



### Tax Education and the Attitude of University Students Towards Tax Consciousness: The Case of University of Externado (Colombia)

G.A. Yepes-López<sup>1</sup> , U. Gergerlioğlu<sup>2</sup>

<sup>1</sup> Universidad Externado de Colombia, Bogota, Colombia

<sup>2</sup> Hitit University, Çorum, Turkey

[gustavo.yepes@uexternado.edu.co](mailto:gustavo.yepes@uexternado.edu.co)

#### ABSTRACT

Many studies have been conducted on the effect of tax education on tax consciousness, however, no study that reveals such an effect has been conducted in Latin America. In this context, we aimed to analyze whether there is a significant difference between the attitudes towards tax consciousness of students who took tax courses and those who did not take tax courses at the University of Externado in Colombia. The data regarding 538 surveys were taken into account for analysis and testing. A 5-point Likert scale was used for the attitude items in the survey. It was observed that the data on attitude items did not show a normal distribution. Therefore, non-parametric tests were used for the data subject to our survey. In this context, the relationship between the demographic data (gender, marital status, work status) and the attitude items were analyzed through Mann Whitney U and Kruskal Wallis H tests. The test results of our study for gender and marital status showed that female students compared to males and married students compared to single and engaged students showed more supportive attitudes towards consciousness. Additionally, the students who define their own tax consciousness level as high revealed more supportive attitudes towards tax education. As the results of our analysis revealed that there is not much difference among the attitudes of students who received tax courses and those who did not receive tax courses, it would be beneficial for comparability to carry out such a study in universities in other countries located in Latin America.

#### KEYWORDS

tax consciousness, tax education, tax awareness, university students, attitude toward taxes

JEL H20, H26, C12

УДК 342.743

### Налоговое образование и отношение студентов к налоговому сознанию: опыт университета Экстернадо (Колумбия)

Г.А. Йепес-Лопес<sup>1</sup> , У. Гергерлиоглу<sup>2</sup>

<sup>1</sup> Университет Экстернадо-де-Колумбия, Богота, Колумбия

<sup>2</sup> Университет Хитит, Чорум, Турция

[gustavo.yepes@uexternado.edu.co](mailto:gustavo.yepes@uexternado.edu.co)

#### АННОТАЦИЯ

Несмотря на множество исследований влияния налогового образования на налоговое сознание, ни одно исследование, раскрывающее такой эффект, не проводилось в Латинской Америке. В этом контексте мы стремились проанализировать, существует ли значительная разница в налоговом сознании студентов, посещавших и не посещавших налоговые курсы, в Университете Экстернадо

в Колумбии. Для анализа и проверки проведен опрос 538 человек. Для оценки отношения к налогам в опросе использовалась 5-балльная шкала Лайкерта. Было замечено, что показатели отношения к налогам не показывают нормального распределения, поэтому использовались непараметрические тесты. Взаимосвязь между демографическими данными (пол, семейное положение, трудовой статус) и показателями отношения к налогам были проанализированы с помощью тестов Манна Уитни U и Крускала Уоллиса H. Результаты исследования по полу и семейному положению показали, что студентки по сравнению с юношами и семейные студенты по сравнению с одинокими или состоящими в отношениях, проявляли более благосклонное отношение к налоговому сознанию. Кроме того, студенты, определяющие уровень своего налогового сознания как высокий, проявляли более благосклонное отношение к налоговому образованию. Поскольку результаты нашего анализа показали, что нет большой разницы между отношением к налогам студентов, прошедших и не прошедших курсы по налогообложению, для сопоставимости было бы полезно провести такое исследование в университетах других стран Латинской Америки.

### КЛЮЧЕВЫЕ СЛОВА

налоговое сознание, налоговое образование, студенты вузов, отношение к налогам

## 1. Introduction

A tax is a payment that is compulsorily collected from citizens and is used for the public interest [1, p. 35]. Taxes not only ensure the supply of needed goods and services but also represent a price paid to live in a society that is civilized and prosperous. If tax revenue is not sufficient, it is not possible to realize programs, infrastructure investments, and public services that will motivate social development and economic growth for nations [2, p. 47]. At the same time, states need to finance increased public services by raising tax revenues [3, p. 22]. Thus, governments should make a real effort to increase the public's tax consciousness [4]. Tax administrations should strive to ensure that taxpayers have adequate knowledge and understanding of taxation issues through continuing education programs [5, pp. 42–43].

Although tax evasion has been a recurring research topic in developed countries [6], the Latin American region in general and Colombia in particular, have significant levels of inequality, which according to CEPAL<sup>1</sup>, make that despite the existing wealth, a significant number of its inhabitants live in poverty, which is directly related to the redistributive policies of the state, among which are the tax sys-

tems<sup>2</sup> and of course the evasion of these. And although Colombia is not the country in the region that suffers the most from this phenomenon, its dependence on tax revenues, for 2019 slightly exceeds 19%<sup>3</sup>. The National Tax and Customs Office of Colombia, which go in Spanish by the acronym DIAN, estimates that income tax evasion by legal entities in the country, for the period between 2007 and 2012, reached 39% on average, which represents COP<sup>4</sup> 15 billion, or 2.3% of Colombian GDP<sup>5</sup>. On the other hand, if we take into account that according to [7–9] tax complexity, education, source of income, tax equity and morality or some cultural elements such as legal compliance, trust in government and religiosity are among the criteria de-

<sup>2</sup> CEPAL. Evasión y Equidad en América Latina, 2010, Available at: [https://repositorio.cepal.org/bitstream/handle/11362/3762/1/lcw309\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/3762/1/lcw309_es.pdf)

<sup>3</sup> OECD. Transparencia Fiscal en América Latina 2021: Informe de Progreso de la Declaración de Punta del Este, 2021, Available at: <https://www.oecd.org/tax/transparency/documents/Transparencia-Fiscal-en-America-Latina-2021.pdf>

<sup>4</sup> Colombian Peso

<sup>5</sup> DIAN. Colombia: Estimación de la Evasión del Impuesto de Renta de Personas jurídicas 2007-2012, 2015, Available at: <https://www.dian.gov.co/dian/cifras/Cuadernos%20de%20Trabajo/Colombia.%20Estimaci%C3%B3n%20de%20la%20Evasi%C3%B3n%20del%20Impuesto%20de%20Renta%20Perosnas%20Jur%C3%ADdicas%202007-2012.pdf>

<sup>1</sup> La Comisión Económica para América Latina y el Caribe

termining tax evasion at the international level, so the need to seek the relationship between tax consciousness and tax education among university students and future business managers is evident.

Because we have not come across a study that reveals the relationship between tax consciousness and tax education in any university in Latin America, we thought that this study could contribute to the literature.

In the light of this information, we aimed to reveal whether tax education had an important effect on the attitudes towards tax consciousness of students studying at the School of Business Administration at the University of Externado in Colombia.

*The aim of the study* is to analyze from the perspective the different demographic variables the attitudes towards tax consciousness of the students who took tax courses and those who did not take tax courses by using the hypotheses tested in the previous studies. In this study, the conceptual framework is firstly discussed, and then the analysis and test results are mentioned.

*Three different hypotheses* were put forward for this study. These hypotheses are as follows:

**H0:** There is no significant difference between the attitudes of students of different gender regarding tax consciousness.

**H1:** There is no significant difference between the attitudes of students of different marital statuses regarding tax consciousness.

**H2:** There is no significant difference between the attitudes of students of different work statuses regarding tax consciousness.

All of these hypotheses were tested in terms of the students who took tax courses and who did not take tax courses.

## 2. The conceptual framework

Under this title, first of all, the conceptual framework of tax consciousness and tax education was explained. Afterward, the conceptual relationship between tax consciousness and tax education was discussed.

### 2.1. The concept of tax consciousness

Tax consciousness is defined as the level of desire of taxpayers who know the importance of tax within the scope of tax liability [10, p. 4]. It also means that those who pay taxes have information about the burden and levels of taxes [11, p. 40]. Because tax consciousness is related to the mindfulness level of taxpayers, it is associated with both positive and negative attitudes and behaviours towards taxation [12, p. 128]. In this study, since we focus on the positive contribution of tax education to tax consciousness, we will consider tax consciousness in terms of positive attitudes towards tax.

The issue of tax consciousness has been a concept that has been placed on the agenda of many countries until today. Governments of developing and developed countries such as America [13, p. 70], Canada [14], Turkey<sup>6</sup>, China [15, p. 64], and the Philippines<sup>7</sup> have formally discussed efforts to raise and create tax consciousness. Even though the phenomenon of tax consciousness has been accepted, many individuals may still not perceive the tax and the benefits to be obtained from it [16, p. 512]. In this case, efforts to increase tax consciousness are important.

If tax consciousness is high, it is possible to mention the continuity and the adequacy of public revenues [17, p. 78]. There is also the view that a high level of tax consciousness is expected in democratic societies [18, p. 558]. In order to increase the level of tax consciousness, it would be useful to examine an individual's decision-making or readiness to take action regarding taxation [19, p. 573].

<sup>6</sup> GİB. 2018 Yılı Performans Programı, 2018, Available at: [http://www.gib.gov.tr/sites/default/files/fileadmin/yayinlar/Gib\\_2018\\_Performans\\_Programi.pdf](http://www.gib.gov.tr/sites/default/files/fileadmin/yayinlar/Gib_2018_Performans_Programi.pdf)

<sup>7</sup> NEDA (National Economic and Development Authority). Five-Year Philippine Development Plan 1978-1982. Manila, Philippines, 1977, Available at: <https://books.google.com.tr/book?id=8UFXAAAAMAAJ&pg=PA365&dq=%22tax+consciousness%22&hl=tr&sa=X&ved=2ahUKewimsJPPv6TyAhVEyxoKHWWYWAoQ4qgEQ6AEwAnoECAsQAQ#v=onepage&q=%22tax%20consciousness%22&f=false>

In this context, creating awareness regarding taxation can also be associated with understanding the purposes of paying taxes [20]. Good relations between tax administration officers and taxpayers can also contribute to increasing tax consciousness [21, p. 28]. Therefore, tax administrations are expected to provide consultancy services so that taxpayers can consciously fulfil their tax obligations [22, p. 108].

Tax consciousness can improve in the presence of a fair tax system [23, p. 177]. If there is complexity in a tax system, this can negatively affect the tax consciousness of individuals [24, p. 107]. Tax consciousness is also considered as an argument for improving accountability [25, p. 246]. Tax administrations are expected to provide consultancy services so that taxpayers can consciously fulfil their tax obligations [22, p. 108].

The increase in tax revenue depends on the high tax consciousness [26, p. 12]. Additionally, tax consciousness needs to be increased in order to reduce tax evasion [10, p. 2]. It is possible to say that the low tax consciousness in society is enough to explain tax evasion tendencies [27]. Therefore, the spreading of tax consciousness is a necessity in terms of reducing tax evasion tendencies [30, p. 179]. The results of a survey conducted in Greece by Karagiorgos et al. [29] revealed that most respondents believed that both tax evasions are widespread in Greece and tax consciousness is not supported by the state.

It is known that tax consciousness is affected by many factors such as education level, socio-economic status, income level [32, p. 73], cultural and development level of countries, tax perception of taxpayers [10, p. 6].

Enrick [31] and Wagstaff [32] emphasized that the concepts of tax awareness and tax consciousness mean the same thing. Buehler [33] also revealed that tax consciousness can also be expressed as tax awareness or knowledge of taxation. In the light of this theoretical information, our study also took into account the research or surveys on tax awareness and tax knowledge.

## **2.2. The concept of tax education and relationship between tax education and tax consciousness**

Tax-oriented education affirmatively affects taxpayers' awareness of taxation [34, p. 4]. Giving tax education at the school level can positively affect individuals' behaviour towards paying taxes [35, p. 56]. In Ghana, many formal and informal tax education activities are organized to raise the public's awareness of paying taxes [36, p. 4].

It is accepted that tax education also positively affects voluntary tax compliance and the expansion of the tax base [36, p. 3]. In addition, it is argued that tax education can have a positive effect on tax knowledge and in this way can have positive effects on tax justice and tax compliance [37, p. 167]. The research was conducted by Kurniawan [38] on how the tax courses taken by university students in Indonesia affect tax knowledge and tax compliance. The results of this research showed that tax courses can have a positive effect on the tax compliance of university students. The research results conducted by Mukhlis et al. [37] revealed that as the level of tax knowledge of individuals in society increases through tax education, this will first help increase tax justice and then tax compliance.

In Colombia in particular, in this regard, we can highlight the existence of an empirical study, with a sample of 205 university students, in which general terms, they do not agree with tax evasion [39]. For its part, the national government has promoted the implementation of different actions; one of them has been the acceptance of the recommendations of the Inter-American Center of Tax Administrations – CIAT, to seek by 2020 a high level of voluntary compliance with tax obligations through a civic-tax education program [40].

It has also carried out evasion containment actions, such as the “regularization program for undeclared assets and non-existing liabilities abroad”, which not only increased tax collection<sup>8</sup> but also showed

<sup>8</sup> CEPAL. Panorama Fiscal de América Latina y el Caribe: La política fiscal ante la crisis derivada de la pandemia de la enfermedad por coronavirus (COVID-19), 2020, Available at: [https://repositorio.cepal.org/bitstream/handle/11362/45730/5/S2000154\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/45730/5/S2000154_es.pdf)

a significant tax evasion (two-fifths of the richest 0.01 percent evade taxes, hiding a third of their wealth abroad) [41].

It has also promoted the country's participation in tax education initiatives, such as the Tax Education Network, led by the European Commission's program for cooperation between Europe and Latin America - EUROSOCIAL<sup>9</sup>, which supports the development of educational campaigns such as the "Culture of Contribution in School Primer - Teacher's Manual"<sup>10</sup> and the "Culture of Contribution in School Program"<sup>11</sup>. On the other hand, independent efforts have developed taxpayer compliance prediction tools dependent on the audit status that has been applied in the country [42].

The concept of tax consciousness is also associated with tax education [33, p. 237]. Tax education is defined as an important factor in the formation of tax consciousness [43, p. 275]. The result of a study conducted by Akıncı & Başol [23] and Şafaklı & Kutlay [44] revealed that the education factor is determinant in the development of tax consciousness.

Efforts at the government level to increase the tax consciousness of university students through tax education appear in the form of placing tax courses in the curriculum [45, p. 109]. In addition, tax education is organized within the scope of government-based efforts to increase tax consciousness at secondary and primary school levels<sup>12</sup>.

<sup>9</sup> <http://eurosocial-ii.eurosocial.eu/es/pagina/red-de-educacion-fiscal>

<sup>10</sup> DIAN, EUROSOCIAL & OEI. Cultura de la Contribución en la Escuela, Manual para el Maestro, 2019, Available at: <https://www.dian.gov.co/atencionciudadano/CulturaContribucion/Documents/Manual-para-el-maestro-mayo-2019.pdf>

<sup>11</sup> DIAN & EUROSOCIAL. Programa Cultura de la Contribución en la Escuela: Experiencias e iniciativas significativas año 2019. 2019, Available at: <https://www.dian.gov.co/atencionciudadano/CulturaContribucion/Cultura-de-la-Contribucion/Documents/Libro-Experiencias-e-Iniciativas-Significativas-2019.pdf>

<sup>12</sup> GİB. 2018 Yılı Performans Programı, 2018, Available at: [http://www.gib.gov.tr/sites/default/files/fileadmin/yayinlar/Gib\\_2018\\_Performans\\_Programi.pdf](http://www.gib.gov.tr/sites/default/files/fileadmin/yayinlar/Gib_2018_Performans_Programi.pdf)

In many developed or developing countries, it is seen that education programs are implemented to increase tax awareness or tax consciousness. For example, in the USA, Japan, New Zealand, and the United Kingdom, tax education is implemented at the school level [46, p. 112]. Tax education is also organized at the school level in countries such as Peru, Uruguay, Guatemala [47], Turkey, Ghana [36, p. 4] Nigeria [48, p. 531].

Turkey is one of the countries where the most surveys on the attitudes of university students within the scope of the relationships between tax consciousness and tax education have been conducted. Some of the results of recent studies are presented below.

A survey of results conducted regarding university students by Gergerlioğlu & McGee [49] demonstrated that university students who take tax courses revealed a more supportive attitude towards increasing tax consciousness. The field study conducted for university students by Gergerlioğlu & Aytaç [50] showed similar conclusions to the research done by Gergerlioğlu & McGee [49]. In the study conducted by Sağlam [59] for students based on a survey, it is emphasized that the tax-related courses taken by the students can positively affect tax awareness. Çiçek & Bitlisli [43] conducted research revealing the effect of tax education on the tax consciousness of university students. The result of this research demonstrated that the students who receive tax education can have a higher tax consciousness. The surveys conducted for university students by Yayar et al. [52] and Teyyare & Kumbaşlı [10] support this result. The results of research done for university students in Turkey by Akkara & Gencil [53] indicated that in comparison to the students who do not take a tax course, the students who take the tax course have a more supportive attitude regarding the view of "tax education can increase tax consciousness".

In addition to these studies based on surveys revealing the relationship between tax consciousness and tax education in Turkey, within the scope of tax education, the field studies on awareness or knowledge



of taxation regarding university students in different countries have also been conducted. The results of research conducted for the university students in Malaysia by Palil et al. [46] and for taxpayers in Vietnam by Nguyen et al. [54] revealed that the education programs for taxation can contribute to increasing awareness regarding tax liability. The conclusions of a study conducted for university students in Indonesia by Hastuti [55] showed that it is expected that in comparison to the students who do not take a tax course, the students who take the tax course have more awareness regarding taxation.

Similarly, the result of a survey conducted for university students in Indonesia by Putro & Tjen [56] demonstrated that in comparison with those who do not receive a tax education, the students who receive the tax education have more knowledge regarding taxation. Additionally, the survey conducted for university students in Indonesia by Kurniawan [38] indicated that tax education can increase tax knowledge. Similarly, the conclusion of an experimental study conducted for university students by Berhane [57] in Ethiopia revealed that tax education improves tax knowledge. Even the idea of developing tax consciousness through courses that include religious education is also put forward [58, p. 2].

### 3. The details for survey

Under this title, first of all, information about the survey methodology is given. Afterward, the details of the sampling and demographic data are mentioned.

#### 3.1. Survey methodology

The survey was conducted on undergraduate and graduate students at the School of Business Administration of the University of Externado in Colombia in 2019. The aim of this survey was to analyze the attitudes of students who received tax education and those who did not receive tax education from the perspective of tax consciousness. For this purpose, the questionnaire form consisting of 28 attitude items and demographic questions was distributed to the students.

The questionnaire form used for the survey conducted by Gergerlioğlu & McGee [49] was taken into account. 545 questionnaire forms were found suitable for evaluation. However, 7 questionnaire forms were not taken into account because it was not marked by the students whether they received tax education or not. Therefore, the data regarding 538 questionnaire forms were taken into account for analysis and testing. One item<sup>13</sup> about religious beliefs was cancelled because it was not perceived correctly by the students. Among the students who participated in the survey, the number of students who received tax education was 135, while the number of students who did not receive tax education was 403. The data collected from university students were analysed by means of 19 the version of SSPS.

While the Cronbach Alpha regarding reliability analysis value was determined as 0.958 for the data related to 27 attitude items in the 135 questionnaire forms, the Cronbach Alpha value regarding reliability analysis was established as 0.953 for the data related to the 27 attitude items in the 403 questionnaire forms. Cronbach Alpha values for both groups were found to be very high<sup>14</sup>. A 5-point Likert scale was used for the attitude items in the survey. It was observed that the data on attitude items did not show a normal distribution.

Therefore, non-parametric tests were used for the data subject to our survey. In this context, the relationship between the demographic data (*gender, marital status, work status*) and the attitude items were analyzed through Mann Whitney U and Kruskal Wallis H tests. In addition, the means of the responses given by the students who received tax education and the students who did not take tax courses to the attitude statements were compared.

#### 3.2. Details of sampling

The number of undergraduate students studying at the School of Business Administration of the University of Ex-

<sup>13</sup> Individuals with strong religious beliefs may have more tax consciousness

<sup>14</sup> If the Cronbach Alpha value is higher than 0.90, then this value is considered too high [67].

ternado in Colombia, in the 2018–2019 academic years, is 540, and the number of postgraduate students is 976. Therefore, the population of this study consists of 1516 students. The sample size regarding this study was 191 for undergraduate students and 347 for postgraduate students.

Ethics committee approval was obtained from the relevant university for this study, and the survey was conducted on a voluntary basis. Ultimately, the total number of samples is 538. In this context, the sampling error margin was found to be 3.29 at the 95% confidence level. This sampling margin of error was considered sufficient for the sample [60, p. 43].

### 3.3. Demographic data

The participants in the survey consist of 50% male and 50% female students. The participating students consist of 31% married, 62% single and, 6.3% engaged. The work status of the students participating in the survey is as follows: Part-Time 9.3% / Full-Time 73% / Don't Work 17.7%.

## 4. Findings of survey

Here, we first compared the means of responses regarding the attitude items of students who took tax courses and the students who did not take tax courses for each attitude item. Afterward, we tested all hypotheses put forward under the title of "The survey hypotheses". Lastly, we compared the means of responses to the attitude items of the students who define their tax awareness levels as "high", "medium" and "low" regardless of the status of taking a tax course.

### 4.1. Comparison of the means of attitudes towards tax consciousness

In Table 1, we wanted to analyze by comparing the attitudes towards tax consciousness of students who took and did not take tax courses. As a result of analyzing, we saw that there is no distinctive difference between the means of both groups of students. The analysis results are shown in Table 1.

Table 1  
Comparison of the mean of students' attitudes towards tax consciousness for each attitude item

No	Attitude Items	The students who take tax courses			The students who do not take tax courses		
		Mean	Std. Deviation	N	Mean	Std. Deviation	N
I-1	I believe that tax injustice can weaken tax consciousness	3.8667	1.35932	135	3.9181	1.17212	403
I-2	If the tax system is not understandable, tax consciousness in the society may weaken	3.8370	1.23510	135	3.8983	1.15128	403
I-3	Negative approaches of the tax administration can weaken tax consciousness	3.8000	1.24469	135	3.9330	1.10987	403
I-4	Increased informal economy can reduce tax consciousness in society	3.4667	1.23264	135	3.5633	1.23701	403
I-5	The frequency of tax audits can increase tax consciousness	3.2667	1.22292	135	3.5459	1.18437	403
I-6	I believe that individuals with high tax consciousness will regularly fulfil their tax obligations	3.6667	1.36042	135	3.7494	1.23555	403
I-7	The increase of tax consciousness may raise the tax revenues of the state	3.8074	1.35215	135	3.7494	1.27323	403
I-8	I predict that as the level of education rises, tax consciousness will increase	3.4889	1.29791	135	3.4541	1.25969	403

End of Table 1

No	Attitude Items	The students who take tax courses			The students who do not take tax courses		
		Mean	Std. Deviation	N	Mean	Std. Deviation	N
I-9	I believe that individuals with low tax consciousness may not be willing to pay taxes	3.5333	1.27432	135	3.5409	1.19709	403
I-10	I think that as the tax consciousness increases the tax evasion tendencies will decrease	3.4963	1.30940	135	3.4789	1.17453	403
I-11	I believe that societies with improved in tax consciousness have a high welfare level	3.5778	1.37389	135	3.6203	1.27638	403
I-12	High tax rates can weaken tax consciousness	3.6000	1.28829	135	3.5757	1.25627	403
I-13	I think that education in the family has an important role in the development of tax consciousness	3.6667	1.26962	135	3.7171	1.19050	403
I-14	The frequency of tax amnesty can reduce tax consciousness	3.3778	1.29215	135	3.2978	1.13105	403
I-15	If tax consciousness increases in our society, I can get better health care	3.2667	1.28249	135	3.2308	1.23339	403
I-16	Low tax penalties can reduce tax consciousness	3.3926	1.32764	135	3.3598	1.29372	403
I-17	I believe that "tax consciousness development training" initiated by the state will increase tax consciousness in the society	3.4963	1.17101	135	3.5012	1.12496	403
I-18	Individuals who have high tax consciousness can also evade tax	3.4148	1.27774	135	3.5856	1.30231	403
I-19	If our society had higher tax consciousness, I could get better education	3.4370	1.31925	135	3.4392	1.21071	403
I-20	I believe that the individual with a high tax consciousness is a good citizen	3.3185	1.29668	135	3.2531	1.21984	403
I-21	I believe that the training on tax consciousness should start from primary education	3.7037	1.26417	135	3.7940	1.17806	403
I-22	I think that countries with low tax consciousness are undeveloped countries	3.3333	1.20942	135	3.3350	1.18634	403
I-23	I would like to have an elective course related to tax consciousness in our curriculum	3.5111	1.30365	135	3.5335	1.19940	403
I-24	I think that individuals with high tax consciousness love their country more	3.1630	1.20452	135	3.1191	1.24217	403
I-25	I would like to attend the conference "How can my tax consciousness increase?" to be held at my school	3.5926	1.24766	135	3.5633	1.22894	403
I-26	I estimate that the tax consciousness of the poor people is lower	3.0667	1.29407	135	3.1439	1.22541	403
I-27	believe that as individuals' financial incomes rise, tax consciousness will fall	2.7037	1.25825	135	2.5831	1.15466	403

Source: Produced by the authors



#### 4.2. The analysis of attitudes of students with different gender regarding tax consciousness

In Table 2 and Table 3, we separately revealed whether the attitudes towards students who took and did not take tax courses differ in terms of a gender group. In this context, we analyzed all data with the Mann-Whitney U test. The test results we presented in Table 2 showed that attitudes towards only two items (I-9 and I-20) were statistically significant for the gender group. The test results in Table 3 demonstrated that attitudes regarding only one item (I-19) were statistically significant for the gender group.

According to the test results in Table 2 and Table 3, the relationship between the attitudes revealed through the responses to the attitude items associated with I-9, I-20, and I-19 and the gender group variable is statistically significant. Therefore, the  $H_0$  hypothesis for I-9, I-20, and I-19 was rejected and the  $H_0$  hypothesis was accepted for all other attitude items in Table 2 and Table 3.

According to Table 2, compared to the male students, the female students have more supportive attitudes towards the attitude items associated with I-9 and I-20. On the other hand, Table 3 revealed that compared to the female students, the male students have more supportive attitudes for the attitude item associated with I-19.

Table 2

#### Testing the attitudes of students who did take tax courses according to the gender group

Attitude Items	Gender	Sample Size	Mean Rank	P Value
I-1	Male / Female	81 / 54	66.33 / 70.50	0.517
I-2	Male / Female	81 / 54	64.30 / 73.56	0.149
I-3	Male / Female	81 / 54	67.34 / 68.99	0.799
I-4	Male / Female	81 / 54	68.53 / 67.20	0.842
I-5	Male / Female	81 / 54	63.60 / 74.59	0.097
I-6	Male / Female	81 / 54	67.43 / 68.85	0.830
I-7	Male / Female	81 / 54	68.66 / 67.01	0.800
I-8	Male / Female	81 / 54	67.07 / 69.40	0.724
I-9	Male / Female	81 / 54	62.62 / 76.06	0.040*
I-10	Male / Female	81 / 54	66.81 / 69.79	0.654
I-11	Male / Female	81 / 54	67.52 / 68.72	0.856
I-12	Male / Female	81 / 54	67.53 / 68.70	0.859
I-13	Male / Female	81 / 54	65.14 / 72.30	0.272
I-14	Male / Female	81 / 54	68.65 / 67.02	0.807
I-15	Male / Female	81 / 54	68.08 / 67.88	0.976
I-16	Male / Female	81 / 54	65.22 / 72.18	0.297
I-17	Male / Female	81 / 54	69.93 / 65.11	0.465
I-18	Male / Female	81 / 54	66.88 / 69.69	0.671
I-19	Male / Female	81 / 54	65.24 / 72.14	0.300
I-20	Male / Female	81 / 54	62.42 / 76.37	0.037*
I-21	Male / Female	81 / 54	64.04 / 73.84	0.131
I-22	Male / Female	81 / 54	63.62 / 74.56	0.101
I-23	Male / Female	81 / 54	65.72 / 71.43	0.386
I-24	Male / Female	81 / 54	64.51 / 73.24	0.190
I-25	Male / Female	81 / 54	68.64 / 67.05	0.808
I-26	Male / Female	81 / 54	67.98 / 68.03	0.994
I-27	Male / Female	81 / 54	69.27 / 66.09	0.633

Source: Produced by the authors.

Note: \* if it is less than 0.05, it is significant

Table 3

**Testing the attitudes of students who did not take tax courses according to the gender group**

Attitude Items	Gender	Sample Size	Mean Rank	P Value
I-1	Male / Female	188 / 215	197.69 / 205.77	0.457
I-2	Male / Female	188 / 215	202.27 / 201.75	0.962
I-3	Male / Female	188 / 215	195.05 / 208.06	0.228
I-4	Male / Female	188 / 215	198.84 / 204.76	0.597
I-5	Male / Female	188 / 215	197.02 / 206.36	0.403
I-6	Male / Female	188 / 215	198.56 / 205.01	0.560
I-7	Male / Female	188 / 215	207.23 / 197.43	0.379
I-8	Male / Female	188 / 215	200.88 / 202.98	0.852
I-9	Male / Female	188 / 215	191.23 / 211.42	0.068
I-10	Male / Female	188 / 215	206.95 / 197.67	0.403
I-11	Male / Female	188 / 215	204.65 / 199.68	0.657
I-12	Male / Female	188 / 215	196.06 / 207.20	0.321
I-13	Male / Female	188 / 215	209.06 / 195.83	0.231
I-14	Male / Female	188 / 215	196.54 / 206.77	0.361
I-15	Male / Female	188 / 215	210.36 / 194.69	0.165
I-16	Male / Female	188 / 215	205.58 / 198.87	0.550
I-17	Male / Female	188 / 215	201.52 / 202.42	0.935
I-18	Male / Female	188 / 215	204.38 / 199.92	0.690
I-19	Male / Female	188 / 215	217.35 / 188.58	0.010*
I-20	Male / Female	188 / 215	200.95 / 202.92	0.861
I-21	Male / Female	188 / 215	207.35 / 197.32	0.359
I-22	Male / Female	188 / 215	199.20 / 204.45	0.642
I-23	Male / Female	188 / 215	200.39 / 203.41	0.787
I-24	Male / Female	188 / 215	203.30 / 200.86	0.829
I-25	Male / Female	188 / 215	206.26 / 198.28	0.475
I-26	Male / Female	188 / 215	196.40 / 206.89	0.354
I-27	Male / Female	188 / 215	202.11 / 201.91	0.986

Source: Produced by the authors

Note: \* if it is less than 0.05, it is significant

#### 4.3. The analysis of attitudes of students with different marital status regarding tax consciousness

We demonstrated the test results towards students who took and did not take tax courses for marital status groups in Table 4 and Table 5. We analyzed all data by using the Kruskal-Wallis H test. The results of test in Table 4 revealed the student responses regarding 8 attitude items (I-7 / I-13 / I-15 / I-17 / I-19 / I-21 / I-22 / I-24) were statistically significant for the marital status groups.

The test results in Table 5 showing the student responses regarding 11 attitude items (I-1 / I-6 / I-7 / I-11 / I-13 / I-14 /

I-15 / I-19 / I-20 / I-21 / I-26) were statistically significant for the marital status groups. Therefore, the  $H_0$  hypothesis for I-1, I-6, I-7, I-11, I-13, I-14, I-15, I-17, I-19, I-20, I-21, I-22, I-24, and I-26 was rejected and the  $H_1$  hypothesis was accepted for all these attitude items in Table 4 and Table 5. For the attitude items other than these items, the  $H_0$  hypothesis was accepted and the  $H_1$  hypothesis was rejected.

According to Table 4 and Table 5, compared to the single and engaged students, the married students have more supportive attitudes towards the attitude items associated with I-1, I-6, I-7, I-11, I-13, I-14, I-15, I-17, I-19, I-20, I-21, I-22, I-24, and I-26.

Table 4

**Testing the attitudes of students who did take tax courses according to the marital status groups**

Attitude Items	Marital Status	Sample Size	Mean Rank	P Value
I-1	Married / Single / Engaged	43 / 87 / 5	67.65 / 68.72 / 58.50	0.829
I-2	Married / Single / Engaged	43 / 87 / 5	72.45 / 66.24 / 60.40	0.589
I-3	Married / Single / Engaged	43 / 87 / 5	73.74 / 66.14 / 50.90	0.312
I-4	Married / Single / Engaged	43 / 87 / 5	76.99 / 64.57 / 50.30	0.121
I-5	Married / Single / Engaged	43 / 87 / 5	77.58 / 63.28 / 67.80	0.126
I-6	Married / Single / Engaged	43 / 87 / 5	77.07 / 64.88 / 44.30	0.078
I-7	Married / Single / Engaged	43 / 87 / 5	78.81 / 64.88 / 29.30	0.008**
I-8	Married / Single / Engaged	43 / 87 / 5	71.88 / 67.26 / 47.50	0.371
I-9	Married / Single / Engaged	43 / 87 / 5	77.58 / 64.66 / 43.70	0.059
I-10	Married / Single / Engaged	43 / 87 / 5	77.93 / 64.07 / 50.90	0.069
I-11	Married / Single / Engaged	43 / 87 / 5	77.77 / 64.43 / 46.10	0.085
I-12	Married / Single / Engaged	43 / 87 / 5	67.07 / 69.39 / 51.80	0.584
I-13	Married / Single / Engaged	43 / 87 / 5	78.98 / 63.76 / 47.40	0.040*
I-14	Married / Single / Engaged	43 / 87 / 5	74.13 / 66.36 / 43.80	0.193
I-15	Married / Single / Engaged	43 / 87 / 5	83.21 / 63.21 / 20.50	0.000**
I-16	Married / Single / Engaged	43 / 87 / 5	72.34 / 67.09 / 46.50	0.331
I-17	Married / Single / Engaged	43 / 87 / 5	75.95 / 66.18 / 31.30	0.031*
I-18	Married / Single / Engaged	43 / 87 / 5	75.55 / 65.37 / 48.90	0.180
I-19	Married / Single / Engaged	43 / 87 / 5	85.69 / 61.84 / 23.10	0.000**
I-20	Married / Single / Engaged	43 / 87 / 5	76.95 / 64.68 / 48.70	0.115
I-21	Married / Single / Engaged	43 / 87 / 5	82.20 / 62.22 / 46.40	0.007**
I-22	Married / Single / Engaged	43 / 87 / 5	77.67 / 64.95 / 37.80	0.038*
I-23	Married / Single / Engaged	43 / 87 / 5	77.40 / 64.52 / 47.80	0.087
I-24	Married / Single / Engaged	43 / 87 / 5	82.57 / 63.43 / 22.20	0.001**
I-25	Married / Single / Engaged	43 / 87 / 5	72.93 / 66.81 / 46.30	0.281
I-26	Married / Single / Engaged	43 / 87 / 5	65.63 / 69.92 / 55.00	0.617
I-27	Married / Single / Engaged	43 / 87 / 5	62.44 / 72.33 / 40.40	0.095

Source: Produced by the authors

Note: \* if it is less than 0.05, it is significant; \*\* if it is less than 0.01, it is significant

Table 5

**Testing the attitudes of students who did not take tax courses according to the work status groups**

Attitude Items	Marital Status	Sample Size	Mean Rank	P Value
I-1	Married / Single / Engaged	124 / 250 / 29	222.26 / 193.24 / 190.86	0.044*
I-2	Married / Single / Engaged	124 / 250 / 29	219.74 / 193.98 / 195.26	0.093
I-3	Married / Single / Engaged	124 / 250 / 29	218.09 / 193.28 / 208.36	0.107
I-4	Married / Single / Engaged	124 / 250 / 29	209.65 / 198.33 / 200.93	0.655
I-5	Married / Single / Engaged	124 / 250 / 29	210.35 / 197.11 / 208.41	0.532
I-6	Married / Single / Engaged	124 / 250 / 29	225.08 / 188.05 / 223.59	0.005**
I-7	Married / Single / Engaged	124 / 250 / 29	223.92 / 190.71 / 205.59	0.025*
I-8	Married / Single / Engaged	124 / 250 / 29	209.34 / 194.33 / 236.69	0.111
I-9	Married / Single / Engaged	124 / 250 / 29	220.54 / 193.88 / 192.69	0.081
I-10	Married / Single / Engaged	124 / 250 / 29	212.08 / 195.91 / 211.40	0.373
I-11	Married / Single / Engaged	124 / 250 / 29	231.63 / 190.37 / 175.62	0.002**
I-12	Married / Single / Engaged	124 / 250 / 29	217.42 / 191.62 / 225.57	0.057
I-13	Married / Single / Engaged	124 / 250 / 29	224.67 / 191.66 / 194.19	0.023*

End of Table 5

Attitude Items	Marital Status	Sample Size	Mean Rank	P Value
I-14	Married / Single / Engaged	124 / 250 / 29	225.83 / 189.31 / 209.48	0.011*
I-15	Married / Single / Engaged	124 / 250 / 29	231.74 / 189.78 / 180.16	0.002**
I-16	Married / Single / Engaged	124 / 250 / 29	210.84 / 196.57 / 211.02	0.465
I-17	Married / Single / Engaged	124 / 250 / 29	203.59 / 199.86 / 213.64	0.803
I-18	Married / Single / Engaged	124 / 250 / 29	198.70 / 205.20 / 188.52	0.695
I-19	Married / Single / Engaged	124 / 250 / 29	226.33 / 192.21 / 182.38	0.014*
I-20	Married / Single / Engaged	124 / 250 / 29	234.58 / 187.26 / 189.74	0.001**
I-21	Married / Single / Engaged	124 / 250 / 29	222.07 / 194.26 / 182.91	0.043*
I-22	Married / Single / Engaged	124 / 250 / 29	212.99 / 198.51 / 185.07	0.356
I-23	Married / Single / Engaged	124 / 250 / 29	205.58 / 201.77 / 188.71	0.764
I-24	Married / Single / Engaged	124 / 250 / 29	214.45 / 197.42 / 188.26	0.312
I-25	Married / Single / Engaged	124 / 250 / 29	209.29 / 197.64 / 208.41	0.607
I-26	Married / Single / Engaged	124 / 250 / 29	221.48 / 191.22 / 211.60	0.047*
I-27	Married / Single / Engaged	124 / 250 / 29	196.57 / 200.33 / 239.64	0.168

Source: Produced by the authors

Note: \* if it is less than 0.05, it is significant; \*\* if it is less than 0.01, it is significant

Table 6

**Testing the attitudes of students who did take tax courses according to the work status groups**

Attitude Items	Work Status	Sample Size	Mean Rank	P Value
I-1	Part-time / Full-time / Do not work	23 / 93 / 19	60.09 / 68.62 / 74.55	0.425
I-2	Part-time / Full-time / Do not work	23 / 93 / 19	54.02 / 69.88 / 75.71	0.107
I-3	Part-time / Full-time / Do not work	23 / 93 / 19	59.07 / 69.85 / 69.76	0.444
I-4	Part-time / Full-time / Do not work	23 / 93 / 19	62.28 / 70.29 / 63.71	0.575
I-5	Part-time / Full-time / Do not work	23 / 93 / 19	62.74 / 70.54 / 61.95	0.507
I-6	Part-time / Full-time / Do not work	23 / 93 / 19	60.72 / 70.34 / 65.34	0.516
I-7	Part-time / Full-time / Do not work	23 / 93 / 19	63.13 / 71.07 / 58.87	0.337
I-8	Part-time / Full-time / Do not work	23 / 93 / 19	70.67 / 67.09 / 69.24	0.908
I-9	Part-time / Full-time / Do not work	23 / 93 / 19	61.41 / 68.81 / 72.03	0.611
I-10	Part-time / Full-time / Do not work	23 / 93 / 19	61.59 / 69.97 / 66.13	0.618
I-11	Part-time / Full-time / Do not work	23 / 93 / 19	64.46 / 68.53 / 69.71	0.878
I-12	Part-time / Full-time / Do not work	23 / 93 / 19	62.57 / 65.97 / 84.50	0.110
I-13	Part-time / Full-time / Do not work	23 / 93 / 19	51.09 / 71.60 / 70.84	0.056
I-14	Part-time / Full-time / Do not work	23 / 93 / 19	64.80 / 69.58 / 64.16	0.773
I-15	Part-time / Full-time / Do not work	23 / 93 / 19	74.83 / 67.33 / 63.03	0.579
I-16	Part-time / Full-time / Do not work	23 / 93 / 19	64.48 / 69.48 / 65.00	0.795
I-17	Part-time / Full-time / Do not work	23 / 93 / 19	69.83 / 68.63 / 62.68	0.794
I-18	Part-time / Full-time / Do not work	23 / 93 / 19	64.33 / 68.24 / 71.26	0.833
I-19	Part-time / Full-time / Do not work	23 / 93 / 19	66.78 / 68.84 / 65.37	0.923
I-20	Part-time / Full-time / Do not work	23 / 93 / 19	67.24 / 68.46 / 66.66	0.977
I-21	Part-time / Full-time / Do not work	23 / 93 / 19	57.52 / 70.86 / 66.68	0.304
I-22	Part-time / Full-time / Do not work	23 / 93 / 19	70.09 / 66.79 / 71.39	0.854
I-23	Part-time / Full-time / Do not work	23 / 93 / 19	69.63 / 67.23 / 69.82	0.938
I-24	Part-time / Full-time / Do not work	23 / 93 / 19	78.74 / 66.25 / 63.58	0.317
I-25	Part-time / Full-time / Do not work	23 / 93 / 19	69.13 / 66.54 / 73.76	0.734
I-26	Part-time / Full-time / Do not work	23 / 93 / 19	78.57 / 64.14 / 74.11	0.202
I-27	Part-time / Full-time / Do not work	23 / 93 / 19	68.98 / 65.07 / 81.16	0.239

Source: Produced by the authors

#### 4.4. The analysis of attitudes of students with distinct work status regarding tax consciousness

We indicated the test conclusions towards students who took and did not take tax courses for work status groups in Table 6 and Table 7. We analyzed all data by using the Kruskal-Wallis H test. The results of test in Table 6 showed the student responses regarding any attitude items were statistically not significant for the work status groups.

The test results in Table 7 revealing the student responses concerning two attitude items (I-3 / I-16) were statistically significant for the work status groups. Therefore, the  $H_0$  hypothesis for all attitude items

other than I-3 / I-16 was accepted and the  $H_1$  hypothesis was rejected for all these attitude items in Table 6 and Table 7.

According to Table 6 and Table 7, compared to the students who work full-time and do not work, the students working part-time have more supportive attitudes towards the attitude items associated with I-3, I-16.

#### 4.5. Comparison of the means of students' tax consciousness levels

Here, we wanted to compare the means of responses to the attitude items of the students who defined their tax awareness levels as "high", "medium" and "low" without taking into consider-

Table 7  
Testing the attitudes of students who did not take tax courses according to the work status groups

Attitude Items	Work Status	Sample Size	Mean Rank	P Value
I-1	Part-time / Full-time / Do not work	27 / 300 / 76	206.07 / 203.11 / 196.18	0.866
I-2	Part-time / Full-time / Do not work	27 / 300 / 76	199.85 / 200.25 / 209.66	0.794
I-3	Part-time / Full-time / Do not work	27 / 300 / 76	243.50 / 203.05 / 183.12	0.042*
I-4	Part-time / Full-time / Do not work	27 / 300 / 76	216.17 / 203.61 / 190.63	0.529
I-5	Part-time / Full-time / Do not work	27 / 300 / 76	217.00 / 202.45 / 194.90	0.672
I-6	Part-time / Full-time / Do not work	27 / 300 / 76	201.59 / 204.33 / 192.95	0.726
I-7	Part-time / Full-time / Do not work	27 / 300 / 76	201.30 / 207.80 / 179.36	0.139
I-8	Part-time / Full-time / Do not work	27 / 300 / 76	191.74 / 201.78 / 206.50	0.842
I-9	Part-time / Full-time / Do not work	27 / 300 / 76	211.76 / 205.64 / 184.16	0.286
I-10	Part-time / Full-time / Do not work	27 / 300 / 76	194.76 / 205.92 / 189.10	0.470
I-11	Part-time / Full-time / Do not work	27 / 300 / 76	203.74 / 206.60 / 183.23	0.268
I-12	Part-time / Full-time / Do not work	27 / 300 / 76	228.80 / 196.61 / 213.74	0.218
I-13	Part-time / Full-time / Do not work	27 / 300 / 76	194.80 / 204.00 / 196.67	0.824
I-14	Part-time / Full-time / Do not work	27 / 300 / 76	226.06 / 205.30 / 180.42	0.115
I-15	Part-time / Full-time / Do not work	27 / 300 / 76	184.37 / 208.02 / 184.51	0.190
I-16	Part-time / Full-time / Do not work	27 / 300 / 76	256.69 / 202.46 / 180.74	0.011*
I-17	Part-time / Full-time / Do not work	27 / 300 / 76	217.22 / 201.13 / 200.01	0.758
I-18	Part-time / Full-time / Do not work	27 / 300 / 76	216.52 / 198.39 / 211.11	0.532
I-19	Part-time / Full-time / Do not work	27 / 300 / 76	174.93 / 209.28 / 182.88	0.082
I-20	Part-time / Full-time / Do not work	27 / 300 / 76	197.80 / 182.88 / 174.92	0.060
I-21	Part-time / Full-time / Do not work	27 / 300 / 76	183.70 / 205.02 / 196.57	0.557
I-22	Part-time / Full-time / Do not work	27 / 300 / 76	223.48 / 201.46 / 196.51	0.558
I-23	Part-time / Full-time / Do not work	27 / 300 / 76	170.02 / 202.24 / 212.43	0.238
I-24	Part-time / Full-time / Do not work	27 / 300 / 76	210.96 / 207.02 / 179.01	0.144
I-25	Part-time / Full-time / Do not work	27 / 300 / 76	174.00 / 203.76 / 204.99	0.403
I-26	Part-time / Full-time / Do not work	27 / 300 / 76	227.85 / 203.51 / 186.85	0.245
I-27	Part-time / Full-time / Do not work	27 / 300 / 76	204.26 / 201.67 / 202.49	0.993

Source: Produced by the authors

Note: \* if it is less than 0.05, it is significant



ation the status of receiving a tax course. In this context, we prepared Table 6 by considering the attitude items that best reflect the answers given by the students for their tax consciousness levels. According to the results of the analysis, the students who defined their own tax consciousness level as high revealed more supportive attitudes towards tax education. The results are shown in Table 8.

**5. Discussion**

When the test and analysis results of this study are evaluated together, the following can be said: According to the analysis results showing the means regarding attitude items revealed that there is no distinctive difference between the attitudes towards tax consciousness of students who took and did not take tax courses. In this case, it is possible to say that the attitudes towards tax consciousness of these two groups are close to each other. This result is not consistent with the results of the studies conducted by Gergerlioğlu & McGee [49], Gergerlioğlu & Aytaç [50], Palil et al. [46], Putro & Tjen [56].

Within the scope of this study, the top three attitude items most supported by students who took and did not take tax courses are as follows: “I believe that tax injustice can weaken tax consciousness”,

“If the tax system is not understandable, tax consciousness in society may weaken”, and “Negative approaches of the tax administration can weaken tax consciousness” (Table 1). The studies carried out by Gergerlioğlu & McGee [49] and Gergerlioğlu & Aytaç [50] revealed the same results.

The test result of this study in terms of gender variable revealed that compared to the male students, the female students have more supportive attitudes for the attitude item of “I think that individuals with high tax consciousness love their country more”. This test result is not consistent with the results of the studies conducted by Gergerlioğlu & McGee [49], Gergerlioğlu & Aytaç [50] because they expressed those male students have more supportive attitudes for the same attitude item. Therefore, these results are not consistent with our research conclusions. Additionally, it is known that tax education positively affects tax consciousness [45, p. 109] and tax consciousness has a positive effect on tax compliance [36, p. 167]. At this point, within the scope of tax compliance studies, the results related to gender should also be evaluated. In this context, the survey results conducted by Helhel & Ahmed [61], Nurkhin et al. [62], Asante & Baba [63], showed female taxpayers have a stronger attitude regarding tax compliance. These

Table 8

**Comparison of the means of students’ tax consciousness levels for some attitude items**

No	Attitude Items	Low			Middle			High		
		Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation	N
I-13	I think that education in the family has an important role in the development of tax consciousness	3.5167	1.20016	60	3.6099	1.20953	282	3.8980	1.19391	196
I-17	I believe that “tax consciousness development training” initiated by the state will increase tax consciousness in the society	3.4833	1.14228	60	3.4858	1.10393	282	3.5255	1.18294	196
I-21	I believe that the training on tax consciousness should start from primary education	3.5500	1.19922	60	3.6879	1.19985	282	3.9592	1.18034	196

Source: Produced by the authors

studies supported the results of our survey in terms of gender.

The test results for marital status groups demonstrated that compared to the single and engaged students, the married students have more supportive attitudes for the 11 attitude items which are shown in Table 4 and Table 5. For example, the married students have more supportive attitudes regarding the attitude item of *"I believe that the training on tax consciousness should start from primary education"*. This result is supported by the survey study conducted by Gergerlioğlu & McGee [49]. In addition to this, Ayyıldız et al. [66] revealed that married people support the idea that paying taxes is a civic duty more than singles. Additionally, the results of a comprehensive survey study conducted by Gergerlioğlu [65] showed that married individuals have a more supportive attitude towards taxes. The results of these surveys are also in agreement with our study. Finally, Torgler [66] stated in her study that married people are more likely to comply with taxation compared to singles. This study also supports our results.

Finally, the test conclusions for work status groups showed that compared to the students who work full-time and do not work, the students working part-time have the more supportive attitudes for the two attitude items which are demonstrated in Table 6 and Table 7. For example, the students working part-time have more supportive attitude for the attitude items of *"Negative approaches of the tax administration can weaken tax consciousness"*. This result is not supported by the survey conducted by Gergerlioğlu & Aytaç [50]. In addition, this conclusion is not consistent with the result of the study conducted by Gergerlioğlu & McGee [49].

## 6. Conclusion

Taxes are one of the indispensable resources in financing public expenditures. Therefore, the timely and complete collection of taxes is very important. In this context, individuals are expected to have a certain level of awareness or consciousness regarding the fulfilment of their tax obligations. As a result of this situation,

the concepts of tax education and tax consciousness have become an important issue by being placed at the centre of both governments and academic studies. Numerous studies have been conducted in different countries on tax consciousness and tax education, especially for taxpayers and university students. However, a field study revealing the relationship between tax education and tax consciousness in Latin America has not been conducted so far. This has been a motivation for our study.

Thus, our fieldwork focused on how much tax education can have on students' tax consciousness. However, contrary to many studies, the results of our analysis revealed that there is not much difference among the attitudes of students who received tax courses and those who did not receive tax courses. Additionally, the test results of our study for gender and marital status showed that female students compared to males and married students compared to single and engaged students showed more supportive attitudes towards consciousness. Lastly, our study demonstrated that the students who define their own tax consciousness level as high revealed more supportive attitudes towards tax education.

In light of all these results, we think that tax compliance should be included in studies that will reveal the relationship between tax consciousness and tax education. Including of attitude items towards tax compliance in surveys within the scope of tax consciousness and tax education may produce more significant results. Additionally, it would be beneficial for comparability to carry out such a study in universities in other countries located in Latin America.

At the same time, more comprehensive studies can be conducted on how gender and marital status can affect the relationship between tax education and tax consciousness. Finally, the dissemination of studies revealing the relationship between tax consciousness and tax education in universities of developed countries can produce good results in terms of comparison between developed and developing countries.

## References

1. Kennedy M.M.J. *Public Finance*. PHI Learning Private Limited, New Delhi, 2012.
2. Robinson D. Evading Responsibility, Shaking Financial Stability. In Figazzolo L., Harris B. (eds) *Global Corporate Taxation and Resources for Quality Public Services*. Education International, Global Unions; 2011, pp. 47-58.
3. Saygın Ö., Sandalçı U., Sezer F. Vergi Ahlakının Belirleyicileri Bağlamında Mükelleflerin Kamu Harcamalarına Bakışı. *Research Journal of Public Finance*. 2015;1(3):21-38. Available at: <https://docplayer.biz.tr/36382553-Vergi-ahlakinin-belirleyicileri-baglaminda-mukelleflerin-kamu-harcamalarına-bakisi.html>
4. Sales D.M.A. Taxpayer's Checklist for Boarding the Train. *P&A Grant Thornton*. April 10, 2018. Available at: <https://www.grantthornton.com.ph/insights/articles-and-updates1/lets-talk-tax/taxpayers-checklist-for-boarding-the-train/>
5. Palil M.R. *Tax Knowledge and Tax Compliance Determinants in Self Assessment System in Malaysia*. Thesis of Department of Accounting and Finance Birmingham Business School The University of Birmingham; 2010.
6. Richardson G. Determinants of tax evasion: A cross-country investigation. *Journal of International Accounting, Auditing and Taxation*. 2006;15(2):150-169. <https://doi.org/10.1016/j.intaccudtax.2006.08.005>
7. Riahi-Belkaoui A. Relationship between tax compliance internationally and selected determinants of tax morale. *Journal of International Accounting, Auditing and Taxation*. 2004;13:135-143. <https://doi.org/10.1016/j.intaccudtax.2004.09.001>
8. Tsakumis G.T., Curatola A.P., Porcano T.M. The relation between national cultural dimensions and tax evasion. *Journal of International Accounting, Auditing and Taxation*. 2007;16:131-147. <https://doi.org/10.1016/j.intaccudtax.2007.06.004>
9. Richardson G. The relationship between culture and tax evasion across countries: Additional evidence and extensions. *Journal of International Accounting, Auditing and Taxation*. 2008;17(2):67-78. <https://doi.org/10.1016/j.intaccudtax.2008.07.002>
10. Teyyare E., Kumbaşlı E. Vergi Bilinci ve Vergi Ahlakının Gelişiminde Maliye Bölümü Eğitiminin Rolü. *AİBÜ Sosyal Bilimler Enstitüsü Dergisi*. 2016;16(4):1-29.
11. Herbert Jr.J.R. An Agenda for Tax Reform. In Boaz D., Crane E.H. (eds). *Beyond the Status Quo*. Cato Institute, USA; 1985, pp. 29-50.
12. Demir İ.C., Çiğerci İ. The Role of Education in the Development of Tax Awareness: An Empirical Study with Students of Primary School. *Yönetim ve Ekonomi*. 2016;23(1):127-143. <https://doi.org/10.18657/yecebu.43689>
13. Revenue Revisions. *Committee on Ways and Means House of Representative*. Eightieth Congress, First Edition, Government Printing Office, Washington, USA, 1947.
14. Fowler N. 4 Millions Canadians from a New Coalition for Tax Fairness. *Tax Justice Network*. 2017, September 20. Available at: <https://taxjustice.net/2017/09/20/4-million-canadians-form-new-coalition-tax-fairness/>
15. Yulu C., Qingwang G. *Major Issues and Policies in China's Financial Reform*. Enrich Professional Publishing; 2013.
16. Susilawati N. Teacher's Will to Promote Tax: A Preliminary Evidence to Build Tax People in Indonesia Through Community Partnership. *Kne Social Sciences*. 2018, pp. 510-527. <https://doi.org/10.18502/kss.v3i10.2931>
17. Abdiyeva R., Cumakunova T. Vergi Bilincini Etkileyen Demografik ve Siyasal Faktörler: Kırgızistan Örneği. *Sosyoekonomi*. 2017;25(32):71-80. <https://doi.org/10.17233/sosyoekonomi.289927>
18. Petrei A.H. Inflation Adjustment Schemes under the Personal Income Tax. *Staff Papers (International Monetary Fund)*. 1975;22(2):539-564. <https://doi.org/10.2307/3866488>
19. Kucherova H., Pokataieva O., Bilska O. Modelling Tax Consciousness Evaluation in the context of Economic Development Uncertainty. *Periodical of Engineering and Natural Sciences*. 2019;7(2):567-579. <https://doi.org/10.21533/pen.v7i2.565>
20. Lestari T., Wicaksono M. Effect of Awareness, Knowledge and Attitude of Taxpayers Tax Compliance for Taxpayers in Tax Service Office Boyolali. *International Journal of Economics, Business and Accounting Research*. 2017;1(1):12-25.
21. Serim N., İnam B., Murat, D. Factors Affecting Tax Compliance of Taxpayers: The Role of Tax Officer The Case of Istanbul and Çanakkale. *Business and Economics Research Journal*. 2014;5(2):19-31.

22. Nurlis I.K. The Effect of Taxpayer Consciousness, Knowledge, Tax Penalties and Tax Authorities Services on the Tax Compliance: (Survey on the Individual Taxpayer at Jabodetabek & Bandung). *Research Journal of Finance and Accounting*. 2015;6 (2):104-112.
23. Akıncı A., Başol O. Vergi Algısı Üzerine Bir Alan Araştırması: Kırıkkale İlinde Yaşayan İnsanların Vergi Algısı. *Dumlupınar University Journal of Social Sciences*. 2015;43:170-179.
24. Mitrakos P., Bitzenis A., Makedos I., Kontakos P. Tax Morale and Compliance in Greece: An Approach for the Construction of a Questionnaire Survey. In: Karasavoglou A., Arandelović Z., Marinković S., Polychronidou P. (eds). *The First Decade of Living with the Global Crisis, Economic and Social Developments in the Balkans and Eastern Europe, Series: Contributions to Economics*. Springer; 2016, pp. 103-112. [https://doi.org/10.1007/978-3-319-24267-5\\_8](https://doi.org/10.1007/978-3-319-24267-5_8)
25. Cipriani G. Making Taxpayers' Contributions to the EU Budget Visible: Towards Greater Transparency and Legitimacy. In: Stephenson P., Sanchez-Barrueco M.-L., Aden H. (eds). *Financial Accountability in the European Union*. Routledge, USA; 2021, pp. 242-254.
26. Widiyanto R. The Effect of Demographic Factors on Individual Tax Compliance in Duren Sawit. *International Institute of Social Science*. 2015, pp. 1-58.
27. Li M. Chinese Actress Bingbing's Alleged Tax Evasion Sparks Crisis. *Pacific Council on International Policy*, October 18, 2018, Available at: <https://www.pacificcouncil.org/newsroom/chinese-actress-bingbing%E2%80%99s-alleged-tax-evasion-sparks-crisis>
28. Kumar V. *Committees and Commissions in India*. New Delhi: Concept Publishing Company; 1967.
29. Karagiorgos A., Drogalas G., Lazos G., Fotiadou I. Tax Policy, Tax Disharmony and Tax Competition: The Situation of Greek Economy. *Journal of Governance and Regulation*. 2019;8(2):8-16. [https://doi.org/10.22495/jgr\\_v8\\_i2\\_p1](https://doi.org/10.22495/jgr_v8_i2_p1)
30. Dornstein M. Taxes: Attitudes and Perceptions and Their Social Bases. *Journal of Economic Psychology*. 1987;8:55-76. [https://doi.org/10.1016/0167-4870\(87\)90006-7](https://doi.org/10.1016/0167-4870(87)90006-7)
31. Enrick N.L. A Pilot Study of Income Tax Consciousness. *National Tax Journal*. 1963;16(2):169-173. Available at: <https://www.journals.uchicago.edu/doi/abs/10.1086/NTJ41790939?journalCode=ntj>
32. Wagstaff J.V. Income Tax Consciousness Under Withholding. *Southern Economic Association*. 1965;32(1):73-80. Available at: <https://www.jstor.org/stable/1054985>
33. Buehler A.G. The Tax System and Tax Consciousness. *The Bulletin of the National Tax Association*. 1940;25(8):237-246. Available at: <https://www.jstor.org/stable/41788059>
34. Angraini L.F. *The Effect of E-Filing Implementation, Taxpayer Awareness, Tax Knowledge, Tax Penalties, Service Quality On Taxpayer Compliance*. International Program, Faculty of Economy, Universitas Islam Indonesia; 2018.
35. Abubakari A., Adafula C.J. Evaluating Taxpayers' Attitude and Its Influence on Tax Compliance Decisions in Tamale, Ghana. *Journal of Accounting and Taxation*. 2013;5(3):48-57. <https://doi.org/10.5897/JAT2013.0120>
36. Mbilla S.A.E., Abiire M.A., Atindaana P.A., Ayimpoya R.N. Tax Education and Tax Compliance in Ghana. *Research Journal's Journal of Accounting*, 2020;8(1):1-21.
37. Mukhlis I., Utomo S.H., Soesetion Y. The Role of Taxation Education on Taxation Knowledge and Its Effect on Tax Fairness as well as Tax Compliance on Handicraft SMEs Sectors in Indonesia. *International Journal of Financial Research*. 2015;6(4):161-169. <https://doi.org/10.5430/ijfr.v6n4p161>
38. Kurniawan D. The Influence of Tax Education during Higher Education on Tax Knowledge and Its Effect on Personal Tax Compliance. *Journal of Indonesian Economy and Business*, 2020;35(1):57-72. <https://doi.org/10.22146/jieb.54292>
39. McGee R.W., Paláu L., Yepes S., Gustavo A. *Is Tax Evasion Ethical? An Empirical Study of Colombian Opinion*. Barry University; 2007. <https://doi.org/10.2139/ssrn.973762>
40. Mora M., Enríquez, J. Cumplimiento voluntario de las obligaciones tributarias. *Revista UNIMAR*. 2017;35(1):273-292. <https://doi.org/10.33386/593dp.2021.5.650>
41. Londoño-Vélez J., Javier A.-M. Enforcing Wealth Taxes in the Developing World: Quasi-experimental Evidence from Colombia. *American Economic Review: Insights*. 2021;3(2):131-148. <https://doi.org/10.3886/E120772V1>
42. Alm J., Cox J.C., Sadiraj V. Audit State Dependent Taxpayer Compliance: Theory and Evidence from Colombia. *Economic Inquiry*. 2019;58(2):819-833. <https://doi.org/10.1111/ecin.12864>
43. Çiçek U., Bitlisli F. Vergi Eğitiminin Üniversite Öğrencilerinin Vergi Bilinci ve Farkındalığı Üzerindeki Etkisi: Bir Araştırma. *Muhasebe ve Vergi Uygulamaları Dergisi*. 2017;10(2):261-278.



44. Şafaklı O.V., Kutlay K.A. Research on Students' Tax Compliance: Case of European University of Lefke. *International Journal of Academic Research in Economics and Management Sciences*. 2014;3(2):1–7. <https://doi.org/10.6007/IJAREMS/v3-i2/646>
45. Wang C. Individual Behaviour and Tax Consciousness the Experience of the Republic of China. *Revista De Administracion Tributaria*. 1993;12:105–112.
46. Palil M.R., Akir M.R., Ahmad W.F. The Perception of Tax Payers on Tax Knowledge and Tax Education with Level of Tax Compliance: A Study The Influences of Religiosity. *ASEAN Journal of Economics, Management and Accounting*. 2013;1(1):118–129.
47. Masud H., Pfeil H., Agarwal S., Briseno A.G. *International Practices to Promote Budget Literacy*. World Bank Group, USA; 2017.
48. Okauru I.O. *Federal Inland Revenue Service and Taxation Reforms in Democratic Nigeria*. Safari Books Ltd; 2012.
49. Gergerlioğlu U., McGee R.W. University Students' Attitudes towards Tax Consciousness: A Case Study of The Faculty of Economics at Istanbul University. *Researcher: Social Science Studies*. 2017;5(10):383–407.
50. Gergerlioğlu U., Aytac D. The measurement of the Students' Attitudes regarding Tax Consciousness: A Case Study. *Journal of Social Science*. 2021;6(1):59–78. Available at: <https://dergipark.org.tr/tr/download/article-file/1618791>
51. Sağlam M. Vergi Algısı ve Vergi Bilinci Üzerine Bir Araştırma: İktisadi ve İdari Bilimler Fakültesi Öğrencilerinde Vergi Algısı ve Vergi Bilinci. *Sosyoekonomi*. 2013;19(19):316–334.
52. Yayar R., Barlas E., Güney G. Measuring Tax Sensitivity of University Student. *Yönetim ve Ekonomi*. 2019;26(1):309–319. <https://doi.org/10.18657/yonveek.476528>
53. Akkara Ö., Gencil U. Yüksek Öğretim Öğrencilerinin Vergiye Yönelik Algılarının Çeşitli Değişkenler Açısından İncelenmesi: Çanakkale Onsekizmart Üniversitesi Örneği. *Organizasyon ve Yönetim Bilimleri Dergisi*. 2016;8(1):28–48.
54. Nguyen T.T.D., Pham T.M.L., Le T.T., Truong T.H.L., Trang M.D. Determinants Influencing Tax Compliance: The Case of Vietnam. *Journal of Asian Finance, Economics and Business*. 2020;7(2):65–73. <https://doi.org/10.13106/jafeb.2020.vol7.no2.65>
55. Hastuti R. Tax Consciousness and Tax Education: A Perception of Potential Taxpayers. *International Journal of Business, Economics and Law*. 2014;5(1):83–91.
56. Putro B., Tjen C. *Analysis of Tax Education and Tax Knowledge: Survey on University Students in Indonesia*. LPEM-FEBUI Working Paper, Indonesia; 2020.
57. Berhane Z. *The Influence of Tax Education on Tax Compliance Attitude*. Faculty of Business and Public Administration Department of Accounting and Finance, Addis Ababa University; 2011. 156 p. Available at: <http://etd.aau.edu.et/bitstream/handle/123456789/5781/Zelalem%20Berhane.pdf?sequence=1&isAllowed=y>
58. Said L. Inclusion of Tax Awareness on Higher Education. *South East Asia Journal of Contemporary Business, Economics and Law*. 2018;16(1):1–5.
59. Cohen L., Manion L., Morrison K. *Research Methods in Education*. 8<sup>th</sup> ed. Routledge; 2017.
60. Sue V.M., Ritter L.A. *Conducting Online Surveys*. 2<sup>nd</sup> ed. Sage Publishing, USA; 2012.
61. Helhel Y., Ahmed Y. Factors Affecting Tax Attitudes and Tax Compliance: A Survey Study in Yemen. *European Journal of Business and Management*; 2014;6(22):48–58.
62. Nurkhin A., Novanty I., Muhsin M., Sumiadji S. The Influence of Tax Understanding, Tax Awareness and Tax Amnesty towards Taxpayer Compliance. *Jurnal Keuangan dan Perbankan*. 2018;22(2):240–255. <https://doi.org/10.26905/jkdp.v22i2.1678>
63. Asante S., Baba A. Tax Compliance Among Self-Employed in Ghana: Do Demographic Characteristics Matter. *International Business and Management*. 2011;3(1):86–91. <https://doi.org/10.3968/j.ibm.1923842820110301.070>
64. Ayyıldız Y., Vural T., Demirli Y. *Vergiye Gönüllü Uyumu Etkileyen Faktörler "Bolu İli Alan Çalışması"*. Abant İzzet Baysal Üniversitesi Yayınları; 2014. 119 p. Available at: <https://docplayer.biz.tr/10049765-Vergiye-gonullu-uyumu-etkileyen-faktorler-bolu-ili-alan-calismasi.html>
65. Gergerlioğlu U. *Davranışları Etkilemeye Yönelik Özel Tüketim Vergilerinin Tutum ve Davranışlar Üzerindeki Etkilerinin Ampirik Analizi (İstanbul İli Örneği)*. Yayınlanmamış Doktora Tezi, İstanbul Üniversitesi Sosyal Bilimler Enstitüsü; 2014.
66. Torgler B. Tax Morale in Asian Countries. *Journal of Asian Economics*. 2004;15(2):237–266. <https://doi.org/10.1016/j.asieco.2004.02.001>



**Information about the authors**

*Gustavo A. Yepes-López* – PhD, Prof., Director of Management and Social Responsibility School of Management, School of Management, Universidad Externado de Colombia, (Caller 12 No 1 – 17 Este Barrio La Candelaria, Bogota, Colombia), ORCID: <https://orcid.org/0000-0003-3216-3827>; e-mail: [gustavo.yepes@uexternado.edu.co](mailto:gustavo.yepes@uexternado.edu.co)

*Ufuk Gergerlioğlu* – PhD, Assoc. Prof., Head of the Department of Fiscal Law, Department of Public Finance at the Faculty of Economics and Administrative Sciences, Hitit University (Akkent Mahallesi 3. Cadde, Akkent Caddesi, 19040, Çorum, Turkey), ORCID: <https://orcid.org/0000-0002-9950-9311>; e-mail: [ufukgergerlioglu@hitit.edu.tr](mailto:ufukgergerlioglu@hitit.edu.tr)

**For citation**

Yepes-López G.A., Gergerlioğlu U. Tax Education and the Attitude of University Students Towards Tax Consciousness: The Case of University of Externado (Colombia). *Journal of Tax Reform. 2022;8(1):69–87*. <https://doi.org/10.15826/jtr.2022.8.1.109>

**Article info**

Received *December 24, 2021*; Revised *February 26, 2022*; Accepted *April 7, 2022*

**Информация об авторах**

*Йепес-Лопес Густаво А.* – PhD, профессор, директор Школы менеджмента и социальной ответственности, Школа менеджмента, Университет Экстернадо-де-Колумбия (Caller 12 No 1 – 17 Este Barrio La Candelaria, Богота, Колумбия), ORCID: <https://orcid.org/0000-0003-3216-3827>; e-mail: [gustavo.yepes@uexternado.edu.co](mailto:gustavo.yepes@uexternado.edu.co)

*Гергерлиоглу Уфук* – PhD, доцент, заведующий кафедрой финансового права, департамент государственных финансов факультета экономики и управления, Университет Хитит (Akkent Mahallesi 3. Cadde, Akkent Caddesi, 19040, Çorum, Турция), ORCID: <https://orcid.org/0000-0002-9950-9311>; e-mail: [ufukgergerlioglu@hitit.edu.tr](mailto:ufukgergerlioglu@hitit.edu.tr)

**Для цитирования**

Yepes-López G.A., Gergerlioğlu U. Tax Education and the Attitude of University Students Towards Tax Consciousness: The Case of University of Externado (Colombia). *Journal of Tax Reform. 2022;8(1):69–87*. <https://doi.org/10.15826/jtr.2022.8.1.109>

**Информация о статье**

Дата поступления 24 декабря 2021 г.; дата поступления после рецензирования 26 февраля 2022 г.; дата принятия к печати 7 апреля 2022 г.