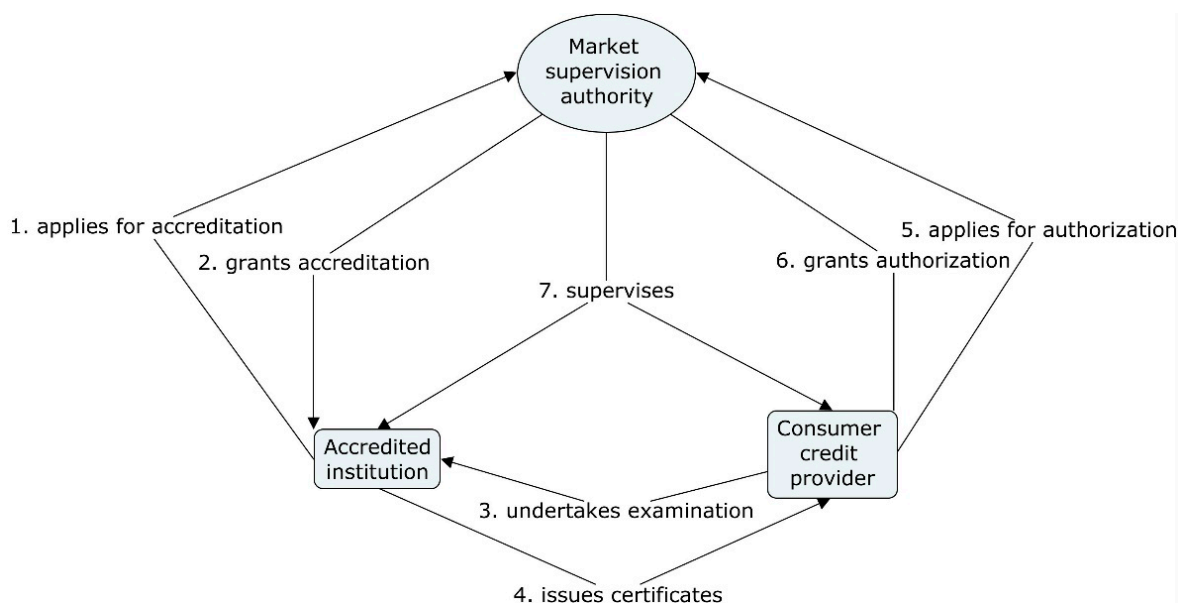


Figure 5. Simplified professional qualifications examination scheme in the case of a new consumer credit provider.

Professional qualification regulation:

1. Private entity, mostly in the form of a private limited company, submits an application for accreditation to CNB. The request is assessed according to the requirements from article 9 of (Czech National Bank 2016a) and article 63(2) of (Parliament of the Czech Republic 2016). One of them relates to the board of examiners. There is a rule that a majority of the members of the board of examiners has to be independent of the accredited person or of the business group of which the accredited person is a member.

Such independent examiners are then, e.g., academic professionals in a field of finance or economy or practicing professionals. A board of examiners list and their CVs are a part of required application documents in order to keep examination unbiased.

2. Market supervisor (CNB) issues accreditation in case of meeting the requirements.
3. Employees of a consumer credit provider have to apply for professional qualifications examination.
4. Accredited institution organizes examination according to the requirements and issues a certificate of professional qualifications for successful trainees.
5. Consumer credit provider can apply for an authorization to pursue consumer credit business. There is, among other requirements, obligatory duty to prove that all staff participating on provision and intermediation of consumer credit hold a certificate professional qualification.
6. Market supervisor (CNB) grants authorization in case of meeting the requirements.
7. The whole process is under market supervisor's supervision. Accredited institutions e.g., report professional qualifications examination terms in advance to the market supervisor. Any examination can be visited by supervisor's inspection team, which unannounced, arrives at the beginning of an examination and performs a supervision of examination room, question delivery, examiner's identity, etc.

The key-part was the professional qualification test. The questions were divided into 7 areas, each test with 70 questions drawn from a total battery of 1036 questions. The tests involve not only the issue of consumer credit selling, but also financial market knowledge and legal terms. Each test included a theoretical part and case study parts. Each of the test questions had four possible variants of the answer. Each test contained 70 questions:

- Theoretical part: 45 questions had only one correct answer, which is rated at one point. Another 15 questions had multiple correct answers, which are rated two points.
- The practical part contained 2 case studies with 5 questions for 2 points.
- The total minimum number of points is 72, with the minimum number of points to be achieved at the same time in the theoretical part (45 points) and in the practical part (12 points).

Maximum point score was 95 points. The score of 72 points was the total minimum requirement to pass the test. At the same time, there had to be achieved in the theoretical part 45 points and in the practical part 12 points. The time limit was 120 min.

We mentioned in the introduction a question of representatives who participate in credit provision and intermediation, i.e., how did they cope with the regulation. One of the regulatory goals was, in short, to clear the market of consumer credit other than for house purchase. The regulator presumed that those with predatory intentions would find new requirements prohibitive. There were literally thousands of independent intermediaries as sole traders—now there are only several hundred. After the regulation came into force in 2018, the number of independent intermediaries dramatically dropped to 330 (registered at CNB by the end of 2019). We compare to sole traders because they had to become independent intermediaries. Credit provision and intermediation was not possible for a sole trader to pursue anymore and they had to become a (regulated) independent intermediary. Similarly, there was a noticeable decline in the number of tied agents—individual representatives having a contract with a provider company. See the Figure 6 below.

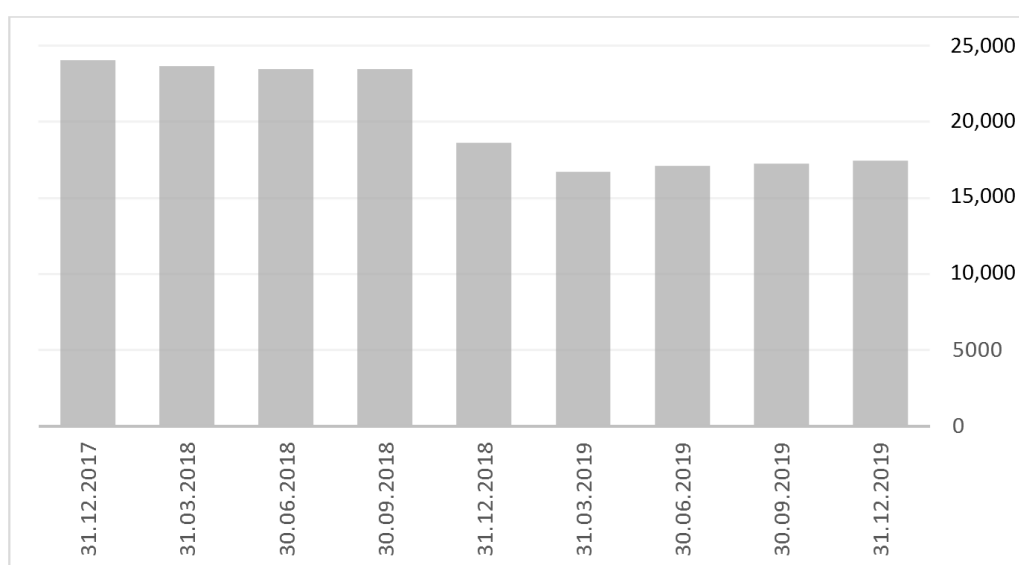


Figure 6. Registered tied agents for consumer credit other than for house purchase.

The end of 2018 was the last date up until which it was possible to participate in credit provision and intermediation without the professional qualification certificate. We can see the drop by 7000 tied agents which is in percentage a less severe drop compared to independent intermediaries; however, the impact is still significant and clearly visible.

4.3. Preparation of Employees and Examination

Firstly, we describe the main tool accredited institution employed in trainee preparation—the e-learning course. It was prepared in cooperation with two practitioners and four academicians. The accredited institution used its own solution and decided not to buy another e-learning platforms' license. The training software was developed over three-quarters of a year and was accompanied by significant debugging complications related to changes to issues defined by the regulator itself. The e-learning environment provided trainee monitoring and individualization options. The first feature was automated feedback of time, progress, and self-test results. Individualization options were related to a sequence of learning chapters, planning and prioritization, and choice between brief web-page like materials and script-like type. Thematic areas of expertise necessary for the provision or intermediation of consumer credit other than for house purchase included:

1. minimum expert knowledge of the financial market
2. structure, entities, and functioning of the market
3. regulation of the market
4. lending and the products of consumer credit other than for house purchase
5. related complementary services
6. the principles of the process for assessing a consumer's creditworthiness

Each chapter above included subsections which were briefly at first accessible in the web material with charts, pictures, visualization elements, and demonstrational examples. Secondly, the main issues of current legislation, consumer protection law, civil law, or complementary services related to consumer credit were explained in short narrative videos. These videos were created in collaboration with specialized media service professionals. Thirdly, there were script-like web materials providing a final/deeper insight. These materials included interactive references to questions that correspond exactly to questions from the certification examination database set by the CNB. Each chapter was always finished with a self-test. The trainee became familiarized with the theory, the construction of the questions, and the answers, and finally, all answers were commented on to minimize search-for-knowledge time and to draw attention to details. It was not rare that there were

just small differences in questions or answers. Some questions had “a catch” that was hard to discover, and so several tutorial videos were focused on such details.

Organization of training was discussed in a non-bank consumer credit provider who had a major share of total participants in the surveyed training program. This non-bank company provided in 2018 almost 50,000 consumer credits with a total principal of almost 35 million €. The design was set by the company’s operations manager in Prague. Organization of training showed a key role of local managers supervised by regional managers. Each of the regional managers had to regularly update the operations manager about the progress of training because the company could not pursue the business without certified tied agents. Local managers carried the responsibility for a successful training process and they acted as team leaders who supervised the preparation of each trainee for the exam. The trainee learning schedule and the result of control tests were available for local managers providing an overview of each trainee’s progress. The main indicator of the trainee being ready was to be able to pass a control test composed of questions from all chapters two times in a row scoring 72 or more points. This condition was not set at the beginning. However, the results in the third quarter of 2018 showed an average point score lower by 12 points compared to the first quarter. Local managers were instructed to recommend and supervise that two full-scale control tests were passed successfully before the exam was taken. There was also a recommendation to re-take a subsection control test if more than 1 month passed since the end of learning of the chapter. Full-scale control tests were available to a trainee after all subsection control tests were successfully passed. Then, there was a financial incentive to responsibly prepare for the professional qualification exam. The first and therefore only attempt was paid by a company. In case of a failure, further attempts had to be paid for partially and then completely by a trainee.

5. Discussion

Firstly, we interpret our results and assess the tests used for professional qualification examination. Q1 analyzed if a success rate of individual questions was balanced. The distribution was significantly left-skewed, see Table 2 and Figure 1. Therefore, the differences in success rate were not just present but there was another more significant issue. It mattered from which question the test was composed of. Without a correction in question selection a very easy test could have been generated and vice versa. We do not find the success rate of questions balanced.

In Q2 we assessed whether a difficulty of each test variants was balanced. The expected (mean) point score for each variant showed symmetric distribution which moreover was normal, see data in the Table 3. This is a very important result because test questions were not equal in difficulty. In spite of it, the tests were fair regarding difficulty—a trainee had the same probability of taking a harder or easier variant. What is even better for expected results is that in most cases, a trainee took a test with an average difficulty due to a proven expected point score normality. We claim that CNB prepared the test very well regarding a formula for their generating because it is choosing from several pools of questions with significantly varying difficulty.

The third research question, Q3, analyzed a relation between the expected value of each variant point score and observed point score, see Figure 4. Although we found a significant correlation coefficient, the effect is weak and so there is another factor explaining observed point scores, i.e., test results. We expect trainees themselves to be a major factor. We acknowledge that other factors could have some level of influence. Summer 2018 was very hot and learning or taking an exam in high-temperature environments affects the results of cognitive tasks. Still, we expect trainees to be the major source of variance in expected values of each variant point score and observed point score relation. We also expect a temporary pattern related to an effect known as “early-takers” or, in more colloquial terms, an “eager-beaver” effect. Such persons are more motivated, more hard-working, and overall more prepared for the test. Otherwise, they would take later exam term to gain more time for studying. Therefore, the results at the beginning of testing in

January 2018 were positively deviated by the participation of such trainees. The situation is similar to pre-term exams at universities where almost exclusively only gifted, prematurely ready students participate. What we find interesting is that variance is symmetrically and almost normally distributed around an average. This suggests there is a normal distribution in trainees' ability to pass the test. That leads us to a conclusion that their demonstrated knowledge of the field also shares a normal distribution which is a natural one.

The last research question, Q4, was related to examination test ability to sort employees who do not meet the level of qualification criteria set by the regulator. The first option was that random answers would lead to successful test and the second one that knowledge of a previous variant would lead to success, i.e., that the re-taken test would contain the same questions. Neither of the options is a threat to test fairness in the surveyed examination. The probability of such event is only theoretical, respectively limit-zero. Table 1 showed that less than half of the trainees had to re-take the exam. Most of the trainees were already employed in the credit provision institutions and took the exam in order to continue. If (mostly) experienced employees got more than a 50% chance to fail, we can take it as supportive empiric proof of the test demands. We claim that exam tests were fair and no trainee passed just by accident without required knowledge of problems and task in the test. However, this claim has nothing to do with the problem of test validity. The Czech Banking Association objected that the set of test questions is focused too much on legal issues and contains very little practice and issues related to ambiguous interpretations of CCA.

Secondly, we assess a method and role of e-learning which was the main tool employed to prepare trainees. E-learning is effective for a wide range of outcomes, including knowledge, skills, and behaviors (Brown 2001) but not suitable for all types of learning outcomes. E-learning is insufficient for, e.g., teaching complex analytical, conceptual, and interpersonal skills (Welsh et al. 2003). On the other hand, it is highly effective for training that emphasizes cognitive outcomes, such as declarative and procedural knowledge (Noe 2016). A significant part of the professional qualification test contained declarative knowledge testing related to the legal environment and financial market. Therefore, we consider e-learning as well-chosen and an effective choice over, e.g., a face-to-face course. One article (Kraiger 2008) pointed out principles for long courses principles which allowed e-learning to be more effective than regular class: provide a trainee control over content, sequence, and pace; and ability to practice the content and receive feedback. All these principles were followed in the analyzed e-learning course. The next principles that could be found in the e-learning course were monitoring and individualization options. Both are in accord with (Schmidt and Ford 2003; Sitzmann et al. 2009) who focused on a role of metacognition and self-regulation. Both articles demonstrated that support of metacognition and self-regulation lead to increased training performance in web-based training. Manager recommendation and random check of repeated subsection control tests were maybe redundant from the point of view of the Ebbinghaus forgetting curve but it was in accord with the idea of overlearning. This prevention of decay in trained skill and knowledge is related to additional training beyond required for initial proficiency (Abadzi 2016; Cascio 2019) by passing training tests. It is true that overlearning is the most effective for tasks that are performed infrequently in the job however, there it also gives the trainee more confidence in his or her performance (Cascio 2019). That confidence can be a supportive factor later in exam taking. Inclusion of various learning materials (script, web page, video, presentation) also suggests an option of podcast employment, although a review article (Kay 2012) emphasized reliability and validity for a data collection tools issue. Therefore, its benefit would have to be ex-post measured by, e.g., a questionnaire in order to justify additional cost. The financial incentive which had the straightforward idea of saving cost and exam fee participation also increased self-interest of trainees. It was not fully education for more than one-third of trainees. However, we find a stronger incentive in the possibility to work in this area at all which is not possible without the certification. What remains is the issue noted in an article Sung and Choi (2014). Studies based on

human capital theory suggest that employees who participate in organization-sponsored education programs are more likely to leave their companies because of their increased marketability. To finish this paragraph, let us mention that the CNB regulation again proved the need for learning across the lifespan regardless of whether it is obligatory or self-initiated and self-managed as Bjork et al. (2013) pointed out. In general, this approach to education can be adopted by commercial banks. Moreover, this is one of a few choices left due to more than one-year long pandemics. Such institutions possess more funds than small and middle-sized enterprises consumer credit intermediators and so more complex, sophisticated, and content-rich e-learning is not the issue. The issue is what (Welsh et al. 2003) mentioned, i.e., interpersonal skills. A new bank trainee should undergo 3 weeks sales skills and product features intensive course with experienced tutors (usually a former skilled bank employee). It takes place in a separate training center and the course includes practical situation simulations such as dealing with clients. This is not possible right now.

Thirdly, we provide a broader EU context for the regulation which set the educational challenge. We focus on professional qualifications examination and examination testing only. Most of the EU countries transposed MCD as it is regarding professional education requirements. The situation in the market for consumer credit other than for house purchase remains unharmonized among EU member states as can be seen in the Table 5 below. More detailed description of the Czech Republic regulation can be seen in the Figure 5.

Table 5. Professional qualification regulation overview in selected European Union (EU) countries.

| | Regulator Requires Submission of Training Program | Regulator Requires Knowledge/Skill Certification | Regulator Supervises Examination Companies | Certification by Registered Private Companies |
|----------------|---|--|--|---|
| Austria | | x | | x |
| Bulgaria | | | | |
| Croatia | x | x | | x |
| Czech Republic | | x | x | x |
| Germany | | x | | |
| Greece | x | x | | x |
| Hungary | | x | x | x |
| Ireland | | x | | x |
| Netherlands | | x | | x |
| Poland | | | | |
| Portugal | | x | x | x |
| Slovenia | | x | x | x |

Source: (Austrian Financial Market Authority 2019; Bank of Portugal 2017; Bulgarian National Assembly 2018; Central Bank of Ireland 2017a, 2017b; Hungarian Ministry of National Economy 2015; Parliament and the President of the Hellenic Republic 2016; Parliamentary Council of the Federal Republic of Germany 2019; Polish Sejm 2019).

6. Conclusions

This article studied the educational challenge for non-bank consumer credit providers and their staff in the Czech Republic. We found that regulation greatly reduced the number of independent intermediaries who were before pursuing consumer credit provision business as sole traders. Most of the problems with predatory practices came from this group of entrepreneurs. The number of tied agents dropped by 7000 and so new requirements, including the educational challenge, significantly influenced the market. In the educational challenge, we analyzed professional qualification test and results. The test questions were divided into seven areas, each test with 70 questions randomly drawn from the set of 1036 questions. The question set was centrally-provided and examination was performed by the regulator-accredited institution. This institution provided us with anonymized but detailed results of 2130 professional qualification exam test results. This sample represented approximately 10% of all employees tested in the Czech Republic in 2018. We assessed test fairness and sorting ability. Tested hypotheses showed that, although success rate of questions was not balanced, the success rate of the exam tests was.

The tests were fair regarding difficulty, which showed normal distribution. We found only a weak correlation between expected value of each test variant point score and observed point score suggesting the main factor was a different phenomenon—trainees. Sorting ability was proven and there is almost zero probability that any trainee passed just by accident without required knowledge of problems and task in the test. In the future, we recommend to the test-creator firstly, to exclude questions with a success rate <0.5 , which is 5% of the items in the current bag-of-items (see Q1 results). Secondly, we recommend paying constant attention to difficulty balancing, e.g., identify easy questions and keep their ratio stable to keep the comparable difficulty of test variants.

The process of trainee education was carried out by e-learning course. The course included different types of materials from opening brief web-page-like topic abstracts to complex script-like. Complex or troublesome issues were explained also by narrative videos. The provided course supported individualization, metacognition, and self-regulation. We studied the largest non-bank provider who used this course to prepare trainees. Local manager supervision followed principles of overlearning and there was also a (negative) financial incentive to pass the test at the first attempt. The result was test scores above country average. To sum the results up, the regulation combining centrally-provided requirements and questions with the market-based method of preparing for the professional qualification test was successful.

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