

Evaluation of The Performance of Excise Tax on Demerit Goods in Turkey

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Abstract

The effectiveness of health taxes on vices harmful to health, especially alcoholic beverages and tobacco products, is an essential issue of debate. The study aims to analyze the effectiveness of excise taxes on vices, which have been practiced in Turkey since 2002. In the study, we conducted a performance analysis of these taxes with quantitative indicators in four main targets and sixteen sub-targets. As a result of the analysis, we concluded excise taxes in Turkey are partially successful for fiscality goals, efficiency cannot be achieved in economic, social, and public health outputs, and are unsuccessful in secondary targets.

Keywords: Excise Tax, Health Taxes, Tax Burden, Demerit Goods, Consumer Sovereignty

Jel Codes: H3, H23, I18

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Türkiye’de Erdemsiz Mallar Üzerindeki Özel Tüketim Vergilerinin Performans Değerlendirmesi

ÖZ

Başta alkollü içecekler ve tütün ürünleri olmak üzere, sağlığa zararı olan erdemsiz malların üzerinde özel tüketim vergilerinin etkinliği önemli bir tartışma konusudur. Çalışmanın amacı, Türkiye’de 2002 yılından itibaren uygulama alanı bulan erdemsiz mallar üzerindeki özel tüketim vergilerinin etkinliğini analiz etmektir. Çalışmada, bu vergilerin dört ana hedef ve on dört alt hedefteki kantitatif göstergelerle performans analizi gerçekleştirilmektedir. Analiz sonucunda, Türkiye’de sağlık vergileri bütçe fiskalite amacıyla kısmen başarılı olsa da ekonomik, sosyal ve halk sağlığı çıktılarında etkinliğin sağlanamadığı ve ikincil amaçlarda başarısız olduğu sonucuna varılmıştır.

***Anahtar Kelimeler:** Özel Tüketim Vergisi, Sağlık Vergileri, Vergi Yükü, Erdemsiz Mallar, Tüketici Egemenliği*

***Jel Kodları:** H3, H23, I18*

1. Introduction

The taxation of consumption has become one of the most important tax revenues of the government. It provides an important administrative and financial convenience for tax administrations that have difficulty in collecting taxes, especially with the collection of withholding tax in the price. In Turkey, consumption taxes have a share of 62% in total tax revenues, and Value Added Tax (VAT) and Excise Duties (ET) are the most important income resources (Central Government Budget Law, 2022). In Turkey; consumption taxes were first applied with VAT, which is the general transaction tax, and then ET was put into effect for the taxation of luxury consumption. Excise tax started to be implemented in Turkey with the “Excise Duties Law No. 4760”, which was first published in the Official Gazette of the Republic of Turkey on 12.06.2002 (TBMM, 2002; Official Gazette, 2002). Luxury consumption has been taxed in Turkey since this date, and goods and services in this class are included in the lists and tables of the relevant law. Such taxes are mainly collected for fiscal purposes, but they can also be collected for economic and social goals. In addition, excise taxes can be applied to protect and amend public health. For this purpose, ET is implemented to limit the consumption of demerit goods as alcoholic beverages, tobacco products, sugar-sweetened beverages (SSB) and foods, fast food products, foods and drinks containing saturated and trans fats. In this context, tobacco and tobacco products, alcoholic beverages and

coke in Turkey in 2002; sugar-sweetened beverages (SSB Tax) were subject to ET in 2017.

One of the main reasons why demerit goods are included in the luxury class by the public authority is the goal of limiting their consumption for public health. It aims to prevent chronic diseases like cardiovascular diseases, type-2 diabetes, stroke and cancer, associated with the consumption of these products. The extent to which the excise duties is effective in limiting consumption and preventing these diseases is an important debate. These taxes, which have been an important income sources in the budget since the date of their implementation, have a large fiscal burden on the consumer over the years.

2. Excise Tax Burden on Demerit Goods in Turkey

2.1. Excise Tax Share in Total Tax Revenues

As the development of the excise tax on tobacco and tobacco products and alcoholic beverages is evaluated, tax revenue has been increasing permanently between 2006 and 2022. According to Table 1, the ET revenue on alcoholic beverages and tobacco products, which was 10 billion 816 million TL in 2006, increased approximately 7 times and reached 83 billion 503 million TL in 2021. According to the 2022 Central Government Budget Law revenue estimation, this revenue is expected to be 96 billion 913 million TL in the 2022 general government budget. The share of total ET revenue in total tax revenues varies between 6% and 10%. While the highest rate is 9.8% in 2020, the lowest rate is estimated to occur in 2022 with 6.7%. It is observed that the share in total tax revenues changes irregularly every year and has decreased since 2020. This shows that the excise duty revenues from demerit goods can be tolerated within the central government budget. As a result, it is possible to alleviate the tax policy on tobacco products and alcoholic beverages and to reduce the tax burden.

Table 1: Excise Tax Revenues for Tobacco Products and Alcoholic Beverages in Turkey, 2006-2022, Total, Million TL

Year	Tobacco and Tobacco Products	Alcoholic beverages	Total Excise Tax Revenues	Total Tax Revenues	Total Exice Tax / Total Tax Revenues (%)
2006	8918	1898	10816	137480	7.8
2007	11049	2256	13305	152835	8.7
2008	11032	2005	13037	168108	7.7
2009	11950	2394	14344	172440	8.3
2010	16417	2166	18583	210560	8.8
2011	14694	3760	18454	253809	7.2
2012	19218	4501	23719	278780	8.5
2013	21345	5982	27327	326169	8.3
2014	21971	5882	27853	352514	7.9
2015	23500	5939	29439	407818	7.2
2016	29999	8232	38231	459001	8.3
2017	36597	8693	45290	536617	8.4
2018	37786	10550	48336	621536	7.7
2019	45655	15309	60964	673859	9
2020	64819	17174	81993	833250	9.8
2021	65527	17976	83503	1164988	7.1
2022 ^{3*}	70629	26284	96913	1430041	6.7

Source: The table created by using the data obtained from the “B” Charts Republic of Turkey, Central Government Budget Law (2006-2022)

2.2. Excise Tax Burden on Consumers

The ET amounts for alcoholic beverages and tobacco products per person aged 15 and over have been increasing regularly since 2006 in Turkey. According to Table 2, the amount of ET on tobacco products, which was 180 TL per person in 2006, increased by 4.6 times and reached 1008 TL in 2021. On the other hand, the tax amount on alcoholic beverages, which was 38 TL in 2006, increased approximately 10 times and reached 404 TL in 2022. This shows that the ET burden on alcoholic beverages is twice as high. The sharp increase periods are seen as 2020 and 2021. The most important reasons for the increase in these years can be seen as the increase in the consumption of these products during the Covid-19 period and the inflationary period that occurred. The total ET burden has increased 6 times in 16 years. It is observed that the tax burden for consumers tends to increase in general, except for the decreases in certain years. Although it is an considerable revenue item for the public budget, it creates a significant burden especially for low-income and

³ It is derived from the revenue estimate of the 2022 Central Government Budget Law.

middle-income consumers. In addition, although many scientific studies have shown that it is harmful, it is discussed because it is an implementation that interferes with consumption decisions. Although the amount of excise duty per capita is an significant indicator, it is important to evaluate it with the increase in GDP in the same period.

Table 2: Excise Tax Amount on Tobacco Products and Alcoholic Beverages Per Capita in Turkey, 2006-2021, Turkish Lira

Year	Tobacco and Tobacco Products ET Per Capita (TL)	Alcoholic beverages ET Per Capita (TL)	Total ET Per Capita (TL)
2006	180	38	218
2007	220	44	264
2008	216	39	255
2009	230	46	276
2010	310	40	350
2011	272	69	341
2012	349	81	430
2013	380	106	486
2014	383	102	485
2015	402	101	503
2016	503	138	641
2017	601	142	743
2018	609	170	779
2019	722	242	964
2020	1010	267	1277
2021	1008	404	1412

Source: The table created by using the data obtained from the “B” Charts Republic of Turkey, Central Government Budget Law (2006-2022), Population data aged 15 and over, (The World Bank, Population Total, 2006-2021)

2.3. Excise Tax Burden on Income and Purchasing Power

Total ET revenues on alcohol and tobacco products increased by 700% from 10.8 billion TL in the same period and reached 83.5 billion TL. In this period, while the share of revenues in the budget is increasing, it is also important to evaluate the excise duties burden with the development of GDP in terms of evaluating it from the consumers and taxpayers. In the same period, GDP increased by 810% from 2006 to 2021. This situation reveals that the increase in national income is higher than the increase in total ET revenues. Table 3 is evaluated, while the ratio of total ET to GDP was 1.35 in 2006, it was 1.15% in 2021. In this period, it may be said that the ET burden

on demerit goods decreased according to the total income level. Although the purchasing power seems to increase, it is important to evaluate it together with the income distribution in order to evaluate whether this increase is in all income groups. One of the important indicators measuring income inequality is the gini coefficient. When this coefficient approaches one, it means that the income distribution deteriorates, and when it approaches zero, the income distribution ameliorates (Turkish Statistical Institute, 2022). According to Table 3, while the gini coefficient in Turkey was 0.428 in 2006, it was 0.401 in 2021. This situation reveals that there has not been a significant improvement in income distribution in Turkey in the 16-year period. Considering that the purchasing power and income distribution in Turkey have not improved enough, the decrease in the total ET / GDP ratio does not have a sufficient effect on the ET burden. For middle and low-income consumers, the ET burden on these products can be reduced and different policies can be followed for public health.

Table 3: Ratio of ET Revenues on Tobacco Products and Alcoholic Beverages to GDP in Turkey, Gini Coefficient, 2006-2021, Turkey, Million TL, %

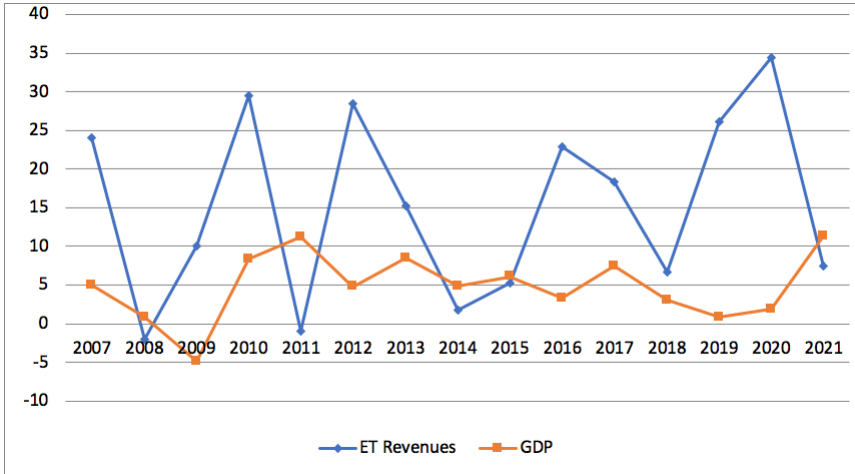
Yıl	Total Excise Tax Revenues	GDP (Million TL)	GDP Per Capita (TL)	Total Excise Tax / GDP (%)	Gini Coefficient
2006	10816	795757	69.295	1,35	0,428
2007	13305	887714	70.158	1,5	0,406
2008	13037	1002756	71.052	1,3	0,405
2009	14344	1006372	72.039	1,42	0,415
2010	18583	1167664	73.142	1,59	0,402
2011	18454	1404927	74.224	1,31	0,404
2012	23719	1581479	75.176	1,49	0,402
2013	27327	1823427	76.148	1,49	0,4
2014	27853	2054897	77.182	1,35	0,391
2015	29439	2350941	78.218	1,25	0,397
2016	38231	2626559	79.278	1,45	0,404
2017	45290	3133704	80.313	1,44	0,405
2018	48336	3758773	81.407	1,28	0,408
2019	60964	4317786	82.579	1,41	0,395
2020	81993	5046883	83.385	1,62	0,41
2021	83503	7248789	84.147	1,15	0,401

Source: The table created by using the data obtained from the "B" Charts Republic of Turkey, Central Government Budget Law (2006-2022), GDP Per Capita and Gini coefficient data obtained from the Turkish National Institute, <https://data.tuik.gov.tr/Kategori/GetKategori?p=ulusal-hesaplar-113>

2.4. Buoyancy and Elasticity of Excise Taxes in Turkey

The concepts of tax elasticity and buoyancy are essential in determining the financial and economic effects of the implemented tax policy and measuring its performance. In this respect, tax flexibility expresses the change in tax revenues caused by the change in national income. This concept is closely related to how sensitive a tax in a country is to national income growth (Lagravinese, Liberati & Sacchi; 2020:2; Akar & Sahin; 2015:30). This sensitivity is realized by comparing the rate of increase in tax revenue within a year with the increase in GDP. Secondly, tax buoyancy shows the effect of structural changes in the current tax policy (such as tax legislation and rates, tax base, and tariff) on tax revenues. Therefore, analyzing tax flexibility and buoyancy is crucial to determine the financial and economic performance and effectiveness of the special consumption tax collected on demerit goods in Turkey. It is important to compare two indicators as performing this analysis. GDP growth rate and ET revenue growth rate in Turkey.

Graph 1: Excise Tax Revenue and GDP Growth Rate in Turkey (2007-2021),%



Source: The table created by using the data obtained from the “B” Charts Republic of Turkey, Central Government Budget Law (2006-2022), GDP Growth, Turkiye (The World Bank, 2007-2021)

Graph 1 shows the growth rate of ET revenues on alcohol and cigarette consumption and the GDP growth rate in Turkey in the 15 years between 2007 and 2021. When we evaluate the relationship between ET revenues and GDP in Turkey, there is no similarity in the increase rates; on the contrary, it is complicated to say that there is a correlation between the changes in the increase rate. Although there is a similarity in the change in 2008-2009 and

2019-2020, when the effects of global crises were seen, the economic and demand contraction experienced with the crisis had common effects. In Turkey, we see that the sensitivity of tax revenues on demerit goods to the increase in national income is weak; therefore, tax buoyancy is low. Illicit trade of these products is among the most important reasons for low tax flexibility and buoyancy. Smuggling and the informal economy in alcoholic beverages and tobacco products, which have increased in recent years in Turkey, also bring non-taxability and may cause tax loss. The most crucial reason tax buoyancy cannot be established on these products is smuggling. In addition, when Turkey's Gini coefficient indicators given in Table 1 are evaluated, there is a deterioration in income distribution in Turkey in this period. In other words, the increase in national income does not show a normal distribution, and the tax burden on a significant part of the society increases. For this reason, due to the increase in tax burden, individuals exhibit tax avoidance and evasion behavior when consuming these products. One of the most important indicators that show the buoyancy of tax practice is the tenderness of tax revenues to legal and structural changes in the tax legislation. In this context, the important changes made in List No. 3 (Chart A and B) of the Excise Tax Law No. 4760, which includes the base and tariff of the special consumption tax collected on alcohol and cigarettes in Turkey, are listed in Table 4.

Table 4: Regulations of the Excise Tax Law No. 4760

Year	Excise Tax Growth Rate (%)	Regulations of the Tax Legislation
2007	24	4.4.2007 / Law No. 5615 – List 2 and 3
2008	-2	6.6.2008 / Law No. 5766 – List 1,2,3,4
2009	10	X
2010	29,5	X
2011	-1	25.2.2011 / Law No. 6111 – List. 1,2,3,4
2012	28,5	X
2013	15,2	X
2014	1,8	X
2015	5,3	X
2016	22,9	X
2017	18,4	5.12.2017 / Law No. 7061 – List 3
2018	6,7	1.1.2018 / Law No. 7061 – List 3, 27.3.2018 / Law No. 7103 – List 1,2,3,4
2019	26,1	18.1.2019 / Law No. 7161 – List 3
2020	34,4	X
2021	7,5	X

Source: (TBMM, 2002; Official Gazette, 2002)

Another important indicator of tax buoyancy is tax law's impact and legislation changes on tax revenues. In Turkey, between 2007 and 2023, seven major changes were made in the excise tax law no. 4760 regarding alcoholic beverages and tobacco products. The laws enacted are fixed and proportional changes directly for these products and consist of tables A and B in 3 lists. According to Table 4, there is no relationship between the changes made and tax revenue increases. In summary, the excise tax on alcoholic beverages and tobacco products in Turkey is a weak tax elasticity and buoyancy practice. The primary determinants of changes in tax revenues in this period can be global crises and illicit trade.

3. Government Intervention in Consumption Decisions

3.1. Consumer Sovereignty

The concept of consumer sovereignty, which advocates not to interfere with the voluntary decisions and free choices of consumers, is one of the major principles of classical economic theory that supports the invisible hand of the demand-supply mechanism (Lerner, 1972:58). In the supply side of the economy, consumer sovereignty is realized to the extent that which goods and services will be produced and how much, how they will be allocated, how they will be priced, in line with the demands of the final consumer (Norkus, 2003: 10). Adam Smith, in *The Wealth of Nations*, interpreted this concept as "Consumption is the ultimate goal of all production, the interest of the system must serve the interest of the consumer" (Smith, 1776: 159). According to Smith, the mercantilist commercial system sacrifices the consumer's interest to the producer and sees production, industry and trade, not consumption, as the ultimate goal of the system. Although Smith has views in favor of consumers and freedom of consumption, the first economist to use the concept of consumer sovereignty is William Harold Hutt. Hutt used the concept of consumer sovereignty for the first time in his book "The Economists and the Public" published in 1936, and stated that it is not possible to talk about social will and sovereignty without providing sovereignty to the consumer (Hutt, 1936:257). According to Hutt, consumer behavior expectations are the basis of economic growth and development. Monopol and oligopol domination, which continued until the 1930s, the post-war period; continued with practices that are on the side of the manufacturer, such as asymmetric information, supply-oriented marketing, monopoly and oligopoly markets, and cartelization. Over time, manufacturers' abuses in the market have led governments and consumers to defend their rights. Consumers who can make rational decisions

choose the best goods and services for themselves, thus ensuring a more effective supply-demand balance (Sirgy, Lee and Yu, 2011: 461).

3.1.1. John Stuart Mill: The Harm Principle

John Stuart Mill explains the principle of harm (harm to others) in his book “On Liberty” as follows: (Mill, 1859:22) “The sole purpose of the exercise of coercive force against any member of a civilized society, against his will, is to prevent harm to others”. Mill’s view determines the nature and boundaries of power that society may legitimately exercise over individuals. While Mill does not precisely formulate the word ‘harm’ in On Liberty, many thinkers have interpreted this limit. Generally, It is expressed as that individuals do not harm each other’s interests, bodily integrity, or material and moral elements and that the rights determined by legal provisions are not usurped (Debbaut, 2021: 2). As Mill’s definition of freedom is interpreted in terms of consumer behavior, any outside interference in consumption decisions that concern individuals’ benefits and preferences cannot be accepted. Suppose the harm caused by the act of the individual as a result of consumption does not impose any damage on others and is realized with free will. In that case, it rejects all restrictions on freedoms (Eunseong, 2016:1). According to this principle, the government, the public, society, and any authority should not interfere with the individual’s taking or not taking actions related to their own body and well-being. Mill argues that, although for the good of individuals, this is insufficient to justify interference with individual freedom. (Dworkin, 2020:1).

According to Mill, “Every person is the guardian of his own bodily and mental existence.” People make decisions with free will for their material and spiritual interests are the correct decisions (Waithe, 1983:101). Mill’s defense of freedom within the framework of the harm principle and his critique of paternalism clearly define the limits of this concept that needs to be identified and interpreted. On Liberty does not make clear what Mill should consider “harm.” Although the actions taken are defined as having harmful consequences for the interests of other individuals, what is good and bad for individuals also carries a subjective point of view. Therefore, consumption behaviors are only the individual’s decisions about his present and future. The individual himself will bear the good or bad result of consumption. The decision of the state or society to decide what is good or bad for the individual’s personal choices is a unique situation that cannot be drawn. In this respect, Mill’s point of view rejects the paternalistic point of view. Therefore, state intervention in a consumption behavior that does not harm others is unacceptable.

3.1.2. Private Sector Perspective: Objection to the Paternalist State

Industries such as alcohol and tobacco products, on the contrary, state that governments intervene with the decision-making autonomy of adults in the name of public health and use the concept of the paternal state for their interests (Hoek, 2015: 1040). One of the most discussed practices is taxing sugar and sweetened beverages. These drinks are taxed at a penny per ounce, and the proceeds are allocated to obesity prevention programs. In Turkey, the scope of the excise tax levied only on cola drinks was expanded in 2002, and a sugar-sweetened beverage tax began to be applied in 2018. While a 35% excise tax is levied on cola drinks, other sugar-sweetened beverages are subject to a 10% special consumption tax. There are also objections to paternalistic government interventions from food industry leaders. For example, Coca-Cola made a corporate statement about the taxes on sugary drinks, stating that consumers should take responsibility for their diets. Food and beverage confederation; opposes these taxes and likens these practices to war periods when food and beverage controls are made with rationing (Brownell, 2010:379).

3.2. Criticism of Consumer Sovereignty

One of the biggest criticisms of consumer sovereignty, which includes that consumption decisions of individuals should be made freely without any intervention, comes from the neoclassical economic view. In this criticism, which includes market failures, it is stated that some consumption preferences of individuals create negative externalities and cause its social costs. In classical economic thought, it is argued that the economic decisions of the rational consumer bring the supply-demand mechanism into balance, while neoclassical economic analysis; argues that social costs should be internalized to the supply-demand function of negative externalities created by the consumption of demerits such as cigarettes, alcoholic beverages, and sugar-sweetened soft drinks. For this reason, neoclassical theory explains that the consumption of demerit goods should be limited and externalities should be internalized through the implementation of health taxes. Although Excise duties in Turkey is applied to limit consumption and protect public health, the primary purpose is to collect income (for the fiscal function). Along with the main goal of fiscality, the secondary purpose of health taxes in Turkey is the protection of public and individual health (Gülden, 2022: 110).

3.2.1. Hard Paternalism

Public health policies implemented by states can intervene a range of rights that individuals have such as personal autonomy, choice, self-determination, and living independently. Areas of individual freedom may

conflict with public health goals on various issues such as population growth and reproductive policy, herd immunity, tobacco use, traffic safety and obesity. The common view is that states can use coercive power over their stakeholders for these goals, posing a moral threat to personal autonomy (Powers, Faden, & Saghai, 2012:6). Strict paternalism, on the other hand, is the practices that violate the autonomy areas of individuals in coercive and prohibitive ways, and do not allow them to decide and choose how to live their lives according to their views on what is best for them, their religious beliefs, the concepts of justice and virtue, their ideas about honor and dignity. Prohibitions, obstructions, coercive and compulsory measures, taxes, quotas and limitations are within this scope. In strict paternalism, public authorities impose the understanding of good life on their citizens (Scoccia, 2007:351). These taxes, which find application in the name of public health, are completely rejected by liberal thought. When evaluated from the neoclassical economic point of view, it is very crucial to evaluate the effectiveness of these taxes and to decide on the tax policy as a result of evaluation.

3.2.2. The justification for the Intervention: Demerit Goods and Public Health

The concept of merit-demerit goods was first presented to the literature by (Richard Musgrave, 1957-1958), widely discussed and interpreted differently. Although it has many definitions, it is evaluated from consumer sovereignty and paternalism perspectives. Musgrave defines *demerit goods* as “the situation in which the value or defect of a good is evaluated in an alternative way outside the consumer sovereignty (consumer sovereignty) paradigm” (Hoberg and Strunz, 2018: 287). Musgrave, in his book “The Theory of Public Finance,” defines *merit goods* as “goods that are deemed valuable beyond what they should be, enough to be satisfied through the public budget” and that these goods (education, health, milk, seat belts, meat, clean water, etc.) should be supported by public financing (Musgrave, 1958, p. 13; Pulsipher, 1971:266; Eecke, 2003, p. 702; Tremblay, 2019:211). Goods such as milk, books, newspapers, education, and seat belts that are not consumed in sufficient quantities by individuals despite providing individual and social benefits are called virtuous goods. Although products such as tobacco products, heroin, vaccines, alcohol, trans fats, and saturated fats have social harm, the goods consumed are also considered vices (Muter, Çelebi, Sakiñç, 2018:27). It is also a matter of debate what way and according to which the distinction between virtuous and immoral goods and services will be classified (Thurow, 1974: 193). Although making this classification is seen as a normative interp-

retation, it receives its most important support from academic and scientific knowledge.

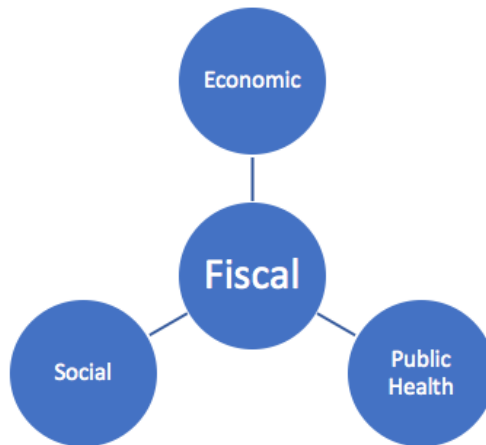
One who makes the best decisions for himself and exhibits economic behavior. The “Homo Economicus” can sometimes be wrong and can make destructive decisions for himself and society. Therefore, scientific developments create consumption norms that cannot be left to the consumer in normative terms. Another view (Head, 1969:214; Paavola, 2022:1) is that consumers can make irrational choices when they are exposed to information asymmetry, and in these cases, public interventions are needed. Studies on developed countries with a high level of welfare reveal that these countries provide virtuous goods and services intensively and that these items constitute a significant part of public expenditures. For example, the consumption preferences of children and individuals who do not have the power to appeal may be too sensitive to be left to the domain of sovereignty. At this stage, two fundamental questions arise: may consumers make the best choices for themselves? Secondly, if it can be powerfully demonstrated that consumer behaviors are scientifically “wrong,” should the public authority intervene in these preferences? In this direction, states can intervene with normative value judgments, individual freedoms, and the free market with financial instruments (Brennan and Lomasky, 1983:184). For example, while organic foods are persistently seen as virtuous goods, on the other hand, the climate crisis and famine predictions in the world suggest the consumption of artificial meats (Ericson, Kjonstad and Barstad, 2014: 73). In an interview published in February 2021, Bill Gates explains that the consumption of artificial meat should be increased rapidly to avoid the greenhouse effect and carbon emissions (Technology Review, 2021:1). From a sustainability perspective, organic meat is a threat as it increases carbon emissions in nature, while artificial meat poses a risk to global health. The thesis evaluates consumer preferences and government intervention within the public health framework. Its effectiveness on consumption preferences and related public health problems is in focus.

3.3. Excise Taxes

The main reason behind many sin taxes, such as tobacco tax and alcohol tax, which are applied for the protection of third parties, is that the state directs it to what is good for the citizen rather than limiting and punishing consumption. It is assumed that the state carries out such tax controls with a paternal motive, and activities that punish, limit, and narrow the freedom area can stay in the background. Although sin tax is seen as a tax that is good for the citizen or intended to be, the potential benefit that is good for the citizen is generally the

health benefits of individuals and society (Nielsen and Jensen, 2016:56). For example, it is aimed to reduce the risks of various obesity-related diseases by limiting the consumption of high-calorie foods and beverages. Alcoholic beverages, tobacco, tobacco products, and sugar-sweetened beverages, and It is aimed to reduce the consumption of products that cause chronic diseases and affect lifestyles, such as foods, high-calorie snacks, fast food products, foods, and beverages containing saturated and trans fats. The priority of the state with sin taxes is to prevent obesity, diabetes, and cardiovascular diseases by interfering with the lifestyles of individuals, to reduce their risks, and to increase the prosperity of life and welfare of individuals. In addition, with the reduction of health risks, the costs of the health system decrease, and the efficiency of the system increases.

Figure 1: Goals of Excise Taxes



The primary purpose of these taxes, called health or sin taxes for taxpayers, is fiscal. Excise taxes on addictive and inelastic goods such as alcoholic beverages, tobacco, and tobacco products are a remarkably effortless source of income for governments. Therefore, such taxes around the world mainly aim at fiscality. Social, economic, and public health purposes are also the secondary purpose of such taxes (Gülden, 2022:35). In addition, supranational organizations as the World Health Organization and the European Commission strongly recommend these taxes due to adverse health externalities. They declared rates of current taxes to be increased. The government for fiscal objective, which is the primary target, aims to reduce the burden of diseases on the health sector, to reduce the burden of public health expenditures on the budget, and thus to achieve the budget activity as a result of a decrease in

consumption. The economic objective, which is the secondary target, contains targets such as increasing the disposable income of individuals by decreasing consumption and reducing addictions and increasing the welfare of individuals, contributing to the spending of disposable income on more basic and healthy consumption, and preventing the growth of unhealthy markets such as alcoholic beverages and tobacco products. Another secondary purpose of health and sin taxes is social. Health taxes can be applied for reasons such as preventing the spread of addictive substances such as alcohol and cigarettes, especially among young people and children, and reducing the risks of crimes related to alcoholic beverage consumption, traffic accidents, falls, and suicide. Finally, one of the most important secondary objectives in the implementation of these taxes is the aim of protecting public health. It aims to limit the consumption of alcoholic beverages and tobacco products, which cause diseases that threaten individual health and public health. The excise tax to be applied on these products aims to reduce the demand for these goods. It is vital to reduce the risks and incidences of chronic diseases International health organizations continue to advise governments to impose stricter tax rates on this issue.

4. Discussion

4.1. Which Group bears the burden of excise tax in Turkey?

The share of excise taxes on demerit goods in total tax revenues approaches 10% in Turkey as of 2023. Although this ratio is a significant share, the fact that budget revenues are indexed to people's consumption behavior is a matter of debate. In addition to its weight in the budget, the burden of these taxes on demerit goods in Turkey is increasing with each passing year. In addition, although the share of these taxes in GDP decreased, it would be difficult to say that this decrease is reflected in the general population. The partial decrease in the Gini coefficient in Turkey between 2006 and 2022 also shows that the income distribution cannot be achieved. Therefore the majority of the burden of these taxes is low and middle-income consumers. In Turkey, the share of middle-low income-income individuals from the total income of approximately 80% of the population is 53.4%. Although the disposable income of a large part of the population in Turkey is relatively low, these low and middle-income groups bear the burden of special consumption tax. While this situation exacerbates income inequality, it includes a more strict intervention in the consumption decisions of low and middle-income individuals. It is seen that this intervention of the state on consumption creates a more significant burden than the income level of individuals (TUIK, 2022).

There are two types of injustice in applying alcohol and tobacco tax in Turkey. The first is the hard paternalist approach to consumption decisions made by individuals with their own will, and the second is to cause inequality among individuals through unfair taxation. These products, which have low elasticity and low alternatives for individuals with low or middle levels of disposable income, considerably reduce the disposable income of these individuals after tax. In addition, it leads individuals at this income level to illegal consumption or production. This situation also causes the deepening of the informal economy.

The pressure or coercion of a sin tax on harmful products such as tobacco and alcohol is felt much more severely by poor or low-income people. It would not be right to completely ignore that these people, who have already been left alone with the cruel difficulties of life, turned to cigarettes or alcohol for reasons arising from the problems. "Poverty stress" has a stimulating effect on smoking and drinking. Moreover, the relatively low level of education and knowledge of the poor may prevent them from seeing the risks posed by smoking and drinking. As a result, sin taxes create more injustice for poor and low-income people due to their regressive nature (Aktan, 2019:18).

4.2. Illicit Trade of Demerit Goods in Turkey

One of Turkey's most crucial economic and social issues is the informal economy and illegal trade. Especially under-the-counter production and consumption of alcoholic beverages and tobacco products confront individuals in the hands of a hazardous and uncontrolled market. Middle and low-income consumers, who feel the burden of special consumption tax more deeply and whose purchasing power is decreasing, tend to this market, which is cheaper. While illegal consumption and illegal trade dominate tobacco products, there is also illegal trade and illegal production in the alcoholic beverages market. Due to easy access to ethyl alcohol, alcoholic beverages are produced, sold, and consumed uncontrolled and unscientific at home and under the stairs. Illegal alcohol consumption poses serious health risks, especially with diseases like blindness and kidney failure, stroke and may cause deaths. Heavy taxes also lead consumers to produce homemade alcohol and lead to hazardous intake.

Betam (2021, 52), in his research on 2483 consumers states that the main reason for turning to illegal trade and consumption is that the products are cheap, 90%, and not paying high taxes. Turning to illegal production and trade due to high prices indirectly results from the high tax rates applied. Therefore, the main reason consumers turn to illegal trade is the strict tax policy applied. In this case, the government has three significant losses: tax

loss due to illegal trade, the growth of the informal economy, and the fact that consumers are exposed to threats by turning to the unregulated market. Methanol poisoning is experienced due to the consumption of alcohol in illegal production or homemade, and it has severe consequences, especially blindness, and death (Manning and Kowalska, 2021:2). Methanol is preferred because it is cheaper than ethyl alcohol in producing counterfeit liquor and liquor at home (Gulen, vd., 2020:84). In addition, methyl alcohol poisoning is mainly due to high prices and the ignorance of individuals who avoid heavy taxes and make amateur production. Due to reasons such as accidents, cost reductions, malice, and technical ignorance, public health in Turkey is at significant risk.

The closure measures implemented by governments during the Covid-19 pandemic also increased the production of illegal and homemade alcohol, especially in the European Region. A total of 1.2 million liters of illicit alcoholic beverages were produced in Europe in 2020. The disruption of the supply chain in this period is one of the crucial factors that led to the increase in the production of legal alcoholic beverages (OECD, 2021). In addition to the tax burden, the inflationary period that the global economy and, naturally, Turkey faced during the pandemic period also fed illegal trade. As the consumer's purchasing power decreases, the demand for illegal products naturally increases for the domestic market and Turkey's geographical location (Tracit, 2022). They are a bridge to Europe, causing an increase in illegal product movements and transfers. These increases are shaped mainly by illegal drugs, counterfeit alcohol, and illegal tobacco. Unfortunately, heavy tax burdens and price increases make consumers in the domestic market open to the market.

4.3. The Purpose of Excise Taxes: Turkey's Failed Experience

Although the primary purpose of excise taxes in Turkey is fiscal, it also protects public health. Likewise, the excise tax policy in Turkey is on alcoholic beverages, tobacco products, and sugar-sweetened beverages. It has been created per the directives, reports, and recommendations of supranational organizations such as WHO, EU, and OECD. Although these institutions' advisory reports, statements, and scientific studies are instructive, these taxes are implemented within the framework of Turkey's national and autonomous fiscal-social policy (Gulden, 2022:118). One of the most critical indicators for the protection of public health, this study aims to reveal the relationship between diseases related to alcoholic beverages, tobacco products, and sugar-sweetened beverages as of the period when the excise taxes were implemented.

Table 5: Success of Excise Taxes in Turkey

Goals	Subgoals	Efficiency			Success
		Yes	Partially	None	
Economic	Increasing Purchasing Power			✓	<p>Purchasing power after tax decreases due to the decrease in the disposable income level, especially in the middle and lower income groups, and the increase in the tax burden on that (Aktan, 2019:18). In addition, due to the distorting effect of taxation, a perfectly competitive market cannot be formed, and the industry's growth hinders down. For this reason, we can consider health taxes as economically unsuccessful.</p> <p><i>Unsuccessful</i></p>
	Ensuring Perfect Competition			✓	
	Industry Growth			✓	
Fiscal	Collecting Taxes	✓			<p>As noticed in Table 1, Between 2006 and 2022, the special consumption tax on alcohol and tobacco products increased nine times, and its share in tax revenues was 8% on average. In this sense, we concluded that tax revenue is regularly obtained from these products. On the other hand, the tax burden per capita is getting heavier. We estimated that there is erosion in the tax base due to the increased informal economy and illicit trade in these products. Since it has a significant share in tax revenues, the fiscal purpose of health taxes is</p> <p><i>Partially Successful.</i></p>
	Tax Burden Optimality			✓	
	Avoiding Base Erosion			✓	
	Informal Economy			✓	
	Tax Elasticity			✓	
	Tax Buoyancy			✓	<p>There is no direct relationship between the changes that occurred in the Excise Tax Law No. 4760 between 2007 and 2021 (3rd List, Chart A and B, which is related to alcohol and tobacco) and the increased rate of excise revenue obtained from the consumption these products. Changes made in the legislation do not significantly impact tax revenues. In this context, we concluded that tax buoyancy is weak. The most important reasons for this weakness are the tax burden, illicit trade, and the shadow economy.</p>

Social	Addiction Rate			✓	<p>The addiction rate, which was 26% in 2016, increased to 28% in 2019 and increased to 30% by 2022 (TUIK, 2022), which was 27% before the pandemic in Turkey. We observed that consumer behavior has not changed in this period (Karadoğan and Telatar, 2022:1). In Table 3, income distribution has deteriorated, especially against low and middle-income consumers, since 2006. Consumer freedom intervention has become a hard paternalist policy with the tax burden increasing. It cannot be said that these taxes are effective in their social purposes.</p> <p><i>Unsuccessful</i></p>
	Crime and Accident Rates			✓	
	Consumer Sovereignty			✓	
	Income Distribution			✓	
Public Health	Addiction Rate			✓	<p>DALY indicator gives the number of years spent with loss of healthy life years and disability for 100,000 people in a country due to diseases related to alcohol and cigarette consumption (TUSAP, 2020:5-6; Arslan and Ağırbaş, 2017:112; Paksoy and Erbaydar, 2009:20). This metric calculates the regional and global burden of disease using Murray and Lopez, and WHO regularly collects data from national organizations for these calculations (Murray and Lopez, 1996). DALY calculations by country; cardiovascular diseases, COPD, lung cancer, colon and rectum cancer, diabetes, and stroke. While the average DALY values per 100000 people in Turkey between 2006 and 2019 were 4898 years in 2006 for these diseases related to alcohol and tobacco products, it was 5785 years in 2019 (Gulden, 2022; WHO, 2022). This case shows that health taxes cannot provide the intended constraining in consuming these products.</p> <p><i>Unsuccessful</i></p>
	Incident Rate			✓	
	Disability Adjusted Life Years (DALY)			✓	

5. Conclusion

Increasing health risks and chronic diseases in the world after the 2000's encourage governments to prevent consumption behaviors that cause these epidemics. Especially alcoholic beverages and tobacco products; tax mechanism can be used to constrain the consumption of products such as sugar-sweetened beverages, saturated-trans fats, high-calorie snacks, energy drinks, fruit juices with additives, tea with additives and milk. These products are subject to tax under the name of sin taxes or health taxes in order to prevent diseases such as chronic obstructive respiratory disease, cancers, type-2 diabet, stroke, cardiovascular diseases, which are associated with the consumption of these products and generate a high risk for public health.

The classical economic view completely opposes the consumption taxes within the scope of consumer sovereignty, while the neoclassical thought states that the consumption of such products creates negative externalities and should be internalized through ET. At this stage, it is important to reveal the burden of current excises on consumers and to analyze the effectiveness of these taxes on public health. For this purpose, in the study; It is appropriate to evaluate the share of the total ET taxes obtained from these products between the years 2006-2021 in the total tax revenues, their ratio to GDP and the purchasing power in the same period. Although the share of total ET revenues from these products in total tax revenues in Turkey increased until 2019, it decreased in 2020 and 2021. This shows that the burden of this income item can be reduced in terms of the public budget. In addition, the ratio of total ET revenues to GDP varies irregularly between 1.35% and 1.62% in the same period. It is seen that there is no significant improvement in the gini coefficient in terms of income distribution. Therefore, the tax burden of the ET on these products is higher, especially in low and middle income groups. In terms of public health outcomes, studies in the literature indicate that taxes on alcoholic beverages are ineffective on public health outcomes in Turkey.

Public authorities can collect excise taxes, especially in terms of their simple collection. Although the primary purpose of such taxes is to generate public revenue (fiscal function), it can also be applied for economic and social purposes. In addition, the fiscal goals appear to be weak in terms of tax viability and flexibility, apart from its ability to generate regular income. Although there is no direct relationship between GDP and ET revenues from tobacco products and alcoholic beverages between 2007 and 2021, it is not affected by changes in tax legislation. Tax revenue is mostly affected by global crises and the informal economy. With this result, it is concluded that excise taxes on demerit goods in Turkey are fiscally, economically, and socially unsuccessful and underperforming.

Authors' Contributions

The 1st author contributed 60%, the 2nd author contributed 40%.

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