

# Implementation of Cash Transaction Fiscalization Procedure in Businesses: Case of Croatia

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**Abstract.** *The paper deals with fiscalization, which last year caught the attention of the entire Croatian economy. Fiscalization implies stricter oversight of taxpayers' income with the intention of collecting higher tax revenues. Part of that money would not come to government without fiscalization.*

*The authors studied whether the implementation of fiscalization influenced Croatian businesses and in what ways they were affected based on the qualitative answers of participating businesses. They briefly analyze advantages and disadvantages of fiscalization process and the overall attitude towards fiscalization based on the stage of entering fiscalization, on average age or the average gender of employees.*

**Keywords.** fiscalization, budget, cash transactions, small businesses, Croatia

## 1 Introduction

Last year's implementation of cash transactions fiscalization in Croatia raised much attention. This is why the authors explored a bit further how Croatian businesses accepted it.

Main goal was to recognize the most important advantages and disadvantages of the process as seen by participants and to check whether their more positive or more negative attitude depended on the stage of entering fiscalization, on average age of employees or on the average gender of employees. Advantages and disadvantages were explained descriptively and dependence of the impressions on stage, age or gender formed three hypotheses that we checked by chi-square tests.

The article starts with explaining the reasons for fiscalization. After that we explain how the process was implemented in Croatia. The following chapter brings the course of the research and research results. In the end we discuss the conclusions drawn from the research.

## 1 Reasons for fiscalization

Each country needs money for performing its activities and duties and country's budget is a tool which enables collection and distribution of collected money to different states' expenditures. Last financial and economic crisis brought diverse pressures to many countries' governments. On the one hand there came the decline in states' revenues and on the other hand social benefits for unemployed, earlier retiring and similar trends raised their expenditures. The result was lowering of surpluses, or what is more common for most nowadays countries, deepening of their budget deficits. Combined with financial and economic crisis budgets face even more challenges to remain stable. For instance, based on his long-time experience Steger [1] stresses the importance of timely action to establish a robust development budget. Emphasis has to be put on financial discipline in good times and support of programs that are sustainable even in bad times, with open and honest relationship towards the citizens, because the "figs in your pocket" are likely to arouse opposition to fiscal discipline and consolidation [1, p. 63].

Besides these trends many countries have been having some additional problems such as the existence of grey or shadow economy. To avoid some of the tax burden grey economy includes non-registered employees, unofficial renting of premises, illegal activities, agricultural and construction production for own consumption or reporting of lower revenues especially in industries with retail-sale (selling with no bills) and large proportion of cash transactions, such as craftsman trade, personal services or hospitality services. Previous research has shown that at the end of 20th century about 8-9 % of Croatian GDP was created in this formally non-registered sector [2]. Some other researches of shadow economy in transition and OECD countries [3], [4] report even much higher participation of this kind of economic activity in GDP (up to 30 % of official GDP figure). Money supply in Croatia shows more or less stable participation of cash, i. e. monetary reserve (M0) in broadest money aggregate

(M4) amounting to 22-24 % [5], which is considerably more compared to the situation in the USA, where Money base (M0) amounts to 15 % of total money supply (M4), and in the time before crisis it totaled only 5 % of M4 [6]. So, there is a lot of space for Croatian businesses to hide certain amount of transactions. The described situation motivated Croatian government to introduce The cash transaction fiscalization act [7], to lighten the part of the shadow economy.

Although the similar procedures were recently introduced in other neighboring countries (Bosnia and Herzegovina, Serbia and Albania), the first country that introduced fiscalization was Italy in 1980s, and obligation of fiscalization exists in some other transition or developed countries, such as Poland, Czech, Slovakia or Sweden [8]. But the transition countries evidently have more trouble in tax collection. For instance, yearly tax statements of Croatian businesses such as small retail stores, restaurants and bars, hairdressers, mechanics, or carpenters show that turnovers of these entities were very low compared to observed business activities and asset of their owners. Another part of this story are also lawyers, who report revenues considerably lower when compared to their possessions [9]. That is why Croatian government needed stricter control over collecting cash revenues to be more effective in collecting taxes and curbing shadow economy[10].

## 2 The process of fiscalization

The law has prescribed the process of fiscalization as a set of measures that monitor issuing of cash transaction invoices [11]. The main aim of the process is suppression of tax evasion and thereby achieving of a better balance in the financing of public expenditures. Tax administration monitors issuing of each cash invoice through the Internet. In order to achieve this, each obligor is required to obtain fiscal cash register with the appropriate software and a certificate for digital signature. Customers are also part of the monitoring process, because they have the possibility to check the integrity of the invoice through an online application on Tax administration's webpage [12].

Fiscalization was implemented through three stages in which different subjects had to start issuing invoices under the fiscalization process [11]. The first phase began on January 1<sup>st</sup> 2013 for all the medium-sized and large businesses, and for small business dealing with accommodation and food service activities. The second phase began on April 1<sup>st</sup> 2013 for the obligors from wholesale and retail trade, repair of motor vehicles and motorcycles as well as for the independent professions (freelancers, veterinarians, lawyers, writers, athletes, journalists, notaries, auditors, architects, lawyers, tourism professionals, translators, tax advisors, etc.). The third and final phase beginning July 1<sup>st</sup> 2013 obliged all the other

businesses that collect their revenue in cash and have not been previously included in the fiscalization [11].

Certain groups of businesses are excluded from the list of obligors due to the nature of their business or due to the business based on information technology (IT) where there is not probable that transactions would be performed outside of the official system. These are selling of passengers' travelling tickets, toll collection, businesses that do not have to issue an invoice (retail sale of newspapers, lottery tickets, tobacco, ATM sale), financial intermediaries, or citizens who earn by renting their personal real estate on a small scale. There is also an exception considering market sellers for those who have registered family farm and sell only their own products, even though it is not easy to immediately determine whether someone has really produced what they sell or they just resell others' products [13]. Before and during the implementation there was plenty of rebellion, attempted frauds, closing the bars as a sign of protest, but there have also been some positive reactions. Some entrepreneurs we interviewed said that the fiscal process should have started long before, because it allows better control in the system and makes it more difficult to cheat in reporting.

All the obligors had to issue an internal act to describe the invoice numbering and a list business premises with their descriptions before starting with the process. All the issued invoices must contain all the required elements. The third set of obligations prescribes that all the obligors must display a notice on the obligations of a seller to issue and the buyer to take the issued invoice.

Implementation of the procedure involved installation of fiscalization software, and not forcing people to buy expensive hardware as in some other neighboring countries [14]. Usually it was enough to upgrade the existing software, or maybe get a tablet computer with software and an internet connection at an affordable price.

Entrepreneur (Invoice issuer) charges the customer for goods or services through the cash register with a permanent Internet connection, and with each new invoice sends new data to the Tax Authority (hereinafter TA). At first the application generates issuer's security code (ISC), which is different each time and forms an XML request containing this code which is then sent to the TA. TA registers the transaction and generates a unique invoice identifier (UII). The XML response with UII is then sent back to the information system of the obligor. In the step of printing the invoice both ISC and UII must be stamped on each final fiscal invoice. The whole process should take a maximum of two seconds.

The flow of the fiscalization process is represented in the Figure 1:

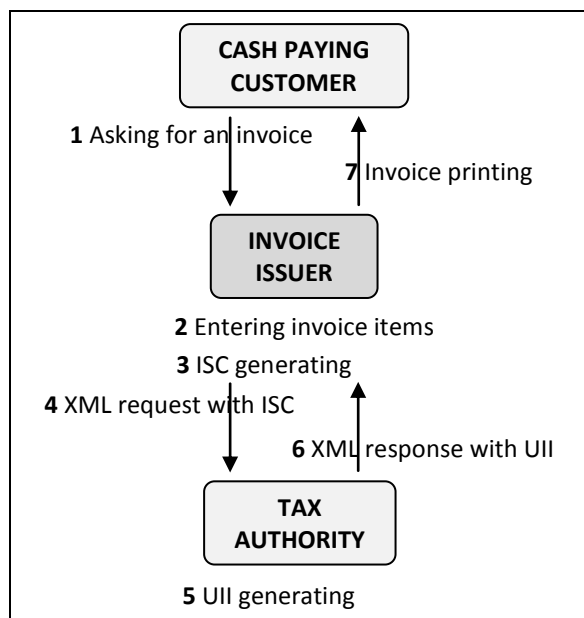


Figure 1. Fiscalization process, source: own sketch according to [15]

Before the beginning of the fiscalization there were some doubts that response from the TA would be a bottleneck of the whole process. But the practice has shown a different path. The biggest test for fiscalization in its first months was the beginning of January sales. TA reports that in some days in January the fiscal cash registers sent around 80 invoices per second [16]. But there was no fear of overloading the system, since it had been built to handle up to 2000 invoices per second [17]. In most cases there are no major problems in the implementation of fiscalization process, except for the bad Internet connection.

### 3 Empirical research

Implementation of the fiscalization in the Croatian economy motivated us to investigate a bit deeper how the process was accepted. We wanted to recognize and understand impressions of the subjects who were involved in the implementation or were obliged to perform the fiscalization in their business operating. First we collected a review of the reflections that were published in newspapers or web news portals together with the TA report on the fiscalization progress. Our next step was conduction of interviews with 5 small business owners to gather a deeper and more thorough understanding of benefits, issues and problems occurring in practice. The third phase included preparation of the survey questionnaire which enabled us to collect data from somewhat bigger sample of respondents and to check and test set hypotheses.

### 3.1 Review of the reflections from the news

A few days before the start of the first phase of fiscalization a large number of obligors was skeptical and believed that the TA servers cannot handle the amount of invoices incoming for check. They also feared that the poor Internet connections will cause longer invoice issuing time that would make customers uncomfortable [16].

When everything started, even in the first few days some cafe owners have found a way to at least partially hide part of their earnings from the eye of the TA in spite of the fiscalization. Namely, when the customers do not take their invoices and leave them on the table when they leave the cafe, the waiters save the invoice for later guests who order the same drink. Their own excuse for these scams is that this way they preserve a small profit, because otherwise they would go bankrupt and have to lay off their employees. This is possible due to the fact that only about one tenth of the customers take an invoice and about every hundredth checks the time of its issuing [18].

In some other situations, the waiters do not even give an old invoice but use the crowd to avoid it entirely. The authors themselves have also witnessed certain situations at public events, when the people have not explicitly asked for an invoice and the waiters have just been collecting money in their pockets. Since most of these guests have been drinking beer and sodas in bulk, there was no problem with the lack of packaging in the calculation, because it is certainly more difficult to control the barrel compared to the bottle count.

In April it was the turn for independent professions to implement the procedure of fiscalization. Most of the questions were raised regarding lawyers; in fact some eminent lawyers got offended by the fact that they have to issue fiscal invoices. Some of them claimed that there was a confidentiality issue with issuing of a fiscal invoice due to the violation of their clients' privacy [9]. Many Croatian citizens believe that most of the lawyers evade taxes. Lawyers even filed for the review of the constitutionality of fiscalization for lawyers, but it only delayed the application of these regulations until July (the third phase).

In the end it turned out that the third phase brought the most troublesome obligors who have even organized protests against the minister and the fiscalization. Small market sellers showed fear of the new technology required for the fiscalization. Although the experts say that the software is user friendly enough, they argued that the implementation of fiscalization undermines the traditional importance of the market, which, among other things, involves bargaining and discount sale at the end of the market day. As another obstacle they have seen the adverse weather conditions for the open air market, or the temperatures below freezing. TA explained that those

who sell their own produce are exempt from fiscalization obligation [13]. The problem isn't a small producer. Sometimes there are sellers who sell not only their own produce, but also goods produced by someone else and there are also big resellers. In some cases these sellers try to present goods as their own to avoid fiscalization. That is why the TA sent out inspectors to control for the accuracy in implementation of the fiscalization procedures.

Here we have to emphasize that all the other retail sellers on stands during different fairs and pilgrimages are not an exempt to the fiscalization act. These sellers have to issue invoices for each deal. But there are many cases where they don't do that. Basically they give an invoice only upon customers' direct request. Many times in this crowd they just go to serve another customer and there are not many people who would in that kind of situation insist on getting their own invoice, except for the inspectors. So far, inspections have found certain irregularities and entrepreneurs have started to take this issues more seriously, especially after getting some fines [13].

Many believe that such measures should have been taken even earlier to introduce better control and transparency in the world of entrepreneurship in Croatia. The others expressed fear for survival. Some have already received fines or their premises have been sealed because the inspections found irregularities in their operations. Inspectors neither spared hotels full of tourists in the midst of the tourist season, nor the popular nightclubs [19].

Own Tax Administration's report [17] shows that due to the lack of previous data, due to the gradual introduction of in stages and due to changes in VAT tax rate for the catering services it is not possible to compare and identify true effects of fiscalization. However, certain real effects of fiscalization will be recognized only after submissions of tax returns for income tax for 2013. Through the invoice verification procedure TA has collected a lot of data on taxpayers operating, which has not been possible until the start of fiscalization. These data can and will be used for further comparison and verification of the taxpayers' operations in terms of tax and other liabilities. Collected data has showed some patterns of illegal behavior and will therefore serve as basis for the better future planning and directing of the tax inspection. These data can also be used by other public bodies for the identification of possible irregularities.

In the Table 1 we present the effects of the fiscalization process on reported taxable revenues from businesses in some sectors in the year 2013 when compared to the same amounts in the 2012. It is evident that the reported revenues of Croatian businesses were higher in comparison to the year before that, which is surprising when considering the fact that Croatian GDP further fell by 1% [20]. The effect in Caterers category is stronger compared to the

other two, which corresponds to the stages of entering the fiscalization process [11].

Table 1. Fiscalization effects on reported taxable revenues (in HRK billion)

Category	Amount difference	Percentage difference
Caterers	2,6	+ 40 %
Merchants	5,2	+ 14 %
Lawyers	6,7	+4,8%

Source: Bolšec, 2014 [21]

Center for market research, GfK Croatia, in September last year reported that 93% of citizens support the introduction of fiscal cash registers [22]. Half of them who support the introduction of fiscalization believe in its implementation, and believe that it will make the order in the state in terms of cash transactions. All in all, a third of the citizens have already changed their behavior and now more often than before ask for and inspect the invoices from shops, restaurants and elsewhere [22].

### 3.2 Interviews with small entrepreneurs

During the September 2013 we did interviews with 4 small entrepreneurs that operate in different industries. The interviews were part of the research for one of the authors' bachelor thesis. In February 2014 we made another interview with a person employed in a software company that issued one of the TA approved applications for fiscalization. Their experiences inspired our curiosity and motivated us for further investigation of this economic phenomenon. Our interviewees come from different sectors such as hairdressing, veterinary clinic, retail shop and a sweetshop.

All the interviewees state certain benefits and some other flaws in the implementation of the procedure. Introduction of IT backed invoicing is generally well accepted. Advantages that were named were better control of employees' work, easier organization and especially more detailed data about the goods, inventories, entry and exits in retail sale. Veterinary doctor even said that farmers now pay more readily because they also fear of being supervised by the TA.

Among disadvantages most commonly mentioned issue is the cost of fiscalization implementation. There is a need to pay for the application, in some cases there was no IT before, so they have to buy at least a tablet computer, or upgrade too old computers and also there is a monthly subscription for internet connection. Many of them say that sometimes the connection is slow so the customers have to wait for the invoice, but that can be partly due to the fact that they paid only for the cheapest and therefore the slowest connection. Field work in areas near the state border also sometimes faces the problem of

connecting to foreign mobile networks, which induces higher internet costs, so some entrepreneurs issue invoices only after they return to the business seat (which is not quite in concordance with the law). The obligors also didn't like the idea of changing their usual documentation workflow, which was inevitable in certain cases.

Their customers have been a little impatient from time to time, but after a few months they have usually got used to waiting a bit for their invoice. However, in some businesses buyers just ignore the fact that they should take the invoice, especially when they are private persons who do not need invoice for the bookkeeping. From the viewpoint of the IT company, that enabled fiscalization in different business entities, they have noticed that small businesses were poorly prepared for the implementation when compared to medium-sized and large businesses. We have also noticed that women in our interviews were more eager to optimistically accept implementation of fiscalization, and since our female interviewees were on average a bit younger than our male interviewees, this gave us some basis to set some hypotheses for our survey.

Since our interviewees were guaranteed anonymity, at the end of the interview each was asked if they sometimes try to avoid fiscalization or invoicing, and how do they respond when the customers do not ask for an invoice. Some of them do not charge their family and friends so this goes without an invoice and beyond the fiscal cash register. But this is usually accompanied by a symbolic sum of money for the favor. Likewise, if someone does not ask for the invoice, some simply don't issue it. Some of them said that customers act differently depending on the sum on the invoice; more attention is paid to the invoices when the amount on it is larger. This means that our entrepreneurs can "earn" more on the small invoices than on the big ones. And there are always those customers who give a little more money than what is written on an invoice and do not ask for change. That money then does not go into the cash register. Moreover, if a surplus is found in the cash register during the inspection, fines are quite rigorous. Some of them also admit using the crowds during holidays and not issuing the invoices to people whom they know and are sure that these people are not the inspectors, unless when they are explicitly asked for an invoice.

### 3.3 Survey

This research on the acceptance of fiscalization in Croatia based on interviews has left some open questions and encouraged motivation for further work. A survey was chosen as an appropriate tool which we could use to expand the sample and reach some new insights. Survey questionnaire consists of 15 questions, thereof first 8 questions relate to basic information about the company and respondent, and

the rest of them tackle the issues related directly to the implementation of fiscalization.

The survey was conducted on a sample of 32 respondents. It has lasted for three months. At first the respondents were offered to fulfill an online survey made in the system of Google documents. The source of our sample was the database of our fifth interviewees' company who implemented fiscalization procedure in those respondents' businesses. The survey was sent to forty companies. We were aware that there was a chance that our respondents will not be zealous to fill in the questionnaire, since many of them do not do their financial statement reporting in timely manner, even when that is the matter of their own business. After the survey has been sent for the first time, two responses were received immediately that day, followed by another nine responses the other day and one response the third day. They were given another month, but new responses no longer arrived. After a month, request was resent once again to the same addresses, after which we received only two more additional responses. After online survey, the rest of the respondents' answers were collected by the field research.

Our respondents consist of fiscalization obligors from two cities, Varazdin and Slatina. Most of the respondents were confused or even nervous at the mere mention of fiscalization, but they were settled after pointing out that the survey was anonymous and would be used for academic purposes only. Some individuals however they did not agree to cooperate, claiming that some of the poll questions interfere with the trade secret. In the end questionnaires were collected from the sample consisting of 32 subjects, which shows certain trends and allows us to draw some conclusions based on the statistical methods.

#### 3.3.1 Descriptive statistics

Most of the businesses in our sample are micro-businesses up to 10 employees, 17 of them (53 %), 7 of them (22 %) fall into the category of 10-50 which is considered to be a small business, 7 of them (or another 22 %) have between 50 and 250 employees thus making medium-sized businesses and only one was a company with over 250 employees which is considered to be a large business. This shows that the sample comprised mostly of SMB. Average age below 40 years is found in 12 businesses (38 %), while the rest of our sample (20 businesses; 62 %) has average employee age over 40. It was also discovered that female employees prevail in 17 businesses (53 %), while mostly men work in 15 businesses (47 %).

According to the business sector, 6 businesses (19 %) work in the manufacturing industry sector, 11 of them (34 %) are in commerce and 15 of them (47 %) are in services. Businesses from our sample have had start fiscalization in various stages of implementation. 14 (44 %) of them started in the first

stage, 13 (41 %) in the second and 5 (15 %) in the third stage.

Research tried to get the impression of the participants about the different aspects of fiscalization. Figure 2 shows the most cited advantages and disadvantages from the obligors' point of view:

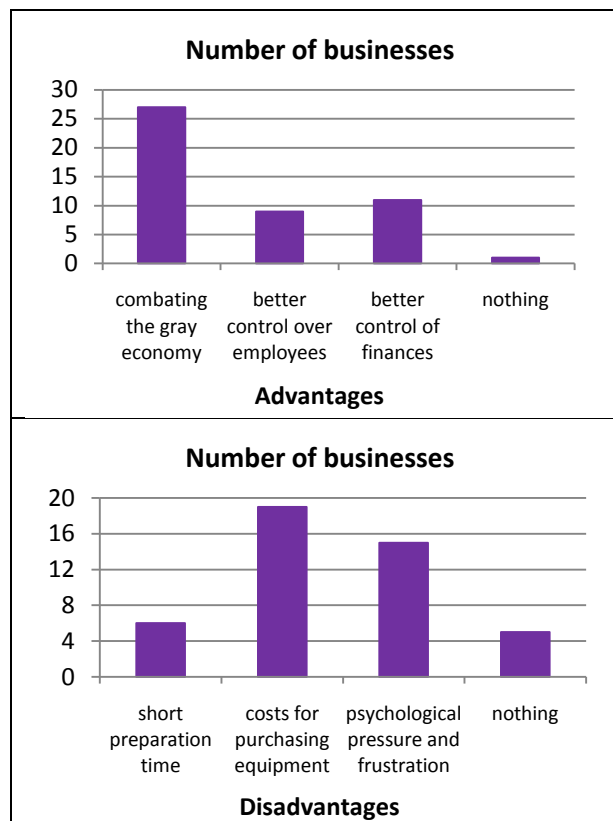


Figure 2. Advantages and disadvantages of fiscalization (as seen by the respondents)

Source: own research

If we compare this with our interviews, we can see that the results are fairly similar, i. e. as the biggest advantage is seen fight against grey economy, whilst the worst part of the implementation were incurring costs. Interestingly, psychological pressure and frustration were also important disadvantages, which weren't so stressed in interviews.

Some of the respondents had technical problems in the implementation of fiscalization, mostly due to the internet connection. But those who have not had a problem with connection generally did not have any problems at all.

### 3.3.2. Hypotheses testing

As shown by the descriptive statistics, respondents were asked about the advantages and disadvantages of fiscalization. Based on their responses we formed a categorical variable "Respondents' impressions on fiscalization". Impressions were divided into three categories considering their answers about the

advantages and disadvantages of fiscalization. For each respondent we summed up the number of selected advantages and deducted the number of selected disadvantages. When the difference was positive (respondents felt that there are more advantages than disadvantages), we noted that the respondent had a positive impression of Fiscalization ( $> 0$ ). When the same number of advantages and disadvantages was given, respondent was classified as neutral impressions ( $= 0$ ), and respondents who indicated more disadvantages than advantages are classified under the category of negative impressions about Fiscalization ( $< 0$ ).

Based on the value of these impressions, we tested whether there was a difference of impressions regarding the stage in which the business had to implement the fiscalization procedure, the age or the prevailing gender of the employees.

Tested hypotheses were the following:

- H1: There is dependence between impression of fiscalization and the stage of entering the fiscalization process.
- H2: There is dependence between impression of fiscalization and the on average age of employees in observed businesses.
- H3: There is dependence between impression of fiscalization and the prevailing gender of employees in observed businesses

Hypotheses are then checked on the basis of the procedure for the analysis of categorical variables [23].

When checking the existence of the differences in categorical data, we first had to form a matrix with entering stages in rows and impressions on the fiscalization in columns. The null hypothesis asserts that differences in impressions between the different phases of the taxpayer do not exist (therefore impressions are independent of the stage), and alternative claims that there are some differences (they depend on the stage of entering fiscalization). Check on hypotheses is done by chi-square test. Working hypotheses were the following:

H1<sub>0</sub>:  $I_{Si}$  is independent of stage of entering fiscalization

H1<sub>1</sub>:  $I_{Si}$  is dependent of stage of entering fiscalization,

whereas  $I_{Si}$  stands for impressions in stage  $i$  where  $i=1, 2, 3$ .

In accordance with the procedure, we first calculated the theoretical proportions of the expected frequency for each category of respondents out of the category overlapping matrix. Then we calculated the empirical chi-square where we have got the value 2.53. After that we looked up the theoretical chi-square value in the table of chi-square for the 0.05 significance level, with 4 degrees of freedom which is value of 9.49. As the empirical chi-square is less than

the theoretical chi-square, we cannot reject the null hypothesis. The conclusion is that there is no statistically significant difference in the impressions among respondents entering fiscalization in different stages.

Considering that the implementation was conducted by using IT we assumed that there might be some differences between the businesses in which employees were mostly young compared to those dominated by older employees. It is well known that older people are less prone to the changes and the new technology than younger ones, so we went to the next question and checked whether there was a statistically significant difference between these two kinds of businesses. Working hypotheses were the following:

H2<sub>0</sub>: Impression of fiscalization is independent of average age of employees

H2<sub>1</sub>: Impression of fiscalization is dependent of average age of employees.

Our calculation showed that empirical chi-square had a value of 3.53, whereas the theoretical chi-square value amounted to 5.99. As the empirical chi-square is again lower than the theoretical chi-square, we cannot reject the null hypothesis. The conclusion is that there are no differences in the impression between businesses employing younger or older people.

Since during our interviews we have noticed certain indications that there might be differences between female and male employees in response to fiscalization implementation, we wanted to examine if this was really the case. Working hypotheses were the following:

H3<sub>0</sub>: Impression of fiscalization is independent of average gender of employees

H3<sub>1</sub>: Impression of fiscalization is dependent of average gender of employees.

Empirical chi-square value in this case was really low; in fact it was a lot lower than in the first two cases (0.11), so the tabulated theoretical chi-square value of 5.99 is again significantly higher. The conclusion is that there is no difference in the impression among respondents based on gender.

## 4 Conclusion

Fiscalization is one of the government's bolder and more specific actions that have been taken for the improvement of a Croatian economy in the year 2013. However, the opinions about the process were divided. Some have complained that the government wants to take the last cent out of their pockets, while the others considered fiscalization as a tool in the fight for equality and transparency.

In this research we found out that many obligors try to somehow avoid fiscalization, in situations such

as a crowd in a way that they avoid billing at all. Our empirical research was done after a review of the available literature and the news about the topic of interest, and was then followed by interviews and the survey.

Basically, fiscalization did not largely improve budgetary problems that we currently have in Croatia. On the other side it neither worsened much nor improved positions of the taxpayers, i. e. fiscalization obligors. Who has had a problem with a business before the fiscalization, has it now as well, and *vice versa*. If the problem of the Croatian village is unprofitable farming, it will not become profitable by vet now issuing the fiscal invoice for his services.

Additional cash in budget that comes from fiscalization barely covers part of budget deficit and we still cannot expect that this money would be transferred for growth acceleration. But there are some positive consequences of fiscalization, which is responsible for increased awareness about the need to operate fairly and transparently in business. It is sufficient to say that the fiscalization continues to be relentlessly implemented, although some had predicted her downfall in the first months.

By doing of the empirical research, we found out the answers to the posed questions. We learnt that the majority of respondents considered the highest advantage and priority of fiscalization is to combat the gray economy and its biggest deficiency is the cost that incurred when implementing it in the business operations. Our statistical tests found no difference in respondents' impressions of the fiscalization regarding the stage at which the fiscalization was implemented, the age or the gender of employees. This shows us that it was a well prepared project in which no companies were discriminated or left worse off. Hopefully, the proceeding of the fiscalization process would eventually bring some additional cash to finance Croatian developmental activities.

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