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The Impact of Capital Tax on Borsa İstanbul: Event Study Analysis

Mehmet Sinan ÇELİK¹

Abstract

Rumors about changes in tax policies have the potential to significantly and suddenly affect financial markets. This study aims to analyze the impact of tax rumors on Borsa İstanbul (BIST) and how this impact can be evaluated in the context of the Efficient Markets Hypothesis (EMH). The study selects certain tax rumors as event days, and their impact on BIST is analyzed. The dates in question are June 4, 2024, which is the beginning of the rumors that the earnings from the transactions on BIST will be taxed, and June 13, 2024, when the postponement was announced. In addition to these days, November 30, 2023 is included in the analysis as a different tax rumor for control purposes. The event window is defined as a period covering the day of the event and (-5,+5) days before and after the event. As a result of the analysis, it is found that the tax rumors on June 4, 2024 have a significant effect on BIST. However, the announcement of the postponement of the tax on June 13, 2024 does not have a significant effect on BIST. On November 30, 2023, the tax rumor also significantly affected the stock market. Both tax rumors affected the stock market, indicating that BIST is inefficient in the semi-strong form. This shows that negative news affects the markets more rapidly. On the other hand, the rumor that the tax was postponed did not have a significant positive effect. As a result, it is concluded that negative news affects the markets more than positive news. These findings reveal the critical role of expectations and rumors about tax policies on market dynamics. Taxation of capital should be considered from economic policy and social justice perspectives. Tax policies can influence the flow of capital, stimulate or hinder economic growth, and impact income distribution. The taxation of capital should be considered from both an economic policy and social justice perspective. Therefore, decisions on capital taxation require careful analysis and a broad economic perspective.

Keywords: Event Analysis, Efficient Markets Hypothesis (EMH), Borsa İstanbul

Jel Code: E62, G12, G14

Sermaye Vergisinin Borsa İstanbul Üzerindeki Etkisi: Olay Çalışması Analizi

Öz

Vergi politikalarındaki değişikliklere ilişkin söylentiler, finansal piyasalar üzerinde ani ve önemli etkiler yaratma potansiyeline sahiptir. Bu çalışma, vergi söylentilerinin Borsa İstanbul (BİST) üzerindeki etkisini ve bu etkinin Etkin Piyasalar Hipotezi (EPH) bağlamında nasıl değerlendirilebileceğini analiz etmeyi amaçlamaktadır. Çalışmada belirli vergi söylentileri olay günü olarak seçilmiş ve BİST üzerindeki etkileri analiz edilmiştir. Söz konusu tarihler, BİST'te gerçekleşen işlemlerden elde edilen kazançların vergilendirileceği söylentilerinin başlangıcı olan 4 Haziran 2024 ve ertelemenin açıklandığı 13 Haziran 2024'tür. Bu günlere ek olarak 30 Kasım 2023 tarihi de kontrol amaçlı farklı bir vergi söylentisi olarak analize dahil edilmiştir. Olay penceresi, olayın gerçekleştiği gün ile olaydan önceki ve sonraki (-5,+5) günleri kapsayan bir dönem olarak tanımlanmıştır. Analiz sonucunda 4 Haziran 2024 tarihindeki vergi söylentilerinin BİST üzerinde anlamlı bir etkiye sahip olduğu tespit edilmiştir. Ancak 13 Haziran 2024 tarihinde verginin ertelendiği açıklanmasının BİST üzerinde anlamlı bir etkisi bulunmamaktadır. 30 Kasım 2023 tarihinde vergi söylentisi de borsayı önemli ölçüde etkilemiştir. Her iki vergi söylentisinin de borsayı etkilemesi, BİST'in yarı güçlü formda etkin olmadığını göstermektedir. Bu durum olumsuz haberlerin piyasaları daha hızlı etkilediğini göstermektedir. Öte yandan, verginin ertelendiği söylentisinin pozitif anlamlı bir etkisi olmamıştır. Sonuç olarak, olumsuz haberlerin piyasaları olumlu haberlerden daha fazla etkilediği sonucuna varılmaktadır. Bu bulgular, vergi politikalarına ilişkin beklenti ve söylentilerin piyasa dinamikleri üzerindeki kritik rolünü ortaya koymaktadır. Sermayenin vergilendirilmesi, hem ekonomi politikası hem de sosyal adalet açısından dikkate alınmalıdır. Vergi politikaları, sermaye akışlarını yönlendirebilir, ekonomik büyümeyi teşvik edebilir veya engelleyebilir ve gelir dağılımını etkileyebilir. Bu nedenle, sermaye vergilendirmesi konusunda alınacak kararlar, dikkatli analizler ve geniş bir ekonomik perspektif gerektirir.

Anahtar Kelimeler: Olay Analizi, Etkin Piyasalar Hipotezi (EPH), Borsa İstanbul

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1. Introduction

The taxation of capital is one of the most critical and controversial issues in modern economic and fiscal policy. Capital is considered one of the essential components of economic growth and welfare, and the taxation of capital is examined in a broad theoretical framework to determine how it affects this growth (Griffith et al., 2010; Piketty & Saez, 2013). Capital can take various forms: physical (plant, machinery, equipment), financial (stocks, bonds), and intellectual (patents, trademarks). Taxation refers to governments taking a share of economic activity to generate revenue. Taxation of capital includes taxes on capital gains, dividends, interest income, and capital property. The Optimal Theory of Taxation aims to design the tax system without distorting economic efficiency and observing the principles of fairness (Piketty & Saez, 2013). According to this theory, capital taxation should be designed to minimize the distortion of economic activity. Too high tax rates may discourage capital accumulation and slow down economic growth. Therefore, optimal capital taxation maximizes tax revenues and preserves economic efficiency by balancing incentives (Ay & Mangır, 2007; Önder, 2021).

Globalization and the free movement of capital have increased tax competition among countries. Countries tend to lower tax rates to attract capital. This may erode the tax base and reduce the government's tax revenues. The fact that countries often resort to tax amnesty does not contribute to increasing tax revenues (Güler, 2020). International tax competition increases the complexity of capital taxation and can significantly impact the global economy. Behavioral finance argues that investors' decisions are not rational and are influenced by psychological factors. Capital taxation can influence investor behavior. For example, a high capital gains tax may discourage investors from selling stocks and reduce market liquidity. These adverse effects may reduce the efficiency of capital markets and negatively affect economic growth (Akdoğan Gedik, 2011). Studies show that tax reductions in capital markets positively affect capital markets (Blandon et al., 2011). However, many studies also show that new taxation or tax increases have a much faster negative impact on capital markets (Downs & Hendershott, 1987; Imboden, 2018). Studies also show that tax regulations do not affect capital markets (Amoako-Adu et al., 1992). Tobin (1984) and Stiglitz (1989) argued that a securities transaction tax would generate revenue for the government and reduce excessive volatility by discouraging speculative transactions. Thus, it was argued that the efficiency of stock markets would increase.

Financial markets are susceptible to economic, political, and social developments. Among these developments, changes in tax policies or rumors about such changes have an important place. Changes in tax policies or rumors of such changes have the potential to have sudden and significant

effects on capital markets. The academic literature has extensively studied the impact of tax regulations and rumors on capital markets. Tax news and rumors can change investors' expectations and investment decisions, which can cause to fluctuate market prices rapidly and significantly. In this context, market efficiency measures how quickly and accurately the market reflects available information into prices. The Efficient Markets Hypothesis (EMH) suggests that the information available in markets is speedily and accurately reflected in prices, and therefore, investors cannot realize extraordinary returns with this information. Our study aims to test the validity of the Efficient Markets Hypothesis by examining the effects of tax rumors on Borsa Istanbul. This hypothesis is categorized into three forms: weak, semi-strong, and strong, each varying in the extent to which they assume information is incorporated into stock prices (Fama, 1970). For this purpose, we will analyze how tax rumors and related news are reflected in stock prices in Borsa Istanbul and evaluate the degree of efficiency of the markets.

There are many methods to measure the efficiency of markets in different forms. One of the methods frequently used in the literature to determine the efficiency in the semi-strong form is event analysis (Eren et al., 2021). In this study, we measure whether the BIST is efficient in the semi-strong form with event analysis within the scope of tax rumors. The researcher Dolley (1933) first applied the Event Analysis method. After Dolley laid the foundation of Event Analysis methodologically and practically, this method has developed and gained new dimensions to control certain events' impact. These developments include parametric (Brown & Wagner, 1985) and nonparametric (Cowen & Sergeant, 1996; Corrado, 1989) methods. However, Ball and Brown (1968) laid the foundation for today's event analysis.

This study examines the effects of tax rumors on BIST, a vital capital market for Turkey, within the scope of EPH. For this purpose, two negative and one positive news rumors related to tax rumors are identified, and their effects on BIST are analyzed using event analysis. Our research contributes to two strands of literature. First, by examining the timing of market reactions, our study shows that negative news affects the markets faster. This provides essential insights into investors' risk perceptions and information processing and adds a new perspective to the literature in this area. Second, our study tests whether Borsa Istanbul has a semi-strong form of market efficiency. In this context, it contributes to the literature on how the market reacts to public information and how prices reflect it.

The study has five chapters. The first chapter defines the purpose, importance, and scope of the study. The second summarizes the related literature. The third presents the research data and methods used.

The fourth presents the research findings, and the last section summarizes and evaluates the results within the framework of the findings and analysis of the research.

2. Literature Review

The first studies on the impact of tax decisions on capital markets were conducted on the American and Canadian stock markets. Booth and Johnston (1984) detail the effects of changes in the taxation of dividends and capital gains on stock prices. The research analyzes the impact of tax changes on stock prices in Canada. As a result, changes in the taxation of dividends and capital gains cause significant fluctuations in stock prices. Vanthienen and Vermaelen (1987) investigated the effects of changes in capital gains taxation on stock prices. The study analyzes the long-term effects of tax policies on stock returns. They conclude that tax changes affect long-term rates of return in stock markets. Downs and Hendershott (1987), using the cash flow valuation model, conclude that the 1986 Tax Reform Act should have increased stock prices by 10% to 13%, while Cutler (1989), using the event study method, finds that the market's reaction to news of changes in tax legislation is limited and that abnormal returns on the same days are uncorrelated with each other. Amoako-Adu, Rashid, and Stebbins (1992) Analyzed the effects of capital gains tax on stock values. The impact of capital gains tax changes on stock prices in Canada was analyzed. As a result, they found that tax changes lead to significant changes in stock values. Edwards et al. (2004) investigated the effects of Germany's abolition of capital gains tax on stock markets.

The effects of tax changes on stock prices are analyzed using the case study method. Tax exemptions are found to cause positive responses in stock markets. Akindayomi and Warsame (2007) examined the effects of capital gains tax changes on stock prices in Canada. The study analyzes the impact of tax policies on market dynamics. As a result, tax changes cause significant fluctuations in stock prices. Amromin, Harrison, and Sharpe (2008) analyze the short-term effects of tax cuts on the market using the event study method of the US dividend tax cut in 2003. As a result, dividend tax cuts were found to cause positive reactions in stock prices. Desai and Dharmapala (2009) examine the market reactions to tax-related corporate announcements and emphasize the importance of tax regulations on stock prices, noting that investors value managerial tax-related actions. Hanlon and Slemrod (2009) examine market reactions to corporate tax-related news and analyze the short-term effects of tax changes on stock prices using the event study method. They conclude that tax-related news leads to significant changes in stock prices. Hanlon et al. (2010) argue that firms will react negatively if they expect tax costs to increase and positively if they expect tax costs to decrease. Many studies focus on the market reaction to firm-level tax announcements.

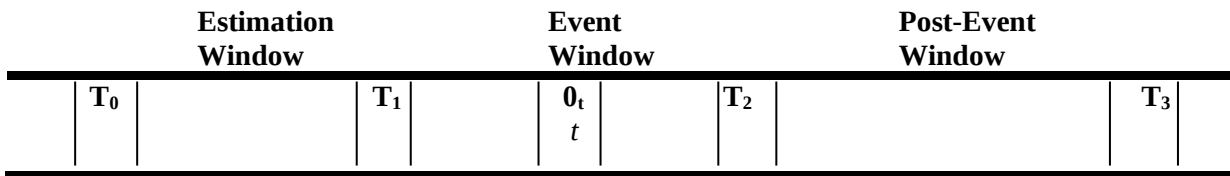
In Türkiye, Yalçın (2010) examines the effects of taxation of financial instruments on the price and volume movements of stocks in the BIST-30 index and finds that tax rate changes on securities generate minimal abnormal returns and cause unusual volume behavior before and after the tax adjustment. Kandır and Yakar (2012) investigate the impact of the corporate tax rate change announcement dated November 29, 2005, on stocks by examining the abnormal returns of the five companies that paid the highest corporate tax in 2004 during the event period and show that the tax cut announcement caused an abnormal effect on company stocks as of the event day and that the market has a semi-strong form of market efficiency. Kütük (2014) analyzed the impact of the corporate tax change announcement 2005 on asset prices and found no significant changes during the event period, suggesting that Borsa Istanbul is a semi-strong efficient market that prices publicly disclosed information. Arslaner and Arslaner (2015) analyzed the effects of changes in capital gains taxation on Borsa Istanbul using the Robust Regression Method. In this study conducted within the scope of the Draft Income Tax Law, it is found that changes in tax rates in equity, debt instruments, exchange-traded funds, and futures and options markets affect trading volume, stock market revenues, and foreign net inflows in different ways. The results generally show that tax increases hurt capital markets while tax decreases have a positive impact. Using the event study method, Güre and Kütük (2016) analyzed the short-term effects of the corporate tax rate change announcement on stocks on November 29, 2005. They concluded that the tax cut announcement did not cause abnormal stock returns. Finally, Demirci and Beskisiz (2023) analyzed the effects of the tax deduction reduction in dividend distributions. They found that it did not cause a significant change in the stock prices of firms in the BIST-100 index, but it caused significant changes in the stock prices of firms in the Participation 30 index. In general, these studies examine the effects of tax policies on capital markets from various aspects and show that increases in tax rates generally have adverse effects on capital markets, while decreases have positive effects. They conclude that Borsa Istanbul is a semi-strong, efficient market for pricing publicly disclosed information and that tax changes can have significant impacts on stock prices and trading volume; moreover, specific events such as tax cut announcements can be reacted to quickly and significantly by the market. This study contributes to the literature by demonstrating tax policy expectations and rumors' vital role in market dynamics.

3. Data and Methodology

Event analysis is a method used to measure how the market reacts to an event. The reason for using event analysis is that the price performance of stocks is suitable for long or short-term analysis. The analysis period is January 2, 2024-July 12, 2024. As event dates, June 4, 2024, the beginning of the rumors that BIST would be taxed, and June 13, 2024, when the announcement that BIST would not be taxed, were determined (Bloomberg, 2024: Trthaber, 2024). Besides the aforementioned linked news, November 30, 2023, is a retrospective rumor for control purposes. The date range for November 30, 2023, is March 1, 2023-December 31, 2023. As the event window, a period covering the event day and (-5,+5) days before and after the event is chosen. Abnormal returns are calculated as deviations from normal returns for each day during the event window, and the significance of these deviations is evaluated using a t-test. The reason for choosing -5, +5 for the event window is that the events occur one after the other and show their effects very quickly. MSCI Emerging Markets Index (MSCIEF) is used as the market index. Borsa Istanbul and MSCI Emerging Markets Index (MSCIEF) data are compiled from www.investing.com.

The timeline used in Event Study studies is shown in Figure 1.

Figure 1. Timeline for Event Study



Source: MacKinley, A.C. (1997). Event Studies in Economics and Finance. *Journal of Economic Literature*, 35, 13-39.

The Event Study timeline is divided into three periods. These are:

1. Estimation Window (T_0 - T_1): This is a period during which the event's effect is not seen. The estimated parameters and normal return estimation for each stock for the event window are calculated using the data from this period.

2. Event Window (T_1 - T_2): Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) are calculated by subtracting the normal returns from the actual returns during this window.

3. Post-Event Window (T_2 - T_3): This window can be controlled at any desired time.

There is no certainty about the duration of each window in the Event Study method. The researcher will determine the duration of the windows specified in Figure 1 depending on the determined event (Mazgirt, 2013). The study's change rates of the BIST-100 index and the MSCI Emerging Markets

Index (MSCIEF) were calculated using the logarithmic return calculation method. The following formula was used to calculate these change rates (Brown & Warner, 1980-1985);

$$R_{it} = \ln (P_{it} / P_{it-1}) \quad (1)$$

R_{it} = logarithmic return of BIST-100 in period t

P_{it} = price of BIST-100 in period t

P_{it-1} = t price of BIST-100 in period t-1.

Abnormal return and expected return rates were calculated using the market model. The expected return $E(R_{it})$ rate for BIST-100 was calculated with the help of the parameters α and β in the formula.

$$R_{it} = \alpha + \beta R_{mt} + \varepsilon_{it} \quad (2)$$

R_{it} = logarithmic return of BIST-100 in period t

R_{mt} = logarithmic return of MSCI Emerging Markets Index (MSCIEF) in period t

The difference between the expected return $E(R_{it})$ and the observed return gives the abnormal return.

$$R_{it} = (\hat{\alpha} + \hat{\beta} R_{mt})$$

Abnormal returns are obtained by subtracting the actual returns from the expected returns.

$$AR_{it} = R_{it} - \hat{R}_{it} \quad (3)$$

AR_{it} = abnormal returns of BIST-100 in period t

$\hat{R}_{it}$ = returns predicted for period t from the regression equation

After calculating the abnormal returns, the Average Abnormal Return (AAR) was calculated as an index for all company stocks.

$$AAR_t = \sum_{i=1}^N (1/N) AR_{it} \quad (4)$$

AAR_t = average abnormal return on day t.

Cumulative Abnormal Return (CAR) was calculated for each day in the event window.

$$CAR_t = \sum_{i=1}^N AAR_t \quad (5)$$

CAR_t = t cumulative abnormal return in period t.

Hypotheses about effectiveness in the semi-strong form;

H0: *If abnormal returns are not statistically significant, the market is considered to be semi-strongly efficient, i.e., public information is quickly and accurately reflected in prices.*

H1: *If the abnormal returns are statistically significant, the market could be more efficient, i.e., publicly available information is not fully reflected in prices, and investors can earn extraordinary returns with this information.*

4. Empirical Results

In this section, event analysis is applied after determining the event dates for our analysis, and the findings are presented.

On June 4, 2024, we analyzed the impact of rumors of a tax on the stock market by looking at five days before and five days after. The CAR values of the analysis are presented in Table 1.

Table 1: Return, Abnormal Return, and CAR values (June 4)			
Event Window	Return	Abnormal Return	CAR
-5	-0.0036	-0.0056	-0.0190
-4	0.0001	-0.0031	-0.0031
-3	-0.0060	-0.0093	-0.0124
-2	0.0118	0.0085	-0.0039
-1	-0.0114	-0.0147	-0.0186
0	0.0118	0.0098	-1.7347
1	-0.0046	-0.0079	-0.0335
2	-0.0142	-0.0175	-0.0511
3	-0.0036	-0.0069	-0.0256
4	-0.0114	-0.0134	-0.0134
5	-0.0046	-0.0066	-0.0257

Table 1 presents the market return, abnormal return, and cumulative abnormal return (CAR) over an event window centered around a significant event occurring on day 0. The event window ranges from day -5 to day +5, where day 0 represents the event date. Overall, the data indicates that the market reacted negatively leading up to and following the event date, as reflected in the consistent negative abnormal returns and declining CAR values. In the literature on which test to use, the results of the Kolmogrov-Smirnov test are considered if $N \geq 50$, and the results of the Shapiro-Wilk test are considered if $N \leq 50$.

Table 2: Dependent Sample t-Test Results for CAR Values (-5/+5) (June 4)		
	t-statistic	p-value
BIST-100	-7.590259	0.000

Based on the dependent sample t-test results, the p-value is checked to see if there is a statistically significant difference between the pre-and post-event cumulative abnormal return (CAR) values. Furthermore, the means of the groups are analyzed to observe the event's impact on CAR values. The table shows the results of the dependent sample t-test. The p-value is 0.000, which is less than 0.01. This result shows a statistically significant difference between CAR values before and after the event. Therefore, it is determined that the rumor of a tax on earnings to be introduced to Borsa Istanbul significantly affects CAR values.

The CAR consistently increases throughout the event window, reflecting the accumulation of positive abnormal returns. The market exhibits sustained positive sentiment, with the CAR reaching its highest point by the end of the observation period. Overall, the data suggests a strong and positive market reaction to the June 13, 2024, event, with the positive sentiment continuing in the subsequent period.

Table 3: Return, Abnormal Return, and CAR values (June 13)			
Even Window	Return	Abnormal Return	CAR
-5	0.0001	-0.0031	-0.0031
-4	-0.0060	-0.0093	-0.0124
-3	0.0118	0.0085	-0.0039
-2	-0.0114	-0.0147	-0.0186
-1	-0.0036	-0.0069	-0.02561
0	-0.0142	-0.0098	0.0100
1	-0.0112	-0.0175	-0.0511
2	-0.0046	-0.0079	-0.0335
3	0.0089	0.0133	0.0106
4	0.0232	0.0276	0.0383
5	0.0085	0.0129	0.0513

These results show that the average abnormal return in the event window is not statistically significantly different from zero (as the p-value is more significant than 0.05). In other words, the official announcement on June 13th that the tax will be postponed has no significant impact on the BIST-100 index. The event window ranges from day -5 to day +5, where day 0 represents the event date.

Table 4: Dependent Sample t-Test Results for CAR Values (-5/+5) (June 13)		
	t-statistic	p-value
BIST-100	1.220674	0.268

Since the p-value of 0.268 is above the generally accepted 5% significance level (0.05), these results suggest that abnormal returns are not significantly different from zero. This means the event has no statistically significant impact on the BIST 100 index.

Table 5: Dependent Sample t-Test Results for CAR Values (-5/+5) (November 30)		
	t-statistic	p-value
BIST-100	-3.001	0.0133

Since the p-value of 0.0133 is below the generally accepted 5% significance level (0.05), these results indicate that abnormal returns significantly differ from zero. This suggests that the event had a statistically significant impact on the BIST 100 index.

Conclusion and Policy Implications

This study aims to analyze the impact of tax rumors on Borsa Istanbul and how this impact can be evaluated in the context of the Efficient Markets Hypothesis (EMH). The study analyzes stock market performance and returns during specific periods of tax rumors using the event study method. Abnormal returns and cumulative abnormal returns are calculated, and these data are used to understand how the market reacts to tax rumors.

After the June 4, 2024, event date, a significant decline in the market index was observed. This may indicate that the event created a negative perception or increased uncertainty in the market. Abnormal returns calculated before and after the event date were also negative, which may indicate that investors perceived the event negatively and increased selling pressure. This was also found to be significant in the event analysis results. Likewise, the rumor of a tax increase on BIST on November 30, 2023, had a negative impact on the stock market and was statistically significant. Many studies reveal that tax increases hurt markets (Ayers et al., 2002; Arslaner & Arslaner, 2015). June 13, 2024, abnormal returns calculated before and after the event date were positive. This may indicate that investors perceived the event positively and that buy trades increased. However, it was found to have no significant effect. The results show that investors react faster and more significantly to negative news. Negative news triggers investors' fear of losses, leading to rapid, large-scale selling and significant market declines. According to EMH, markets can be weakly, semi-strongly, and powerfully efficient. Weakly efficient markets reflect past price information; semi-strongly efficient markets reflect all publicly available information; and enormously efficient markets immediately reflect public and private price information. However, due to market participants' psychological and behavioral reactions, asymmetry may be observed in the reactions to negative and positive news. Prospect Theory defines loss aversion as investors' hypersensitivity to losses. Investors exert more effort to avoid losses than to realize gains. According to the EMH, markets immediately reflect information in prices. However, negative news often increases the perception of uncertainty and risk, reinforcing investors' risk aversion behavior (Korkmaz et al., 2017).

Policymakers can make more informed decisions by understanding the market impact of tax changes or rumors of such changes. By understanding how markets react to tax rumors, policymakers can optimize the timing of such announcements and communication strategies. This can minimize market volatility and enhance economic stability. By understanding the impact of tax rumors and policy changes on equity returns, investors can realign their portfolios accordingly. This can help reduce potential risks and maximize returns. Moreover, by anticipating the financial risks that tax rumors

and changes may bring, businesses can develop appropriate strategies to manage these risks. These findings help to better understand market dynamics and investor behavior in general. In this way, more informed and strategic decisions can be made in financial markets.

Compliance with Ethical Standards

Acknowledgments

Not applicable.

Conflict of interest

The authors declare that they have no conflict of interest.

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Various sources were used to collect data for the analyses. Each source of data and materials has been available and pointed through the paper.

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Genişletilmiş Özet

Finansal piyasalar, ekonomik, politik ve sosyal gelişmelere karşı son derece hassastır. Bu gelişmeler arasında vergi politikalarındaki değişiklikler veya bu tür değişikliklere dair söylentiler önemli bir yer tutmaktadır. Özellikle sermaye kazançlarının vergilendirilmesi, modern ekonomik ve mali politikaların en kritik ve tartışmalı konularından biridir. Sermaye, ekonomik büyüme ve refahın temel bileşenlerinden biri olarak kabul edilir ve sermayenin vergilendirilmesi, bu büyümeyi nasıl etkilediğini belirlemek amacıyla geniş bir teorik çerçevede incelenir (Griffith ve diğerleri, 2010; Piketty & Saez, 2013).

Bu çalışmanın amacı, sermaye vergisi söylentilerinin Borsa İstanbul (BIST) üzerindeki etkilerini analiz etmektir. Çalışma, belirli vergi söylentilerini olay günü olarak seçmiş ve bu söylentilerin BIST üzerindeki etkilerini incelemiştir. Çalışma kapsamında ele alınan tarihlerin başında, 4 Haziran 2024'te BIST'te gerçekleşen işlemlerden elde edilen kazançların vergilendirileceği söylentilerinin başlangıcı ve 13 Haziran 2024'te bu verginin ertelendiği açıklaması gelmektedir. Bu günlere ek olarak, 30 Kasım 2023 tarihi de kontrol amaçlı farklı bir vergi söylentisi olarak analize dahil edilmiştir. Olay penceresi, olayın gerçekleştiği gün ile olaydan önceki ve sonraki (-5+5) günleri kapsayan bir dönem olarak tanımlanmıştır. Sermayenin vergilendirilmesi, ekonomik etkinliği bozmadan ve adalet ilkelerini göz önünde bulundurarak tasarlanmalıdır (Piketty & Saez, 2013). Bu teoriye göre, sermaye vergilendirmesi ekonomik faaliyetlerin bozulmasını en aza indireyecek şekilde tasarlanmalıdır. Çok yüksek vergi oranları, sermaye birikimini caydırabilir ve ekonomik büyümeyi yavaşlatabilir. Bu nedenle, optimal sermaye vergilendirmesi, teşvikleri dengeleyerek vergi gelirlerini maksimize eder ve ekonomik etkinliği korur (Ay & Mangır, 2007; Önder, 2021). Vergi değişikliklerinin sermaye piyasaları üzerindeki etkileri, akademik literatürde geniş bir şekilde incelenmiştir. Vergi haberleri ve söylentileri, yatırımcıların beklentilerini ve yatırım kararlarını değiştirebilir, bu da piyasa fiyatlarının hızlı ve önemli ölçüde dalgalanmasına neden olabilir. Bu bağlamda, piyasa etkinliği, piyasanın mevcut bilgiyi fiyatlara ne kadar hızlı ve doğru bir şekilde yansıttığını ölçer. Etkin Piyasalar Hipotezi (EPH), piyasada mevcut bilginin fiyatlara hızla ve doğru bir şekilde yansıtıldığını ve dolayısıyla yatırımcıların bu bilgi ile olağanüstü getiri elde edemeyeceklerini öne sürer. Çalışmamız, vergi söylentilerinin Borsa İstanbul üzerindeki etkilerini inceleyerek Etkin Piyasalar Hipotezi'nin geçerliliğini test etmeyi amaçlamaktadır. Bu hipotez, bilginin hisse senedi fiyatlarına ne ölçüde dahil olduğunu değişen üç formda (zayıf, yarı güçlü ve güçlü) sınıflandırılır (Fama, 1970). Bu amaçla, vergi söylentileri ve ilgili haberlerin Borsa İstanbul'da hisse senedi fiyatlarına nasıl yansıdığını analiz edecek ve piyasaların etkinliği değerlendirilecektir.

Vergi kararlarının sermaye piyasaları üzerindeki etkisine ilişkin ilk çalışmalar, Amerikan ve Kanada borsalarında gerçekleştirilmiştir. Booth ve Johnston (1984), temettü ve sermaye kazançlarının vergilendirilmesindeki değişikliklerin hisse senedi fiyatları üzerindeki etkilerini detaylandırmıştır. Araştırma, Kanada'daki vergi değişikliklerinin hisse senedi fiyatları üzerindeki etkilerini analiz etmektedir. Sonuç olarak, temettü ve sermaye kazançlarının vergilendirilmesindeki değişiklikler,

hisse senedi fiyatlarında önemli dalgalanmalara neden olmaktadır. Vanthienen ve Vermaelen (1987), sermaye kazançlarının vergilendirilmesindeki değişikliklerin hisse senedi fiyatları üzerindeki etkilerini araştırmıştır. Araştırma, vergi politikalarının hisse senedi getirileri üzerindeki uzun vadeli etkilerini analiz etmektedir. Sonuç olarak, vergi değişikliklerinin hisse senedi piyasalarında uzun vadeli getiri oranlarını etkilediği sonucuna varmışlardır. Downs ve Hendershott (1987), nakit akışı değerlendirme modelini kullanarak 1986 Vergi Reformu Yasası'nın hisse senedi fiyatlarını %10 ila %13 oranında artırması gerektiği sonucuna varmışlardır. Türkiye'de ise Yalçın (2010), finansal araçların vergilendirilmesinin BIST-30 endeksindeki hisse fiyatları ve hacim hareketleri üzerindeki etkilerini incelemiş ve vergi oranlarındaki değişikliklerin anormal getirilere neden olduğunu bulmuştur. Kandır ve Yakar (2012), 29 Kasım 2005 tarihli kurumlar vergisi oranındaki değişiklik duyurusunun hisse senetleri üzerindeki etkisini incelemiş ve vergi indirimi duyurusunun şirket hisseleri üzerinde anormal bir etki yarattığını göstermiştir.

Çalışmada olay analizi yöntemi kullanılarak sermaye vergisi söylentilerinin Borsa İstanbul üzerindeki etkileri incelenmiştir. Olay analizi, bir olayın piyasa üzerindeki etkisini ölçmek için kullanılan bir yöntemdir. Çalışmada olay analizi yöntemi kullanılarak sermaye vergisi söylentilerinin Borsa İstanbul üzerindeki etkileri incelenmiştir. Olay analizi, bir olayın piyasa üzerindeki etkisini ölçmek için kullanılan bir yöntemdir. Bu analiz, hisse senedi fiyatlarının uzun veya kısa vadeli analizine uygun olması nedeniyle tercih edilmiştir. Olay analizi yönteminin uygulanmasında kullanılan temel adımlar şunlardır:

Tahmin Penceresi (T0-T1): Olayın etkisinin görülmediği bir dönemdir. Her hisse için olay penceresinde kullanılacak tahmin parametreleri ve normal getiri tahmini bu dönemden elde edilen verilerle hesaplanır.

Olay Penceresi (T1-T2): Bu pencerede, anormal getiriler (AR) ve kümülatif anormal getiriler (CAR), gerçek getirilerden normal getirilerin çıkarılması yoluyla hesaplanır.

Olay Sonrası Pencere (T2-T3): İstenilen herhangi bir zamanda kontrol edilebilen bir penceredir.

Bu analiz, hisse senedi fiyatlarının uzun veya kısa vadeli analizine uygun olması nedeniyle tercih edilmiştir. Analiz dönemi 2 Ocak 2024 - 12 Temmuz 2024'tür. Olay tarihleri olarak 4 Haziran 2024, BIST'te vergilendirme söylentilerinin başladığı tarih ve 13 Haziran 2024, verginin ertelendiğinin açıklandığı tarih belirlenmiştir. Ayrıca, 30 Kasım 2023, kontrol amaçlı retrospektif bir söylenti olarak analiz edilmiştir. Olay penceresi olarak, olay günü ve olaydan önceki ve sonraki (-5+5) günleri kapsayan bir dönem seçilmiştir. Anormal getiriler, olay penceresindeki her gün için normal getirilerden sapmalar olarak hesaplanmış ve bu sapmaların anlamlılığı t-testi kullanılarak değerlendirilmiştir. Olay penceresi için -5 +5 günlerinin seçilmesinin nedeni, olayların birbiri ardına gelmesi ve etkilerini çok hızlı göstermeleridir. Piyasa endeksi olarak MSCI Gelişen Piyasalar Endeksi (MSCIEF) kullanılmıştır. Borsa İstanbul ve MSCI Gelişen Piyasalar Endeksi (MSCIEF) verileri www.investing.com'dan derlenmiştir. Anormal getiriler hesaplandıktan sonra, ortalama anormal getiri (AAR) ve kümülatif anormal getiri (CAR) değerleri hesaplanmıştır. Bu değerler, olayın piyasa üzerindeki etkilerini daha iyi anlamak için kullanılmıştır.

Çalışmada, yarı güçlü formda etkinliğe ilişkin aşağıdaki hipotezler test edilmiştir:

H0: Anormal getiriler istatistiksel olarak anlamlı değilse, piyasa yarı güçlü formda etkindir, yani kamusal bilgi hızla ve doğru bir şekilde fiyatlara yansıtılır.

H1: Anormal getiriler istatistiksel olarak anlamlı ise, piyasa etkin değildir, yani kamusal bilgi fiyatlara tam olarak yansıtılmaz ve yatırımcılar bu bilgi ile olağanüstü getiri elde edebilirler.

Çalışmanın bulguları, sermaye vergisi söylentilerinin Borsa İstanbul üzerinde önemli bir etkiye sahip olduğunu göstermektedir. 4 Haziran 2024 olay tarihinden sonra piyasa endeksinde önemli bir düşüş gözlemlenmiştir. Bu durum, olayın piyasada olumsuz bir algı yarattığını veya belirsizliği artırdığını

gösterebilir. Olay tarihinden önce ve sonra hesaplanan anormal getiriler de olumsuzdur, bu da yatırımcıların olayı olumsuz algıladıklarını ve satış baskısını artırdığını gösterebilir. Benzer şekilde, 30 Kasım 2023'te BIST üzerinde vergi artışı söylentisi hisse senedi piyasasında olumsuz bir etki yaratmış ve istatistiksel olarak anlamlı bulunmuştur. Birçok çalışma, vergi artışlarının piyasalar üzerinde olumsuz etkiler yarattığını ortaya koymaktadır (Ayers ve diğerleri, 2002; Arslaner & Arslaner, 2015). Öte yandan, 13 Haziran 2024'teki olay tarihinden önce ve sonra hesaplanan anormal getiriler pozitifdir. Bu durum, yatırımcıların olayı olumlu algıladıklarını ve alım işlemlerinin arttığını gösterebilir. Ancak, bu etkinin anlamlı olmadığı bulunmuştur.

Sonuçlar, yatırımcıların olumsuz haberlere daha hızlı ve daha anlamlı tepkiler verdiğini göstermektedir. Olumsuz haberler, yatırımcıların kayıplardan kaçınma korkusunu tetikleyerek hızlı, büyük ölçekli satışlara ve önemli piyasa düşüşlerine yol açmaktadır. Etkin Piyasalar Hipotezi'ne (EPH) göre piyasalar, bilgiyi anında fiyatlara yansıtır. Ancak, piyasa katılımcılarının psikolojik ve davranışsal tepkileri nedeniyle, olumsuz ve olumlu haberlere verilen tepkilerde asimetri gözlemlenebilir. Yatırımcıların kayıplara karşı aşırı hassasiyetini tanımlar. Yatırımcılar, kayıplardan kaçınmak için kazanç sağlamaktan daha fazla çaba gösterirler. Olumsuz haberler genellikle belirsizlik ve risk algısını artırarak, yatırımcıların riskten kaçınma davranışlarını pekiştirir (Korkmaz ve diğerleri, 2017). Bu durum, Etkin Piyasalar Hipotezi'nin (EPH) yarı güçlü formunun geçerli olduğunu, ancak piyasanın psikolojik ve davranışsal tepkiler nedeniyle asimetric tepkiler verdiğini göstermektedir. Politika yapıcılar, vergi değişikliklerinin veya bu tür değişikliklere ilişkin söylentilerin piyasa üzerindeki etkilerini anlayarak daha bilinçli kararlar alabilirler. Piyasanın vergi söylentilerine nasıl tepki verdiğini anlamak, politika yapıcıların bu tür duyuruların zamanlamasını ve iletişim stratejilerini optimize etmelerine olanak tanır. Bu, piyasa oynaklığını minimize edebilir ve ekonomik istikrarı artırabilir. Ayrıca, yatırımcılar, vergi söylentileri ve politika değişikliklerinin hisse senedi getirileri üzerindeki etkilerini anlayarak portföylerini buna göre yeniden düzenleyebilirler. Bu, potansiyel riskleri azaltmaya ve getirileri maksimize etmeye yardımcı olabilir.