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IMPACT OF BUSINESS OWNER'S GENDER ON THE AUDIT FIRMS INCOME: THE CASE OF KAZAKHSTAN

Abstract

Kazakhstan is characterized by women's significant representation in the financial industry, including the audit sector, which distinguishes the country from other states and can lay the basis for a competitive advantage of the economy. The literature review on audit firms in Kazakhstan showcases a scarcity of studies about gender's influence on audit firms' financial performance. The paper aims to identify the correlation between business owners' gender and the net income of Kazakhstani private audit firms. The publicly available data on audit companies and the size of their paid taxes were processed and analyzed with the quantitative research method. The data of 117 audit firms for 2021 were scrutinized through the parametric Student t-test for independent samples with the utilization of the Statistical Package for the Social Science (SPSS). To analyze and adjust the normal distribution of the studied data, frequency histograms, taking logarithms, and formalized tests by Kolmogorov-Smirnov and Shapiro-Wilk criteria were applied. The findings demonstrate the significant correlation between women owners and the size of paid taxes by their audit firms: women positively contribute to audit firms and generate higher net earnings compared with their men counterparts. The paper postulates the necessity of women's more intensive involvement in higher levels of decision-making to increase the performance indicators of the financial industry in Kazakhstan. The study supports the idea that less gender bias in the expert field can be a good indicator of women's real contribution to Kazakhstan's economy. The auditing field should serve as a solid role model for lowering the barriers to female leadership in other industries.

Key words: audit firms, income, gender, business owners, senior executives, services, managers.

Introduction

The representation of women at the level of decision-making in Kazakhstan demonstrates a positive trend. The percentage of women managers in national corporations constituted 36.1% in 2020 against 22.1% in 2016 [1, p. 36]. However, the number of women executives is still low, and most of the above-mentioned statistics reflect women's progression to first-line management. Gender labor segregation both horizontal (within industries and professions) and vertical (within hierarchical levels) are considerable in Kazakhstan. In 2021, women represented 42.3% of medium and small entrepreneurs and 47.3% of individual entrepreneurs with a predominant concentration in low-income industries – education, healthcare, accommodation and catering, and financial services [1, pp. 80, 105].

The Western and Central European studies report a low representation of women in managerial posts in audit firms and gender bias towards them [2, 3]. In contrast financial and insurance activity in RK encompassing the audit field is a female-dominated industry with 65.5% of employed women against 34.5% of men in large- and medium-sized enterprises [1, p. 80]. In small enterprises in the audit field this share of employed women is considerably less – 56% but still higher than that of men – 44% [1, p. 81].

Another fact evidencing the Kazakhstani women's progress in the audit sphere is that the Big Four consisting of KPMG, PricewaterhouseCoopers, Deloitte, and Ernst & Young continuously assigns women as partners and managing partners in their companies [4]. The audit firms render audit, consulting, and accounting services and require rare professionals with expert competencies in this narrow field. Due to the above-mentioned fact in RK audit firms are less gender-biased and oriented to headhunting talent of equally both men and women. Therefore, the case of Kazakhstan represents an interesting area for research within the studied topic.

The present study aims at identifying the influence of business owners' gender on the net earnings of audit firms in Kazakhstan.

The object of research is Kazakhstani audit firms, and the subject of research is the relationship between business owners' gender and their companies' net earnings.

Main provisions

Following the idea of industries classification by the criteria of certain gender domination proposed by B. Burchell et al., industries and occupations are divided into gender-neutral – where women and men constitute from 40% to 60%, male-dominated – in which men's representation equals above 60%, and female-dominated – where the proportion of women is above 60% [5]. In compliance with this concept, the audit field in Kazakhstan is female-dominated. The preceding meta-analysis demonstrated women managers were ranked higher compared to their men peers in female-dominated industries, men were marked as more effective in male-dominated fields, and both men and women were called equally productive in businesses [6].

Globally, the topic of gender in audit firms was intensively studied in two directions: discrimination towards women in audit firms and the influence of women and men auditors on the audit quality, the overwhelming percentage of this research was implemented in developed countries [7]. The impact of women owners on the earnings of audit firms in developing countries is studied insufficiently and there is almost zero research on this topic in Kazakhstan.

Recent studies in developed countries report on women auditors' influence on constraining earnings. In their longitudinal research in Great Britain, A. Owusu et al. defined that women practiced more accrual-based earnings management compared to their men counterparts [8]. K. Hardies et al. studied about 7,100 Belgium companies and argued women auditors' professional work favored audit quality [9]. In their research among public Australian audit firms, S. Hossain et al. obtained the contrary results: women auditor partners exhibited a lower quality of audit compared to men [10].

Recent research in Turkey revealed women owners' positive impact on audit firms' performance [7, p. 386]. In Kazakhstan women executives' favorable contribution to the listed companies in the form of constraining earnings management was detected by N. Orazalin [11]. To our best knowledge, the influence of business owners' gender on enterprise earnings constitutes a significant knowledge gap in Kazakhstan.

Considering the preceding research, the following hypothesis was formulated: women business owners have a positive impact on the auditing firms' net earnings.

Materials and methods

Almost every audit firm in Kazakhstan is registered as a Limited Liability Partnership (LLP) and includes up to 5 people, a few audit firms have hundreds of employees. The specificity and often high cost of auditing allow companies to generate a solid income despite a small size with a few employees. In the audit field, according to the Entrepreneur Code of the Republic of Kazakhstan [12], even small-sized enterprises are classified as medium and large businesses, depending on their income level. Moreover, under the Tax Code of RK audit firms must be registered as the LLP by the generally established mode [13].

The predominant part of audit companies in Kazakhstan has been on the market for 10 years or more, and only a small proportion is new players, most of them representing branches of the existing audit agencies in Nur-Sultan and regional centers. Geographically, most of the audit enterprises are concentrated in Almaty, then in Nur-Sultan, and a small part in other regions.

The list of audit firms was composed by the synthesis of the rosters of the Auditors Collegium and the Kazakhstan stock exchange. Firms were selected from the list randomly, using the method of generating random numbers (equation (1)):

$$n = \frac{z^2 * \sigma^2}{e^2} \quad (1)$$

z – the required confidence level (here – 1.96 with 95% confidence).

e – the margin of error of the sample (here – 185 thousand KZT).

σ – standard deviation (here – 1 million tenge).

The standard deviation and the margin of error were determined from a preliminary random sample. Thus, to determine the amount of average annual taxes deducted by audit companies, the required sample size was calculated by equation (2):

$$n = \frac{1.96^2 * 1\,000\,000^2}{185\,000^2} = 113 \quad (2)$$

Finally, 113 firms constituted the initial sample size, further 4 companies were added to harmonize the representation of women and men: then men and women owners incorporated almost equal shares – 59 and 58 companies, respectively. All the firms included in the sample were LLPs by the general established mode eligible for 20%- of corporate income tax (CIT) from their net earnings [13]. The net earnings equal the difference between the earnings and documented expenditure. The size of the paid CIT was considered an indicator of the firm's net earnings. The data on the amount of paid taxes for 2021 was borrowed from the “Uchyot” specialized portal [14].

Data on 117 companies were integrated into a table and processed in the SPSS. Initially, the tests for data normal distribution were carried out, and the frequency histograms were constructed. The parametric Student t-test for independent samples was used to analyze the differences in the averages in the two samples of men and women owners, the choice of the t-test was stipulated by a small sample.

Results

The use of the parametric t-test always requires normal distribution of data. Thus, before the hypothesis verification, we composed the frequency histograms and made the tests for the normal distribution of the obtained data. The exploratory analysis showed that the data on the number of tax deductions were not distributed normally (Figure 1).

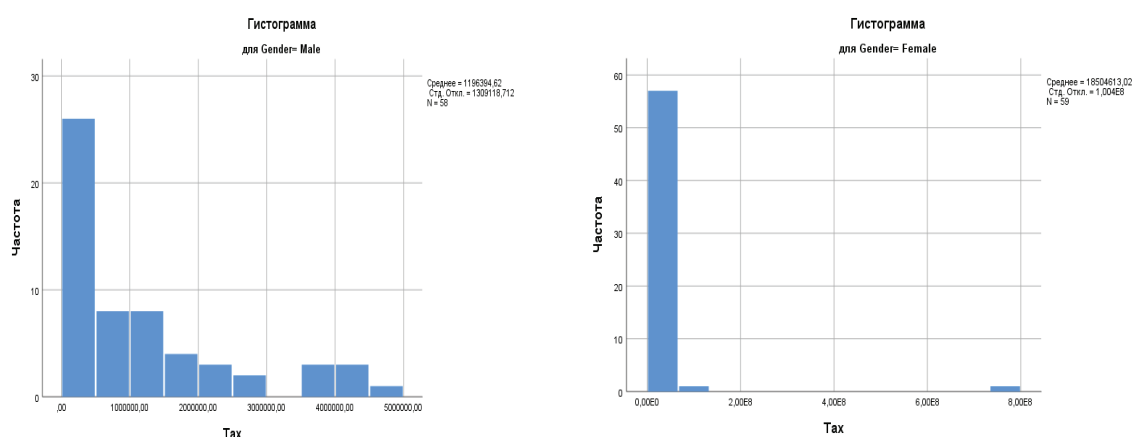


Figure 1 – The frequency histograms before taking logarithms

Note – Compiled by the authors based on the conducted research.

Following Figure 1, there is a deficit in the normal distribution of the available data. For further data analysis, it was essential to linearize the data, thus, they were subject to taking logarithms (Figure 2).

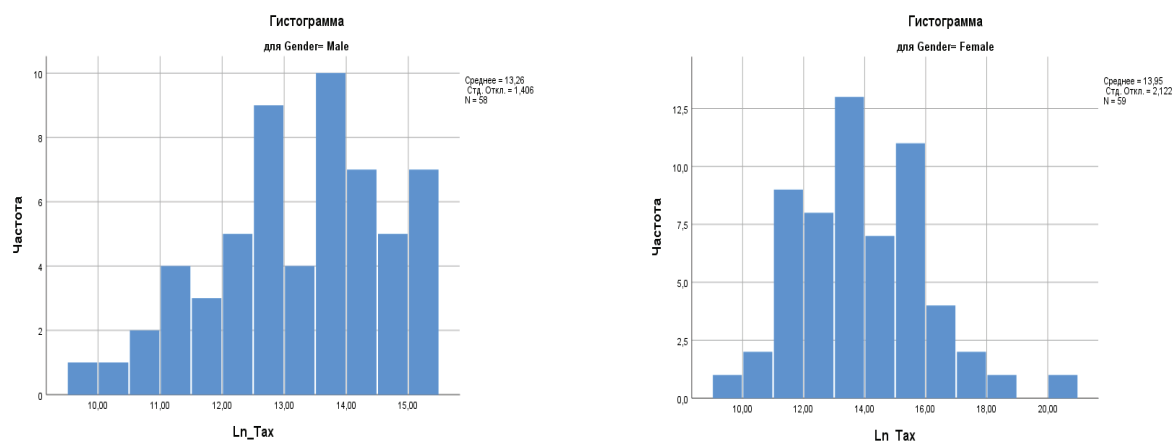


Figure 2 – The frequency histograms after taking logarithms

Note – Compiled by the authors based on the conducted research.

After taking logarithms, the studied data became more symmetrical. In the second step, the formalized tests based on Kolmogorov-Smirnov and Shapiro-Wilk methods and criteria were used to verify the variable for a normal distribution (Table 1).

Table 1 – The criteria for the normal distribution of the variable

| The criteria for the normal distribution | | | | | | | |
|---|-------|------------------------------|-------------------------|--------|------------------------|-------------------------|-------|
| | | Kolmogorov-Smirnov criterion | | | Shapiro-Wilk criterion | | |
| | | Statistics | # of degrees of freedom | Sig. | Statistics | # of degrees of freedom | Sig. |
| Tax | Men | 0.195 | 58 | 0.000 | 0.803 | 58 | 0.000 |
| | Women | 0.427 | 59 | 0.000 | 0.165 | 59 | 0.000 |
| Ln_Tax | Men | 0.106 | 58 | 0.161 | 0.962 | 58 | 0.065 |
| | Women | 0.082 | 59 | 0.200* | 0.979 | 59 | 0.414 |
| Notes – | | | | | | | |
| 1) Compiled by the authors based on the conducted research. | | | | | | | |
| 2)* The lower limit of true significance. | | | | | | | |

Following Table 1, the significance of the gained statistics is higher than the critical value of 0.05, it justifies that due to the implemented transformation, the data comply with the normal distribution. Consequently, the current data could be used for taking the t-test – the present research's main method.

For verifying the research hypothesis, a t-test for independent samples was used to analyze the differences in the averages in tax payments by the audit firms owned by women and men. A Box and Whisker Plot was applied to display the visual difference within the parametric t-test for independent samples (Figure 3, p. 78). A Box and Whisker Plot (Boxplot) allows for analyzing data using the t-criterion, to compare averages and measures of deviation from the average in groups. Additionally, these graphs favor visual assessment of the degree of dependence between the grouping and dependent variables.

Following Figure 3, the median tax deductions of companies owned by women are slightly higher than those of companies owned by men. For further verification of the proposed hypothesis, the parametric student t-test was implemented. The results of the t-test for unequal means, as well as for equal means, showed that companies with women owners paid more taxes than companies run by men.

Following Table 2 (p. 78), the statistics obtained were below the critical value of 0.05, which allows us to reject the null hypothesis that the average amount of tax deductions in the two groups was

the same and to accept the alternative hypothesis that there were statistically significant differences. Therefore, the research hypothesis of women owners' positive impact on the audit firms' earnings has been fully confirmed.

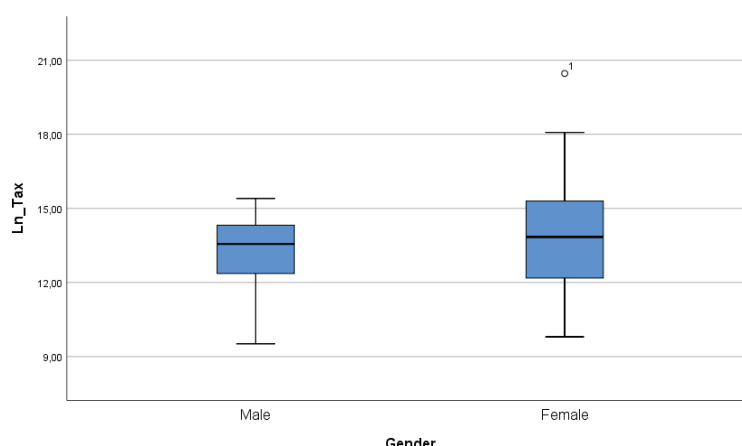


Figure 3 – Boxplot chart of the median tax deductions of the studied firms

Note – Compiled by the authors based on the conducted research.

Table 2 – Results of the variance equality test

| | | Levene's test for homogeneity of variances | | t-test for equal means | | | 95% confidence interval for the difference | |
|--------|--------------------------------|--|------|---------------------------|----------------------|-----------------------|--|--------|
| | | F | Sig. | T | Sig. (two-tailed) | Average difference | | |
| | | | | | | | Lower | Upper |
| Ln_Tax | Equal variances assumed | 6.824 | 0.01 | −2.081 | 0.040 | −0.694 | −1.354 | −0.033 |
| | Equal variances not assumed | | | −2.088 | 0.039 | −0.694 | −1.353 | −0.035 |

Note – Compiled by the authors based on the conducted research.

Discussion

The findings revealed women business owners' positive impact on net earnings in private audit companies in Kazakhstan. The results comply with the previous studies in Central and Western Europe regarding women managers' clout in the performance of audit companies [8, 9]. The study also supports the findings of research conducted in a developing country that justified women owners favored firm's performance [7]. The gained results extend the preceding study in Kazakhstan about women executives' positive effect on companies' earnings [11]. Meantime, the findings contradict the large-scale research in Australia [10], the possible inconsistency might be grounded on the specificity of the examined sectors – in this study, the data from the private firms were scrutinized, whereas the Australian research engaged the public sector.

The present study furthers the existing knowledge in three ways. Firstly, it extends the global literature with new insights from a developing country with a female-dominated financial industry. Secondly, it represents an initial basement for future investigation on the topic in Kazakhstan due to the deficit of similar studies in the region. Thirdly, the preceding studies on gender and managerial effectiveness in male-dominated, female-dominated, and neutral industries can be added to the expert fields where women and men are less biased [6].

The conducted study is subject to some limitations: the registration of the person as the owner in the state bodies does not always assume this person as an actual owner. The second limitation is the

consideration of one characteristic of business owners – gender – in isolation from other such as age, professional experience, etc. – that limit the comprehensive understanding of owners as individuals possessing a set of attributes. Thus, the recommendation for future research is to build a sample of factual business owners when an official registration corresponds with the fact of real ownership. The other direction of research is to consider several characteristics of audit firms' owners along with their genders.

The theoretical implications incorporate the necessity of consideration of expert fields through gender lenses. Expert spheres help lower gender bias towards women and should be examined as the areas for generating knowledge of how rare professional abilities may eliminate gender discrimination globally. The case of Kazakhstan could be examined by foreign researchers to study the root causes and prospects for possible adaptation. The practical implication for the Kazakhstani state bodies is further support of women's economic empowerment by destroying employment barriers in different industries to boost economic growth.

Conclusion

The given paper defined the significant correlation between the audit firm's owner and his/her enterprise's profit: women generated higher net earnings than their male peers. The present study expands the previous research with knowledge of how gender can be beneficial in expert industries practicing equal employment opportunities. Thus, women have better possibilities for utilizing their gender potential in expert spheres compared to male-dominated industries with higher gender bias or female industries mostly encompassing low-income jobs. The Kazakhstani case study can be useful for other countries to consider the prospects of involving more women in the audit field. The public authorities of Kazakhstan can apply the present findings for predicting how women's empowerment might advance the economic prosperity of the country.

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КӘСІПКЕР ГЕНДЕРІНІҢ АУДИТОРЛЫҚ ФИРМАЛАРДЫҢ ТАБЫСЫНА ӘСЕРІ: ҚАЗАҚСТАН ЖАҒДАЙЫ

Андатпа

Қазақстан қаржылық индустрияда, соның ішінде аудит саласында әйелдердің елеулі өкілдігімен ерекшеленеді, бұл елді басқа мемлекеттерден ерекшелендіреді және экономиканың бәсекелестік артықшылығына негіз жасай алады. Қазақстан Республикасындағы аудиторлық фирмалар бойынша әдебиеттерге шолу гендердің аудиторлық компаниялардың пайдасына әсері туралы зерттеулердің жеткіліксіздігін көрсетеді. Мақаланың мақсаты – кәсіпкер гендері мен қазақстандық жеке аудиторлық фирмалардағы таза пайда арасындағы өзара байланысты анықтау. Аудиторлық компаниялардың иелері және олар төлеген салықтардың мөлшері туралы жалпы ақпарат сандық әдіспен өңделді. 2021 ж. 117 аудиторлық фирманың деректері әлеуметтік ғылымдарға арналған статистикалық пакетті (SPSS) қолдана отырып, тәуелсіз үлгілерге арналған Студенттің параметрлік t-критерийі арқылы талданды. Деректердің қалыпты таралу деңгейін анықтау және оларды одан әрі түзету үшін жиілік гистограммалары, логарифмдеу және Колмогоров-Смирнов және Шапиро-Уилк критерийлері бойынша формализацияланған тесттер қолданылды. Алынған нәтижелер әйел-иелері мен олардың аудиторлық фирмалары төлеген салық мөлшерінің айтарлықтай арақатынасын көрсетеді: әйелдер жеке аудиторлық кәсіпорындарға оң үлес қосады және ер әріптестерімен салыстырғанда жоғары таза пайда алады. Мақалада Қазақстандағы қаржы индустриясының тиімділік көрсеткіштерін арттыру үшін әйелдерді аудит саласына тарту қажеттігі айтылған. Зерттеу сараптама саласындағы гендерлік біржақтылықтың аздығы әйелдердің Қазақстан экономикасына нақты үлес қосуының жақсы көрсеткіші болуы мүмкін деген идеяны растайды. Аудиторлық сала басқа индустриялардағы әйелдер көшбасшылығындағы кедергілерді азайту үшін берік рөл моделі болуы тиіс.

Тірек сөздер: аудиторлық фирмалар, пайда, гендер, бизнес иелері, басшылар, қызметтер, менеджерлер.

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ВЛИЯНИЕ ГЕНДЕРА ВЛАДЕЛЬЦА БИЗНЕСА НА ДОХОДЫ АУДИТОРСКИХ ФИРМ: КЕЙС КАЗАХСТАНА

Аннотация

Казахстан характеризуется значительной представленностью женщин в финансовой отрасли, включая сферу аудита, что выгодно отличает страну от других государств и может создать основу конкурентного преимущества экономики. Обзор литературы по аудиторским фирмам в Республике Казахстан демонстрирует де-

фицит исследований о влиянии гендера на прибыль аудиторских компаний. Цель статьи – выявить взаимосвязь между гендером владельца бизнеса и чистой прибылью в казахстанских частных аудиторских фирмах. Общедоступные данные о владельцах аудиторских компаний и размере уплаченных налогов были обработаны при помощи количественного метода. Данные 117 аудиторских фирм за 2021 г. проанализированы с помощью параметрического t-критерия Стьюдента для независимых выборок с использованием статистического пакета для социальных наук (SPSS). Для определения уровня нормального распределения данных и их дальнейшей корректировки применены частотные гистограммы, логарифмирование и формализованные тесты по критериям Колмогорова-Смирнова и Шапиро-Уилка. Полученные результаты демонстрируют значительную корреляцию между женщинами-владельцами и размером уплаченных налогов их аудиторскими фирмами: женщины вносят положительный вклад в частные аудиторские предприятия и получают более высокую чистую прибыль по сравнению с коллегами-мужчинами. В статье постулируется необходимость вовлечения женщин в сферу аудита для повышения показателей эффективности финансовой индустрии в Казахстане. Исследование подтверждает идею, что меньшая гендерная предвзятость в экспертной сфере может быть хорошим показателем реального вклада женщин в экономику Казахстана. Аудиторская сфера должна служить прочной ролевой моделью для снижения барьеров женского лидерства в других индустриях.

Ключевые слова: аудиторские фирмы, прибыль, гендер, владельцы бизнеса, руководители высшего звена, услуги, менеджеры.