
The Influence of the European Tobacco Products Directive on Socio-Economic Situation: Analysis on the Perspective of Competencies Towards Uniformity in Family Business

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Abstract:

Purpose: In terms of the sown area, the largest tobacco plantations in the EU are in Italy, Greece, and Poland. Faced with the issues of globalization and responding to the development of the Internet, the European Parliament initiated works on a directive on the approximation of the laws, regulations and administrative provisions of the member states concerning the manufacture, presentation, and sale of tobacco and related product. After the intended purposes of the Directive were announced Poland raised its objections, because – as predicted – the introduction of new rules would bring a change to the economic situation of the rural areas where tobacco was grown. Against this background, the present article pursues to objectives: 1) to identify the main spheres of social and economic life that have potentially been affected by the Directive, and 2) to assess the impact that the Directive has had on these areas five years after it came into force.

Design/Methodology/Approach: The research was conducted using the document analysis and the comparative analysis methods. The Polish market was used as an example and compared to those in other European countries.

Findings: The Tobacco Products Directive was found to potentially affect 4 spheres: human health, level of budget revenues, production and sale of tobacco products, and agriculture and tobacco growing. However, our analyses did not confirm the claim that any area has been negatively affected; on the contrary, improvements have been observed, for example in terms of the income of tobacco growers or the volume of cigarette production.

Originality/value: Apparently, this is the first paper involving a wide assessment of the effects of the Tobacco Products Directive.

Keywords: European law, tobacco market, agriculture, health.

JEL classification: K2, K4, L16, L66, O11.

Paper Type: Research study.

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1. Introduction

At the turn of 2009 and 2010, the European Parliament initiated work on a directive on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products (2014/40/EU, so called the Tobacco Products Directive). A draft Directive was presented in 2013, and the original assumptions behind the proposal pointed to the withdrawal of the menthol and slim cigarettes from the EU market, and to other restrictions on cigarette sales. Producer organizations in Poland, which are de facto multinational corporations, responded by saying that assumptions were very harsh and unfavorable for the market, and estimated that the change would lessen the demand for tobacco produced in Poland, thus leading to a major reduction in jobs (Karwinski, 2015).

Consequently, it was anticipated that the areas where tobacco is produced or processed, not only in Poland, would face a drop in farm income and an increase in unemployment. Especially the latter aspect was problematic, because at that time (2014) Poland had one of the highest unemployment rates in Europe, together with Spain, Portugal and Slovakia, and a high agricultural employment rate (Statistical Yearbook of Agriculture, 2018). Also, experts predicted that any changes to the profile of agricultural production in those areas would be difficult to make due to the soil types and farm sizes found there (with the average farm size of about 1.6 ha). For that reason, the proposed provisions were protested by Poland. However, in 2014 the Tobacco Products Directive was adopted by the European Parliament as Directive 2014/40/EU of The European Parliament and of The Council of 3 April 2014 on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products (hereinafter referred to as the Tobacco Products Directive) and repealing Directive 2001/37/EC.

The new law was needed not only if the damaging effects of products containing nicotine were to be reduced, but also because new member states were joining the EU, and Internet shopping was becoming an increasingly common buying channel, thus calling for unification of the EU market. Moreover, there were no regulations in place yet regarding some novel products, such as safety requirements for electronic cigarettes, for instance.

At that time, experts frequently voiced their predictions of a negative impact that the Directive would have on the tobacco- and cigarette-producing countries (Peeters *et al.*, 2016). Therefore, the purpose of this article is to identify main spheres of social and economic life which affected by the Tobacco Products Directive, and to assess the impact of the new Tobacco Products Directive on these areas five years after the Directive came into force, taking the Polish market as an example and comparing it to those in other European countries.

We adopt a similar concept to the earlier authors, namely that socioeconomic modernization, economic interest groups and domestic political factors all play a role in policy. As few discussions of the impact of the 2014/40/EU Directive on the tobacco market (in the whole or in part) have been published to date, the present paper claims to bridge the knowledge gap on this subject.

2. Research Methodology

The goals of the present study, as mentioned above, were to identify the main spheres of socio-economic life affected by the Tobacco Products Directive, and to assess the impact of the new Tobacco Products Directive on these areas five years after it came into force. The Polish market was used as an example and compared to other European countries. These goals were to be achieved through:

- 1) an in-depth analysis of the content of the Directive to identify the areas likely to be affected;
- 2) an assessment of the solutions adopted by the EC from the perspectives of different stakeholders, within a selected temporal scope;
- 3) a determination of the role of tobacco for economic development.

The paper is an economic analysis. The empirical part is based on secondary statistical data for the European and Polish markets. Changes to various socio-economic areas were observed for the period between 2010 and 2019. The focus period did not extend to 2020 due to the Covid-19 pandemic, which affected all areas of the economy in an unprecedented manner.

The research was conducted using the document analysis and comparative analysis methods, as well as inference based on incomplete induction, which is a scientific method recognized in social sciences (Apanowicz, 2000, p. 23-28). The assumed hypothesis was that the new Directive did not cause adverse changes from the perspective of the country's social-economic development.

3. Literature Review

The literature on the economic aspects of tobacco production in Europe is surprisingly poor (with health and sociology studies prevailing). Even fewer publications have discussed the impact of the 2014/40/EU Directive on the tobacco market. Therefore, this part of the present paper will discuss those publications that mention, even if briefly, the tobacco market and the economic changes occurring in some European regions, especially rural. Most rural economies in Central and Eastern Europe are facing the consequences of underdeveloped agriculture and the lack of available alternative economic activities outside agriculture. Diversification of the region's rural economies, which are far from over-reliance on agriculture, has become an important policy objective and a vital social problem. Chaplin, Gorton and Davidova (2007) implicate that it is unlikely that any significant diversification

will take place in rural areas in the short term due to the advanced age of the households, the small sizes of the farms, and their inability to raise capital.

In the post-WWII Poland, there have been several regional development plans made, although they have mostly focused on growth factors, instead of development (Banski, 2010). Also today, the issues of the development of the lagging rural regions keep attracting social excitement, especially in the face of the major transformations taking place. These transformations are related to, for example, the spatial location of various branches of the economy. Recent changes in international trade theory predict that increased globalization will be associated with an increased location-based concentration of economic activity, and thus with the increased specialization of national and regional economies (Resmini, 2007). This has been observed for tobacco and cigarette production, as following the accession of Central European members states to the EU the international capital was located there, which led to the concentration of tobacco and cigarette production in the hands of multinational corporations, with some regions (such as eastern Poland) ending up being narrowly specialized. Consequently, economic integration with the European Union has changed the processes behind the location of industries in these countries, which has led to the spatial reorganization of production as a consequence of the new EU regulations.

The success of any new social solutions depends on several factors, some being low corruption, impartial public institutions, and the rule of law. Certainly, Central and Eastern European countries are far behind their Western European counterparts in terms of these determinants (2020 Rule of Law Report). Although in their work on the quality of governance in European countries (2014) Charron, Dijkstra & Lapuente propose that there are some regions in Western Europe that are demonstrating the most noticeable declines in the quality of government, generally regions in Western Europe are quite heterogeneous in terms of that quality. They also notice that the old “dividing lines” as regards the quality of government existing between Northern and Southern Europe, but also between Western and Eastern Europe, seem to be slowly increasingly blur.

Nevertheless, the introduction of any new law and any new economic order can be problematic if it entails difficult socio-political decisions, which has been observed in the case of the implementation of the Tobacco Products Directive. Notably, objections against the proposals were raised mainly by Poland, but not Germany or the Netherlands which too are leaders in cigarette production. This might indicate that the rule of law and the interests and well-being of the Polish society are not yet a priority in the country. Thus, the results of the research by Charron, Dijkstra, and Lapuente (2014) are confirmed by the behavior of Poland’s politicians and lobbyists.

One of the few works related to the Tobacco Products Directive ever published is the article by Örnberg (2013). The author discusses the so-called Swedish experience

with the EU as a political and regulatory force, in the process of shaping the national policy on tobacco production and selling. The document also outlines how various economic and political interests use scientific arguments to achieve their own private, usually financial, goals. The article argues that political measures are dictated by ideology and political considerations such as unemployment, the maintenance of living standards, and the preservation of traditions, with ambiguous scientific results offered as support.

Holden and Hawkins (2018) claim that there is a significant range of good transnational health regulations already in place, but they must be formulated in a language that facilitates the single market, and they hinge on the political commitment of key political actors. Consequently, their effectiveness depends on the political will of governments. At the same time, EU law still offers corporations ample opportunities to challenge national health regulations, an impact that should be reduced. This could be seen, too, in how the Tobacco Products Directive was being implemented in 2013-2014. The same authors also claim that this scope of transnational health regulations distinguish legal and political processes in the EU from those of other trade organizations or arising under other agreements. Without a doubt, then, EU health regulations which limit personal consumption of stimulants are a clear achievement of the European community (Holden and Hawkins, 2018).

Stimulants, such as alcohol and tobacco, are important for national governments from two perspectives – they are a source of budget revenues on the one hand, but they generate health care costs on the other (Rowe, 2002; Valek, 2019). Excise duty on tobacco products is highly uniform in EU member states. The same regulations apply to the same types of products, the same rules govern intra-Community trade, and the same bans apply to sales to minor consumers, media advertising and sponsorships. All this has been introduced by the new EU Tobacco Products Directive as from 2014. This is an important piece of legislation because tobacco consumption is associated with adverse health effects for consumers (even premature deaths), which then create additional economic and social costs. Thus, it was in the public interest that the provisions of the Directive should be implemented effectively and without delay. According to McKee, Mossialos and Belcher (1996), in the beginning, the European Union had relatively little role in health and health care. The adopted directive shows that the EU is trying to change this.

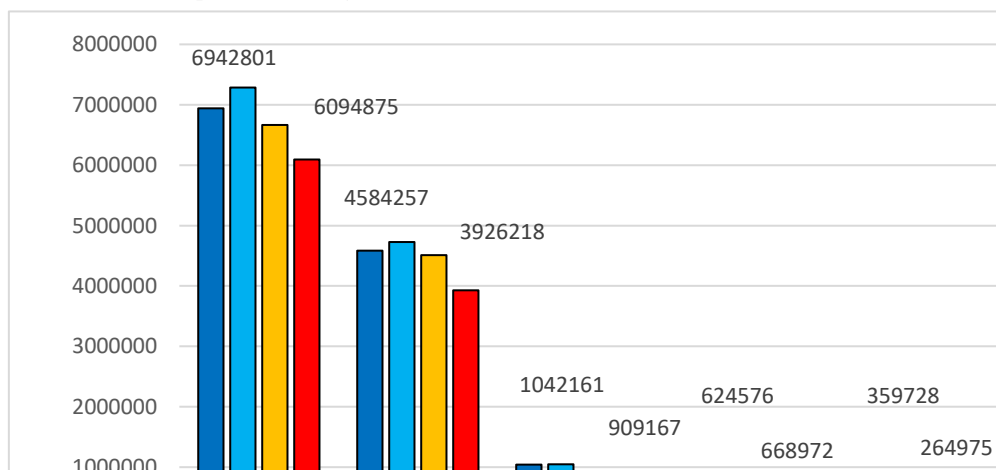
Few papers have been published that discuss the tobacco market and the operation of the Directive concerned, as mentioned above. On the other hand, numerous works exploring the consumption of stimulants such as tobacco and cigarettes deal with issues of health, psychology, and social campaigns. In their article (2006), Costa and Mossialos discuss, e.g., the determinants of smoking cessation and tobacco consumption in the European Union. The authors' claim is that of all the anti-smoking policies that they have examined, regulatory and information policies have

indeed had some effect on a person's resolution to stop smoking. Given the above, although the impact of the Directive in question on the tobacco market appears to be of vital importance, it has not enjoyed sufficient attention as of yet.

4. Tobacco Production

Tobacco is used for the manufacture of cigarettes, but also cigarillos (thin, short cigars) and cigars. It is also prepared for sale in the form of fine-cut tobacco, which is used for individual, home-made cigarettes and for cigarillos. In some countries (e.g., in Asia and Scandinavia), tobacco is also chewed (Lokhande *et al.*, 2013) or used orally (Örnberg, 2013), although mass production of cigarettes is the main industry. The majority of the world's tobacco is grown in Asia – nearly 66% of the world crops, including 31% in China, where 2.4 million metric tons of tobacco are produced (Statista). The second largest production takes place in South America (with Brazil as the leader), followed by Africa, North America, and Europe – with only 4.5% of tobacco production. Significantly, during the period shown in Figure 1, a decrease in tobacco production was observed.

Figure 1. World production of tobacco between 2010 and 2018 [in tons]



Source: Developed by the authors based on the *International Statistics Yearbook, Statistics Poland, 2018, Warsaw, p. 45* and *Faostat, Crops*, <http://www.fao.org/faostat/en/#data/QC>.

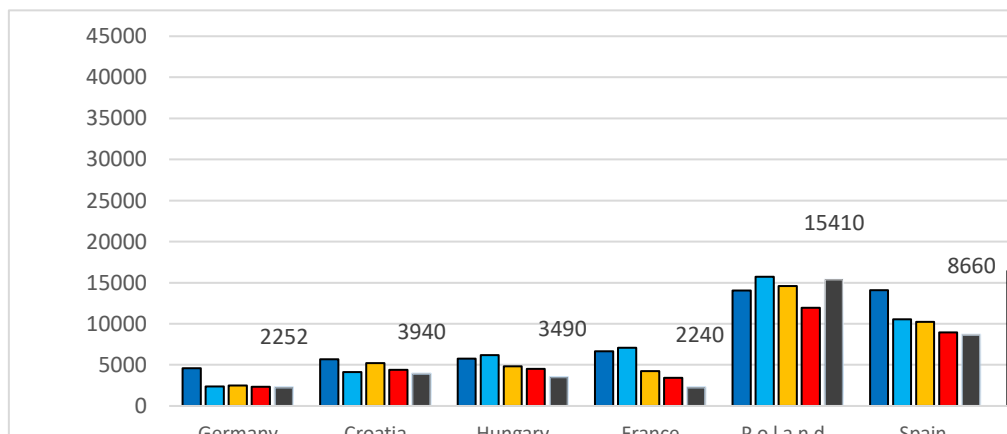
On the European continent, the largest tobacco plantations in terms of sown area are located in Italy, Bulgaria, Greece, and Poland (Fig. 2). In 2018, EU tobacco covered some 66,000 ha and was grown by 26,000 specialist producers. In 2019, the former figure was over 72,000 ha and the latter remained at 26,000 (Eurostat). Importantly, the largest European exporters of tobacco and cigarettes are Germany, Poland, and the Netherlands (Martin, 2020; Smoking statistics Tobacco. Overview).

Over 20 years ago (in 2000, Figure 2), Italy had the largest sown area with almost 38,788 hectares of tobacco. However, the total plantation size has been in decline

ever since and is currently (2019) 15,690 hectares – the area has thus halved. Similar trends are being observed in other countries, too, such as Bulgaria, Spain, and France. Only in two countries, Poland and Greece, the sown areas have been subject to variation.

It is worth mentioning that unprocessed tobacco production in the EU has never met the needs of cigarette manufacturers, it is therefore also imported into the EU. Significantly, the demand exists not just due to the fact that consumers of the given country smoke a lot of cigarettes, but because there are cigarette factories there. Such cigarette manufacturers as British American Tobacco, Philip Morris International, Imperial Tobacco and Japan Tobacco International operate in Europe. The largest tobacco importers in the world are Japan, Germany and Italy. In 2019, Poland was ranked 11th globally, and 7th in Europe (Figure3).

Figure 2. Sown area of tobacco in selected EU countries between 2000 and 2019 [ha]



Source: Faostat, *Crops*, <http://www.fao.org/faostat/en/#data/QC> (accessed: 21.01.2020) and Eurostat, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do> (accessed: 28.08.2020).

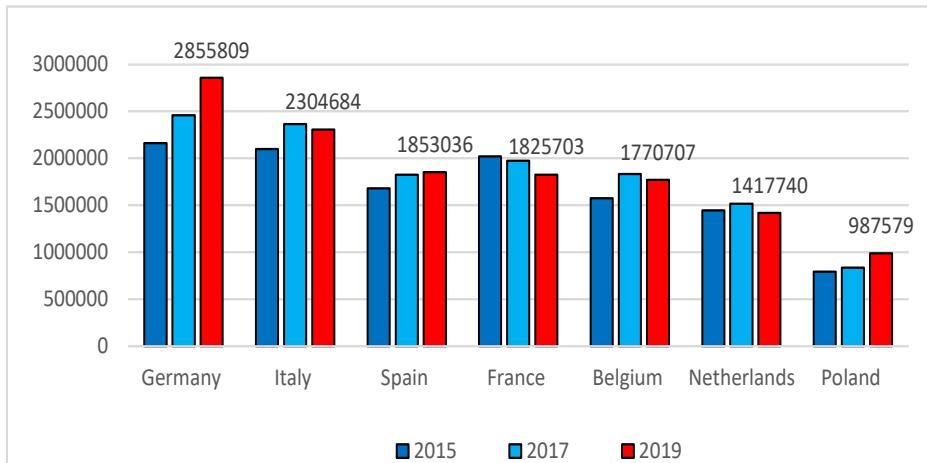
The above data show that the countries with falling tobacco sown areas have seen a growth in imports. This has been due to the demand of cigarette manufacturers, which will be discussed later in the paper.

5. Agriculture in Poland and other EU member states – an outline

European Commission informs that rural areas account for over 77% of the EU territory (47% - agricultural land, and 30% - forests). About half of the EU's population lives there. Predominantly rural regions represent around 80% and more of the territory in Ireland, Finland, Estonia, Portugal, and Austria (The common agricultural policy (CAP) and agriculture in Europe). Consequently, nowadays,

despite the post-industrial development and the dominance of services, agriculture has remained an important part of the economies in many European countries.

Figure 3. The largest European importers of tobacco and tobacco products - changes between 2015 and 2019 (value in thousands of USD)

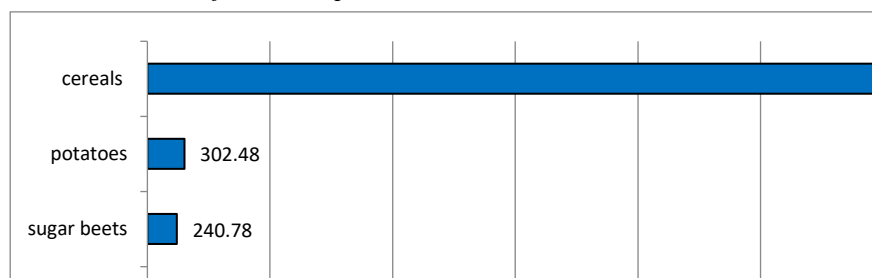


Source: Developed by the authors based on: International Trade Centre, https://www.trademap.org/tradestat/Country_SelProduct_TS.aspx (accessed: 28.08.2020).

As for Poland, 45.5% of its total area of 322.7 thous. km² is occupied by agriculture (Statistical Yearbook of Agriculture, 2019). The available data show that Poland remains an agricultural country and has a high rate of employment in this sector. In 2019, engagement of workforce in agriculture was 9.3% (10.4% in 2017), while the country's GDP from agricultural production was 3% and had increased by 0.6% from 2017. When it comes to crop production, cereals (mainly wheat) are the prevailing crop in Poland and cover 30% of sown area. The second most popular plant is potato, which is followed by industrial plants, mainly sugar beet, canola and flax. This group also includes tobacco, with a sown area of 15,4 thous. ha (Figure 4).

Tobacco in Poland grows in many regions of the country, but the national government has supported tobacco plantations in selected areas, as designated by the Regulation of the Minister of Agriculture and Rural Development of March 2012 on Tobacco Growing Regions (Official Journal of 2012, item 276). This law allowed farmers to be supported with payments from the EU or from local budgets only if their farms were located in communities with high unemployment rates and lagging in other areas of economic development. Therefore, most plantations were located in the south-eastern part of the country. The regulation about EU founding was repealed in March 2015, although domestic aid has been maintained.

Figure 4. Sown area of main crops in Poland in 2019 [thous. ha]



Source: Developed by the authors based on Eurostat, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do> (accessed 28.08.2020).

6. Introduction of the New EU Directive – the Background

2014 was the year of another election to the European Parliament, and potential delegates from Poland wanted to be seen as fighting for the Polish case. Polish citizens, as usual at the time of the elections, declared support only for those who were definitely fighting for the country's interests. The work on the Tobacco Products Directive was a good opportunity to demonstrate politicians' commitment to their, and thus the Tobacco Products Directive has raised perturbations in Poland, both in political and economic circles.

This is why, as mentioned above, at the end of 2013 Poland objected to the provisions of the new Directive regulating tobacco product ingredients and introducing a ban on the use of the term 'slim'. The potential ban on menthol and slim cigarettes sales would affect 35% of the cigarette market in Poland, and thus the introduction of the new law would – according to some experts – have a significant impact on the market situation. Polish local government authorities in areas where the largest tobacco plantations were located (central and eastern Poland) were particularly engaged in lobbying for changes to be made to the draft Directive that would be more favorable to Polish planters and cigarette manufacturers. It was emphasized that costs of its introduction would be very high for Poland. The alleged consequences concerned: loss of farm income, costs of farm profile changes, costs of unemployment benefits, and loss of revenue for the state budget (Tobacco Products Directive. Poles oppose).

The case of the Directive's possible consequences for the Polish market was publicized by the media, which reported that by opposing the Directive the Polish government was protecting 60 thousand jobs involved in tobacco cultivation, which did not seem to be entirely true. As a result of the campaign, the new Directive was opposed not only by the tobacco industry, but also by representatives of commerce, local authorities, and even Polish citizens themselves, who believed that the EU should do more to educate, not to ban (Tobacco Products Directive: Poles oppose, 2014; New Tobacco Products Directive, what will it change on the Polish cigarette market?, 2014).

It should be noted that encouraging smoking leads to enormous costs for healthcare and causes illnesses and premature deaths. Therefore, delaying the adoption of the Directive was detrimental to the Polish society. In fact, the same government increased taxes on cigarettes to such high levels that this contributed to the illegal manufacturing of cigarettes (or to the manufacturing of cigarettes for personal use) and to buying from contraband, because consumers could not afford to pay the high prices. It was also known that the government was actually looking for funds for the budget in 2014 and planned to raise the duty on tobacco by another 5%. Thus, the government supported the production of tobacco and cigarettes on the one hand, and raised the excise duty to increase revenues for the state budget on the other (Taxation of tobacco. Over a decade, the excise tax has tripled, 2014). Consequently, it appears that the changes to be introduced by the Directive were detrimental to the policy of the government, which is why the politicians supported large tobacco companies instead of fighting for the well-fare of the society. Finally, there was a lack of coherence between the policy on the EU forum (protection of agriculture and employment) and the local policy (raising of taxes, which contributed to the development of the shadow economy), where the society's welfare was compromised.

In addition, the fact is that cigarette manufacturers employed a lobbying force to delay work on the Directive or change its provisions in favor of the producers (Peeters *et al.*, 2016). Philip Morris International alone employed 160 lobbyists and allocated € 1.25 million to lobbying activities. By contrast, health advocates had five full-time positions working on the Directive (Peeters *et al.*, 2016). Clearly, cigarette producers focused on influencing the works on the Directive indirectly, which could be also observed in the activity of Polish politicians and mass media criticizing the new law. Furthermore, it has been shown that the anti-Directive campaign attempted to shift the debate away from health issues towards the alleged negative economic impacts of the proposal, also in Poland (The Tobacco Products Directive – not everything ends well – especially for trade, 2016).

7. The Scope of the New Tobacco Products Directive

In this section, an analysis of the major changes introduced by the new Directive is presented. The law generally seeks to regulate the tobacco market in such a way as to reduce the damaging effects of products containing nicotine. It is also supposed to limit public support for tobacco production and processing. The former Directive (2001/37/EC) on tobacco products was adopted in June 2001. Since then, the market situation changed (new tobacco products were introduced, Internet shopping became more popular), new findings of scientific research on tobacco were published, and finally new countries joined the EU. Hence, there was a need to update the Directive, with the works launched in 2010 and a finished draft made public in 2013. The initial regulations assumed that the new Directive on tobacco products should refer to five areas:

- 1) smokeless tobacco products and other products containing nicotine,
- 2) ingredients and additives,
- 3) packaging and labeling,
- 4) in store, cross-border, distance selling and
- 5) traceability and security.

- 1. Smokeless tobacco** is a tobacco product that is not smoked. Its uses include chewing, sniffing, or placing the product between the gums and the cheek or lip. Smokeless tobacco products are manufactured in various forms, such as chewing tobacco, snuff, snus, and even soluble tobacco products. While smokeless tobacco is said to be less harmful, there are studies proving that it increases risk of heart disease and stroke (Rostron *et al.*, 2018). Therefore, such products should be subject to similar regulations as traditional tobacco. Thus, the ban on selling tobacco for oral use was to be maintained, excluding Sweden, which had been granted an exemption specified in its Act of Accession to the EU.
- 2. Fragrance and flavor additives** for cigarettes were another problematic issue. The former Directive did not harmonize the member states' provisions on tobacco additives. Some member states, therefore, adopted their own legislations or entered into agreements with the industry, allowing or banning the use of certain additives. As a result of this, selected components were forbidden only in some member states while entirely allowed in others. The proposal predicated a ban on the sale of flavored tobacco products containing characteristic flavors such as fruit or chocolate. No flavorings should be allowed in filters, paper or in packaging, too.
- 3. Changes were also proposed to packaging.** The packet was to be completely blank, with a warning only. The proposal provided also that the combined warnings (graphics plus text) should occupy 75% of the surface of the packet and should be placed on both sides. At the same time, the use of warnings should be required: *Smoking kills - stop now!* and *Tobacco smoke contains more than 70 cancer-causing substances*. This part of the proposal was based on new evidence showing that the larger the graphic warning the better it is at attracting attention, suggesting that mixed labelling is more effective. Packet warnings containing information about tar, nicotine and carbon monoxide content used earlier were unclear (Capella, 2007; Macy et al, 2016; Lacoste-Badie, et al, 2019). In addition, the packaging, as well as the products themselves, could be misleading to consumers, especially young people, suggesting that the product is less harmful. This applied to such words as 'light', 'ultralight', 'mild', 'natural', 'organic', 'no frills', 'no flavoring', 'slim', and it was claimed that their use should be prohibited.
- 4. The Directive enabled the distance selling of tobacco**, thereby allowing consumers to legally access tobacco products unavailable on their domestic market. Here, a retailer located anywhere in the EU who sells or intends to sell a tobacco product cross-border to a consumer located in the EU should be registered and provide certain data about their activity. This was intended to

serve the EU's product origin and distribution tracking system in order to combat the illicit trade in tobacco products. In addition, a tamper-proof security seal should be placed on the unit packet of a tobacco product, in addition to its unique identifier, allowing the authenticity of every tobacco product to be verified.

5. According to the proposed Directive, new or modified tobacco products could only be introduced upon disclosure of data on the ingredients. Thus, before manufacturing could commence, the manufacturer would have to demonstrate information on the specificity and product ingredients. This means that the tobacco product manufacturer would be required to provide such data as: 1) a list of all the ingredients and the amount of each ingredient, in weight descending order, 2) a statement setting out the reasons for including each ingredient in the product, 3) any available toxicological data for each ingredient in a burnt or unburned form, 4) data describing the effects of the ingredients on consumers' health and taking into account any addictive effects.

Summing up, the new Directive was supposed to contribute to greater consistency, both between the member states and domestically. It also aimed to increase legal certainty, because the legal situation of nicotine-containing products was complex and unclear, resulting in unequal market conditions.

8. The Final Shape of the Directive

On January 22, 2014, the Committee on the Environment, Public Health and Food Safety voted on the final shape of the Tobacco Products Directive. As a result, the following regulations were established:

- no ban on the sale of slim cigarettes,
- plain packaging, point-of-sale display ban – abandoned,
- flavored cigarettes could be sold for the next 4 years,
- necessity to make the so-called positive list of permitted substances (e.g. sugar),
- the warning would occupy 65% of the surface of the packet,
- enhanced reporting obligations,
- traceability of tobacco products,
- cross-border distance sales – responsibility for the decisions/rules transferred to the Member States.

The Tobacco Products Directive is currently (2021) being implemented. For example, the product origin and distribution tracking system for cigarettes was launched in 2019, while certain regulations (such as the one on the recall of flavored cigarettes, traceability of tobacco products other than cigarettes and roll-your-own tobacco) will only enter into force in May 2024 (The EU will trace cigarettes, 2017).

It is worth of mentioning, that the intervention by British American Tobacco, Philip Morris International, Imperial Tobacco and Japan Tobacco International lobbyists not only led to repeated delays to the Directive's passage through the Commission, but also resulted in the removal of the two provisions that the tobacco industry was most concerned about, i.e., plain packaging and the point-of-sale display ban. Another original intention was that a license, similar to drug licenses, should be required if nicotine concentration was high, and this too was eventually removed from the draft (Peeters *et al.*, 2016). It was not the first time that tobacco companies had caused controversies that impacted their credibility (Jindrichovska *et al.*, 2019). At the same time, this situation proved that whether a new law will be introduced or not depends on the culture and values found in the given country (Supriadi, 2018).

9. The Impact of the Directive on Various Socio-Economic Areas

An analysis of the essence and scope of the changes introduced by the Tobacco Products Directive shows that it has the potential to affect the state budget, agricultural production, and tobacco production and trade (mostly referring to cigarettes), and – lastly – influence the health of smokers (Figure 5). Since tobacco products cannot be promoted, the Directive may also indirectly affect the mass media and the advertising market, but because this regulation had already been in place, it shall be omitted in the present considerations.

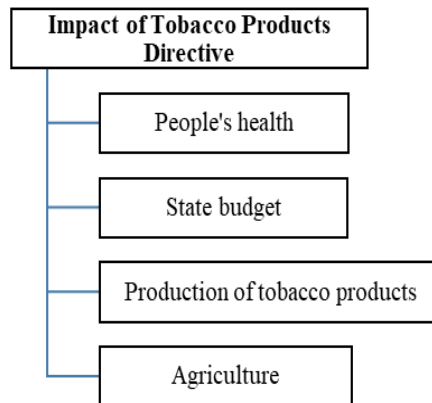
Certainly, it can be expected that some areas would change in positive and others in negative ways, and thus it is important that the right perspective should be adopted in the present discussion. Perhaps most of the state and local budget stakeholders, cigarette manufacturers, traders and growers, have some negative perceptions of the new regulations restricting trade – let us assume this to be true at this point. Tobacco farms will be forced to change their production profiles and the government will have to prepare funds for unemployment benefit payments should the unemployment rate actually increase (Karwinski, 2015), although probably the amounts will not be as high as previously announced. Anyhow, a negative reaction could be expected too, with restrained development and additional transformation costs.

At the same time, the whole society should be able to derive benefits from the transformations, because the incentive to buy cigarettes will be reduced, and reliable information about effects of cigarette will be provided. These effects, however, are less tangible and more difficult to calculate, although further details on this subject will certainly be reported. As a reminder, the hypothesis put forward at the beginning of the paper was that the new Directive has not caused adverse changes in the analyzed areas. Therefore, when assessing the situation, the following reference points should be assumed:

- 1) human health – the number of deaths caused by smoking,
- 2) level of budget revenues (prices of cigarettes and other tobacco products, taxes, border protection),

- 3) production and sales of tobacco products (except agriculture),
- 4) tobacco growing / agriculture.

Figure 5. *Impact of the Tobacco Products Directive on various socio-economic areas*



Source: *Developed by the authors.*

To begin with, it should be noted that, naturally, the market indicators used in this paragraph are based on multiple factors such as policies of national governments, consumer lifestyles, the wealth of the society, the presence of campaigns on smoking, the situation in agriculture, etc. However, the indicators are used here in order to verify if the implementation of the Tobacco Products Directive has indeed had such a negative impact on Poland as anticipated back in 2013-2014. The Tobacco Products Directive does not only apply in Poland, and thus some indicators for the European Union will be provided later on to offer some background.

According to the CASE report (2020), the tobacco production chain includes, among others, the agricultural sector, tobacco purchasing organizations, raw tobacco processing plants, tobacco factories, logistics, and trade sectors. In 2019, PLN 10.9 billion in added value was generated in the entire chain, accounting for approximately 0.5 percent of GDP. These figures also translate into a significant number of jobs created by the tobacco sector directly and in related sectors – in 2019, it was around 33.3 thousand full-time jobs. In 2019, as many as over 600,000 people might have been involved in all stages of production and distribution (CASE 2020, p. 79). It is therefore worth considering how the Tobacco Products Directive has affected the aforementioned areas in Poland and other EU countries.

9.1 Human Health

Tobacco use remains the leading global disease risk factor, estimated to kill more than 7 million people each year worldwide, which is more than HIV/AIDS, tuberculosis, and malaria combined. If the current trends persist, tobacco will kill more than 8 million people around the globe each year by 2030, with 80% of the

premature deaths in the developing world. Tobacco-related deaths are not only tragedies out there, but they carry an important economic cost. The total damage to global economic caused by smoking, including medical costs and productivity losses from death and disabilities, has been estimated at more than 1.4 trillion US\$ per year, which accounts for 1.8 percent of the world's annual GDP (Global Tobacco Control and Health Taxes, 2019; The World Bank, 2021).

Tobacco addiction is more prevalent in people with lower incomes and poorer education. They spend a larger portion of their income on tobacco products than wealthier smokers, and suffer the most from smoking-related illnesses. The medical expenses and lost earnings associated with these illnesses contribute to pushing millions of households into financial crises and deeper poverty every year. Tobacco use reduces one's future earning potential, especially among young adults, and hampers adult workers' economic productivity.

Smoking kills 33-50% of all smokers in the world, shortening their life expectancy by an average of 15 years (12 ways to stay healthy, 2021). In the EU, tobacco is responsible for nearly 700,000 deaths every year. Moreover, the number of smokers in the EU is still high, accounting for 26% of the total population (Tobacco, European Commission). Tobacco is also the main killer of Poles. The almost threefold increase in cigarette consumption after World War II meant that tobacco smoking was the largest cause of mortality of the adult population of Poland for over 40 years. In the 1970s and 1980s, Poles were among the biggest cigarette consumers in the world. Smoking shortens life by many years. Middle-aged smoking Poles lose 22 years of their lives, and the elderly (aged over 70) approx. 8 years. Smoking is one of the main reasons why Poles live shorter than the inhabitants of the 15 countries of the 'old' European Union (12 ways to stay healthy, 2021).

Statistics for the death toll of smoking may vary because the causes of deaths are primarily recorded as diseases and only then attributed to, e.g., smoking (the so called 'smoking-related diseases'). Most frequent diseases caused by smoking are: cancer, cardiovascular diseases, chronic respiratory diseases, respiratory infections and tuberculosis, neurological disorders, diabetes and kidney diseases, and digestive diseases (<https://vizhub.healthdata.org/gbd-compare/>).

In 2019, 77.4 thousand deaths caused by cigarettes were recorded in Poland (Tab. 1), which cost PLN 57,073 million. Notwithstanding, more than 40,000 children and 8,149,000 adults (15+ years old) continue to smoke tobacco every day. The above cost includes direct costs related to healthcare expenditures and indirect costs related to lost productivity due to early mortality and morbidity (Tobacco Atlas 2018). Tobacco-related mortality has remained high for years, despite a decline in domestic consumption. Much of this is due to the aging of the population, which is associated with more deaths in older age groups.

Table 1. Number of deaths caused by smoking in Poland in 2010 and from 2015 to 2019

Deaths	Years					
	2010	2015	2016	2017	2018	2019
smoking	75.6	75.2	75.0	75.9	76.7	77.4
secondhand smoking	7.8	7.5	7.4	7.5	7.7	7.7
Total	83.4	82.7	82.4	83.4	84.4	85.1

Source: Developed by the authors based on: Institute for Health Metrics and Evaluation, <https://vizhub.healthdata.org/gbd-compare/> - accessed on: 28.02.2021.

According to the World Health Organization, the treatment of the most common chronic lung disease in Europe costs up to EUR 3.5 thousand per patient annually. In Poland, according to the Ministry of Health, this cost ranges from PLN 10,000 to 20,000 per year. The World Bank estimates that in a country with a high number of smokers, such as Poland, the cost of treating diseases caused by tobacco smoke accounts for 15 percent of all medical expenses. For example, in Germany the annual expenditure on the treatment of the so-called ‘smoking-related diseases’ is eight times higher at EUR 17 billion (Zwoliński, 2010). Tables 2 and 3 show the total annual costs brought by the most important smoking-related diseases. Table 2 describes the minimum scenario (the smallest values from the given ranges for the number of patients or the relationship with tobacco consumption), while Tab. 3 summarizes the maximum scenario. The most optimistic scenario assumes that the total costs of treating the most important tobacco-related diseases amount to less than PLN 1 billion.

Table 2. The total cost of treating the most important smoking-related diseases in Poland – the minimum scenario

Disease	Patients requiring treatment (thous.)	Relationship with tobacco consumption (%)	‘Smoking’ cases (thous.)	Average cost of treatment (PLN thous.)	Total cost of treatment (PLN thous.)
chronic obstructive pulmonary disease	300	90	270.0	1.2	324,000
heart disease	300	10	30	7.0	210,000
bronchial asthma	58	25	14.5	4.43	64,235
stroke	60	25	15.0	7,785	116,800
lung cancer	21	90	18.9	4.9	92,610
premature birth	28	12	3.4	25	85,000
total	793	47	373.6	2.67	892,645

Source: Motnyk M, Chrobot M, Zemla B. Chosen economic and health consequences of tobacco consumption for the state budget and the public sector, 2016, *Polski Przegląd Nauk o Zdrowiu*, 2(47), p. 187.

Table 3. *The total cost of treating the most important smoking-related diseases in Poland – the maximum scenario*

Disease	Patients (thous.)	Relationship with tobacco consumption (%)	‘Smoking’ cases (thous.)	Average cost of treatment (PLN thous.)	Total cost of treatment (PLN thous.)
chronic obstructive pulmonary disease	500	90	450	4.0	1,800,000
heart disease	300	30	90	7.0	630,000
bronchial asthma	58	33	19.1	4.43	76,018
stroke	70	25	17.5	7,785	136,240
lung cancer	32	95	30.4	4.9	148,960
premature birth	30	12	3.6	30	108,000
total	1003	62	622.95	4.75	2,899,218

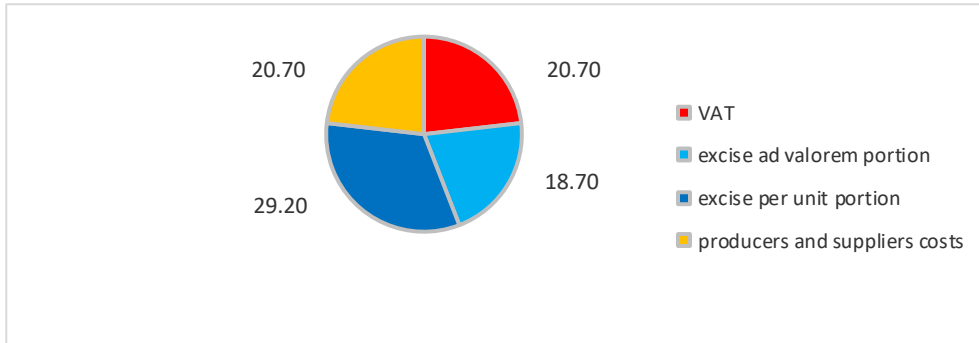
Source: Cf. Table 2.

9.2 Budget Revenues

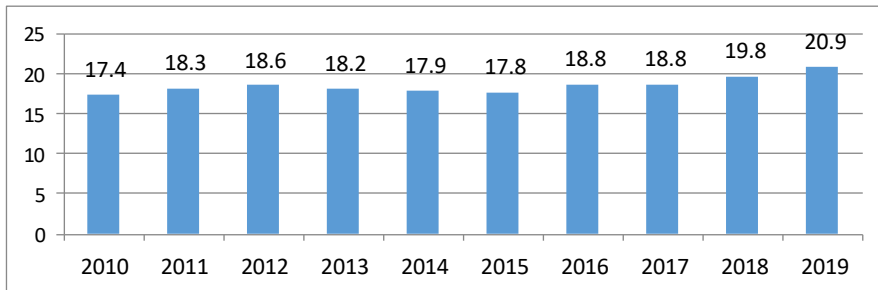
The state budget is mainly supplemented with tax revenues. In Poland, the taxes that flow into the state budget are: value-added tax (VAT), excise tax, tonnage tax, tax on the extraction of certain minerals, tax on games, flat-rate personal income tax, and flat-rate income tax on clergy (Poland Central Government Budget). Personal income tax and corporate income tax are revenues flowing both to state budget and local governments, with the greater part being allocated to the state budget. In 2019, the share of VAT and excise duty in the weighted average price of cigarettes totaled 79.3%. However, as from 2020 – due to the increase in excise tax rate – this share has been even higher and amounted to 80.8% (Fig. 6). In the EU, in turn, the total tax (inclusive of VAT) as a percentage of the total tax-inclusive retail sales price ranged from 71.6% in Sweden to 88.7% in Bulgaria (Excise duty on tobacco products, frequently asked questions).

However, the largest share in the price of tobacco products falls to the excise tax which, combined with the high variability of its level, accounts for the greatest impact on the level of consumption and thus the volume of budget revenues.

Figure 7 shows the amount of budget revenues from excise duty on tobacco products. The decrease in excise duty revenues in 2012-2014 resulted, paradoxically, from the increase in excise duty rates, which contributed to the transfer of some consumption to the shadow economy (Figure 8).

Figure 6. Cigarette price structure in Poland in 2020 [%]

Source: Developed by the authors based on: CASE 2020 Report.

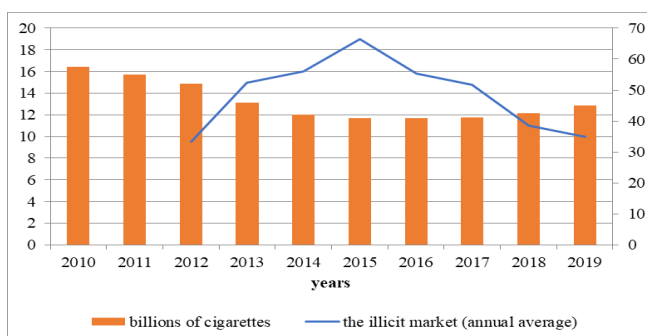
Figure 7. Excise tax revenue from final tobacco products [PLN billion]

Source: Cf. Fig. 6.

The increase in excise duty revenues in 2016-2019 (Figure 7) was caused by a growth in the legal consumption of tobacco products. It was in turn a consequence of:

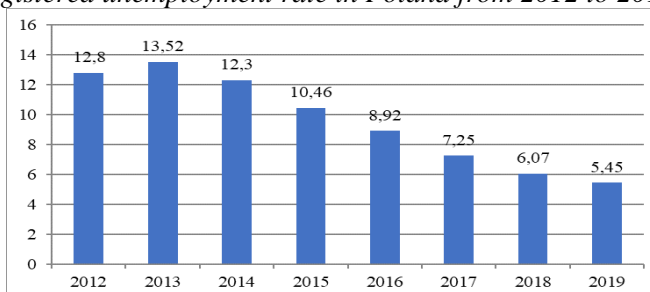
- the improved economic situation of the society, i.e., a decrease in the unemployment rate (Figure 9) and an increase in household disposable income (Figure 10),
- the activities aimed at reducing the size of the shadow economy following the implementation of the Tobacco Products Directive;
- the plans to implement the Track & Trace system obliging all participants of the supply chain (including manufacturers, distributors, transport companies, and retail outlets) to sign up and then track product movements.

Figure 8. The legal cigarette market [billions of cigarettes – right-hand side] compared with the illicit market [% of the whole cigarette market – left-hand side]



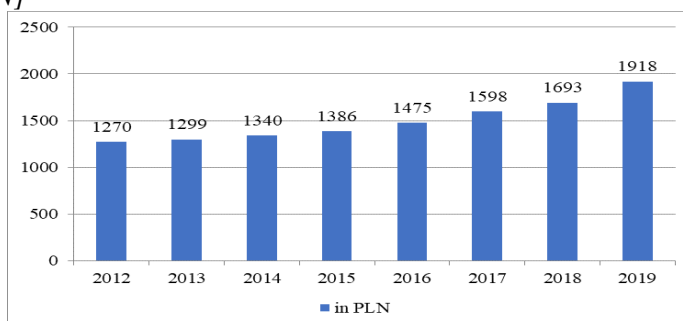
Source: Cf. Fig. 6.

Figure 9. Registered unemployment rate in Poland from 2012 to 2019 [%]



Source: Developed by the authors based on Statistics Poland, <https://stat.gov.pl/obszary-tematyczne/rynek-pracy/bezrobocie-rejestrowane/wyrownania-sezonowe-bezrobotni-zarejestrowani-i-stop-a-bezrobocia-w-latach-2011-2019,5,1.html> (accessed: 12.02.2021).

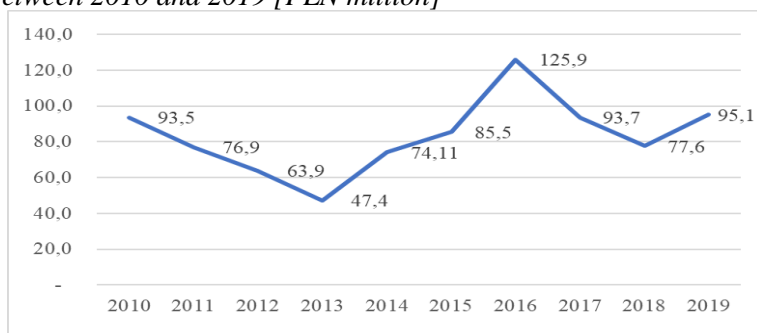
Figure 10. Average monthly disposable income of households in Poland from 2012 to 2019 [PLN]



Source: Developed by the authors based on Statistics Poland, <https://stat.gov.pl/obszary-tematyczne/warunki-zycia/dochody-wydatki-i-warunki-zycia-ludnosci/sytuacja-gospodarstw-domowych-w-2019-r-w-swietle-badania-budzetow-gospodarstw-domowych,3,19.html> (accessed: 12.02.2021).

The growing number of cigarette seizures at the Polish borders – 127.76 million in 2012 and 293.7 million in 2019 (a 230% increase; the Border Guard – statistics) is evidence to the tightness of the system. Notably, the 2020 data concerning the situation at the border and the smuggling activity will be entirely different because of the COVID-19 pandemic, which closed the borders, shut down the border markets, and blocked bus and passenger car traffic, which resulted in reduced opportunities for smuggling and buying illegal cigarettes and tobacco.

Figure 11. Smuggled cigarettes seized in Poland by border guards and custom services between 2010 and 2019 [PLN million]



Source: Developed by the authors based on Border Guard - statistics, <https://www.strazgraniczna.pl/pl/granica/statystyki-sg/2206,Statystyki-SG.html> (accessed: 12.02.2021).

As shown earlier for Poland, tax revenues are a substantial part of a state budget, which makes tight borders and efficient tax collection systems issues of vital importance.

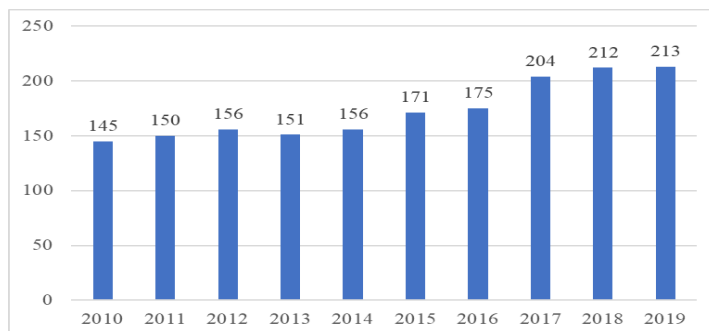
9.3 Production and Sale of Tobacco Products

Growing tobacco requires a lot of human effort and favorable climatic conditions. Poland is the northernmost country where tobacco is grown on a large scale, with its production focused mainly in the central and eastern parts of the country. The considerable input of costly human labor and the climate conditions that the plant requires have meant that the Polish tobacco sector has been losing out to developing countries, where labor costs are far lower and the weather is more favorable. As a result of this, despite being one of the largest producers of unprocessed tobacco in Europe, Poland has seen a systematic decrease in the production of products from domestic raw material, and the sector has been largely dependent on imports.

According to the available data, the ratio of production to imports is 1:4, and is 27.3 thous. tons of domestic production to 116 thous. tons of imports (Rocznik Statystyczny Przemysłu, 2017; Rynek Wyrobów Tytoniowych. Stan i perspektywy, 2016). As already mentioned, the production of cigarettes in Poland is growing – in 2010 it amounted to approx. 144 billion cigarettes, and in 2019 the figure exceeded

213 billion cigarettes, an increase of approx. 47% (an average of 5.3% per year; Figure 12).

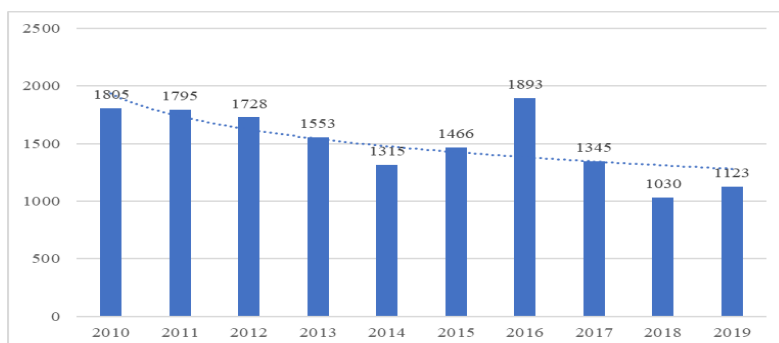
Figure 12. Cigarette production in Poland between 2010 and 2019 [billion cigarettes]



Source: Developed by the authors based on *Roczniki Statystyczne Przemysłu*, years 2012-2017, GUS, Warszawa, <https://stat.gov.pl/obszary-tematyczne/roczniki-statystyczne/roczniki-statystyczne>; accessed on 28.02.2021.

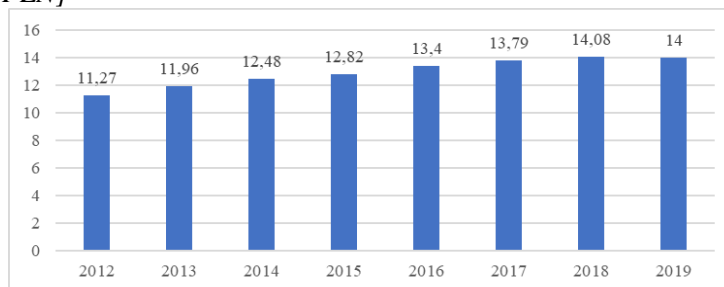
At the same time, the tobacco product consumption on the domestic market is systematically declining, as shown in Figure 13. The factors that may be to blame are the increasing popularity of healthy lifestyles, the ban on smoking in public places, and the raised prices. As for the last factor, the data show that cigarette prices increased by a few percent annually between 2012 and 2018. The largest increase of 6% was observed in 2013, while 2019 saw a decrease of 1% (Figure 14).

Figure 13. Cigarettes smoked annually by a statistical Pole between 2010 and 2019



Source: Developed by the authors based on *Dostawy na rynek krajowy oraz spożycie niektórych artykułów konsumpcyjnych na 1 mieszkańca*, 2014-2017, GUS, Warszawa, <https://stat.gov.pl/obszary-tematyczne/ceny-handel/handel/>; *Obroty towarowe handlu zagranicznego ogółem i według krajów*, years 2018-2019, GUS, Warszawa, <https://stat.gov.pl/obszary-tematyczne/ceny-handel/handel/>; accessed: 10.02.2021.

Figure. 14. Average price of a cigarette packet (20 pcs.) in Poland between 2010 and 2019 [PLN]



Source: Developed by the authors based on GUS – Bank Danych Lokalnych, <https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica>; accessed on 10.02.2021.

To a degree, the data on domestic consumption is contradictory. This contradiction is, however, only apparent and depends on the methodology applied, meaning whether or not the data account for the shadow economy. Another potential factor to consider here is immigration, which has increased since 2015, mainly from the East.

9.4 Tobacco Cultivation – Agriculture

Negative changes caused by the Tobacco Products Directive were also anticipated in agriculture, and expected to result not only in growing unemployment, but also decreasing yields and, therefore, lower incomes for farmers in general. As mentioned above, the new regulations were expected to lead to poverty and unemployment among farmers. This would be an unfavorable situation compared to the overall Polish agricultural sector, especially as regards farms profitability. However, it turns out that the registered unemployment rate saw a systematic decline between 2014 and 2019 (Fig. 9). This means that the predictions claiming that the unemployment would rise did not come true (admittedly, in 2020 the world was hit by the covid-19 epidemic, and thus the situation may have worsened, which is why the present study omits that year).

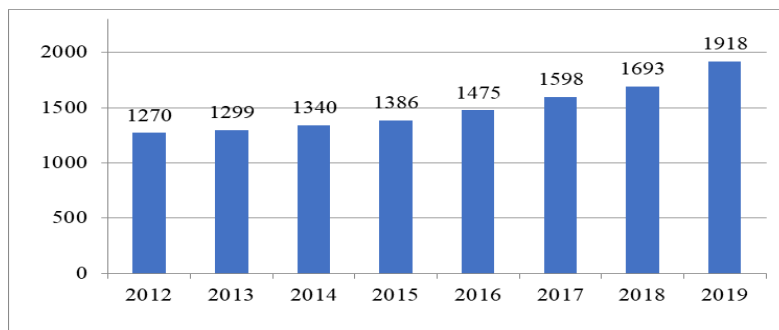
The farmers' income is another difficult issue; still, according to Statistics Poland, Polish farmers' income has been growing since 2015. In 2019, it amounted to PLN 1,667 per person, which was an increase of almost 59% (Fig. 15).

Unfortunately, there are no such data on tobacco farmers, although – using the buying prices of raw tobacco and the average yield per hectare in the plantations – estimations of such income are possible. Figure 16 addresses this issue.

Undoubtedly, changes have affected the situation of tobacco growers, and they have mainly concerned farm sizes. It is extremely difficult to clearly recognize the exact driving factors behind these changes, but it can be assumed that farmers increase their acreage to improve efficiency and profitability, and thus the number of farms is decreasing with their areas expanding. Statistically, therefore, these farms'

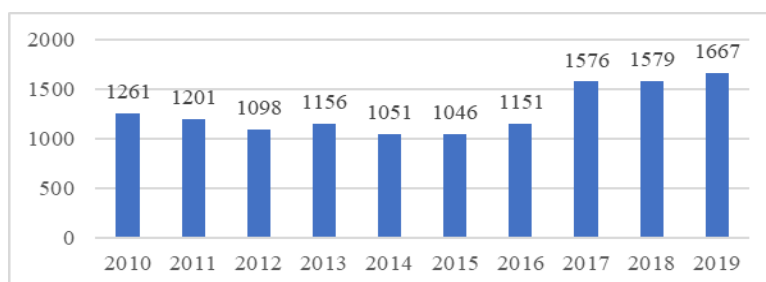
profitability is increasing, helped by the higher prices of tobacco sold to the industry, as clearly shown by the trend line in Figure 16.

Figure 15. Average monthly farm disposable income between 2010 and 2019 [PLN]



Source: Developed by the authors based on: *The situation of households in the light of the results of the household budget survey, years 2011-2020, GUS, Warszawa;* <https://stat.gov.pl/obszary-tematyczne/warunki-zycia/dochody-wydatki-i-warunki-zycia-ludnosci/>; accessed on 21.03.2021.

Figure 16. Average income per ha of tobacco sown area [PLN]



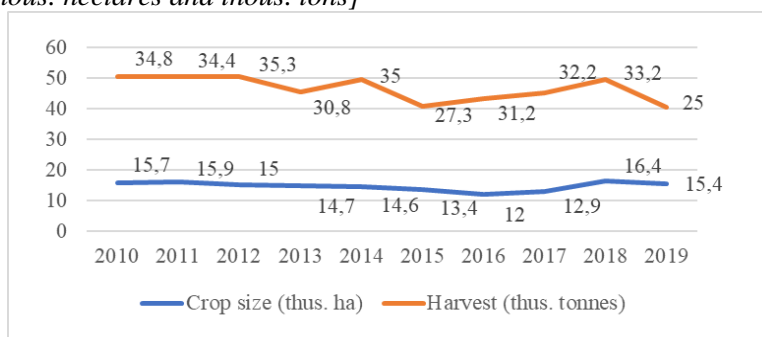
Source: Developed by the authors based on *Zintegrowany System Rolniczej Informacji Rynkowej*, <https://www.gov.pl/web/rolnictwo/rynek-tytoniu>; accessed on 21.03.2021.

Despite the maintained size of the sown area, tobacco yield is experiencing large fluctuations. This is mainly due to the weather conditions (droughts), as the curves in Figure 17 show.

After a short-term decline in the size of the sown acreage (years 2015, and 2016), which was probably caused by the announcement of the Tobacco Products Directive, the size of the sown tobacco area has remained at a similar level for years. Still, a drop in employment and the number of tobacco farms has been observed for many years, which however does not need to be perceived as adverse. After all, as already mentioned, these effects were accompanied by an increase in the average tobacco sown area (Tobacco Sector - Swot Analysis) – in 2012 the average plantation size was 1.58 hectares, and grew to 2.3 hectares in 2018 (an increase of 45%). The

changes that occurred between 2017 and 2019 resulted in a decrease in the number of farms from 11 to 6 thousand and a drop in employment from 50 to 40 thousand people. The decline in the number of farms being far larger than the drop in employment resulted from the consolidation of tobacco-growing farms, whereby they increased in size. This is confirmed by the data on the harvest size and the sown area, which have not fluctuated much in recent years. The reduced employment accompanied by an unchanged production volume proves in turn that the productivity of tobacco growing has improved.

Figure 17. *The sown area and the harvest size of tobacco in Poland between 2010 and 2019 [thous. hectares and thous. tons]*



Source: Developed by the author based on: Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej – Państwowy Instytut Badawczy, *Rynek Wyrobów Tytoniowych. Stan i perspektywy*, 2016, Warszawa; GUS, *Wyniki produkcji roślinnej w 2016 r.*, Warszawa, <http://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/uprawy-rolne-i-ogrodnicze/wyniki-produkcji-roslinnej-w-2016-roku,6,13.html>; GUS, *Rocznik Statystyczny Przemysłu 2017*; GUS, *Użytkowanie gruntów i powierzchnia zasiewów w 2018 r.*; GUS, *Użytkowanie gruntów i powierzchnia zasiewów w 2019 r.*

Despite with withdrawal of EU subsidies for tobacco farmers in 2015, which coincided with the increase in labor costs in agriculture, they continued to receive support from government subsidies, with the backing maintained in 2015-2020 from domestic resources (Ministry of Agriculture and Rural Development), although the aid could only be obtained in a form unrelated to current production. Anyhow, Polish tobacco farmers were receiving financial support and there is no reason to conclude that their economic situation worsened. Due to both environmental conditions and the dynamics of the labor market, Polish tobacco farming is not competitive in a global perspective. However, despite the lack of a price advantage over the raw material from non-European crops, Polish tobacco meets strict quality standards, such as an appropriate humidity, color, nicotine content, pesticides used, employment conditions, and environmental protection regulations (CASE 2020, p. 24). Therefore, thanks to maintaining its high quality, Polish tobacco is valued by cigarette manufacturers.

The Tobacco Products Directive could potentially either reduce and aggravate the negative trends in the profitability of crops – for example, as already mentioned,

sealing the system has increased the legal consumption of tobacco. However, in the long term, phasing out flavored tobacco products (especially menthol cigarettes) is expected to reduce the demand for tobacco products.

10. Discussion and Conclusions

As mentioned at the beginning, two goals were set in the present paper. The first was to define the main spheres of social and economic life affected by the Tobacco Products Directive. Importantly, such impact may be either positive or negative, and the intention was that both were to be taken into account. Therefore, after analyzing the provisions of the Tobacco Products Directive content, we found that it mainly concerns the following spheres:

- 1) human health,
- 2) level of budget revenues,
- 3) production and sale of tobacco products,
- 4) tobacco growing and agriculture.

Clearly, as the Directive's implementation is still ongoing, our deliberations had to be careful. Nevertheless, some conclusions can be drawn already. Globally, smoking kills 33-50% of all smokers, and shortens life expectancy by an average of 15 years. In the EU it means 700,000 deaths every year. Tobacco is also the main killer of Poles, with approx. 77,000 deaths caused by smoking annually. As mentioned above, the World Bank estimates that in a country with a high number of tobacco smokers, such as Poland, the cost of treating diseases caused by the habit accounts for 15% of all medical expenses (Zwoliński, 2010). Restraining smoking can reduce healthcare costs by up to three times and save human health and lives, as shown in Tables 2 and 3. Therefore, education and the introduction of restrictions on advertising and selling tobacco products should be assessed as positive from the point of view of human health.

The abundance of data (Figures 6-11) concerning Poland's economic situation and its state budget revenues show that following a slight decrease in revenues in 2014-2015 (possibly caused by the implementation of the Directive), they subsequently started to grow and the trend has remained constant. Between 2014 (announcement of the Directive) and 2019, state budget revenues from excise duty on tobacco products increased by PLN 3 billion (Fig. 7), showing that the introduction of the new regulations did not hurt the state budget. It also appears that the Directive did not affect the levels of employment and household disposable income during that period, although announcements of the occurrence of such effects were made (no separate data were available about the situation of tobacco growers, which is why general data for the national economy had to be used in the present study).

The ban on the sale of flavored cigarettes, as well as the introduction of restrictions on promotion and of provisions on the traceability of tobacco products, were

perceived as having a restricting effect on the demand and as threatening to producers. It turns out, however, that the production of cigarettes in Poland has been growing over the past 10 years (Figure 12), and this has not been changed by the new Directive. It should be noted that at the same time, cigarette consumption in Poland has been decreasing, which means that the cigarettes produced here are exported. It does not appear that the traders and producers will experience lower incomes because of the Directive, as the price of cigarettes has increased by 12% over a period of 5 years (Figure 14). As mentioned above, some damaging changes in agriculture caused by the Tobacco Products Directive were expected to happen, as well, resulting not only in an increase in unemployment, but also in lower yields, and thus reduced income for farmers in general. Statistical data show that in the 2010-2019 period, 2014 was the worst year when it comes to farmers' income, although this adverse situation could not have been caused by the Directive, as it had only just been introduced and many of its regulations were to be implemented over the following years. On the other hand, the recent years have been marked by a large increase in farmers' income; for instance, their income grew by 58.6% from 2014 to 2019 (Figure 15). The income of tobacco growers can be estimated by taking into account the buying prices of raw tobacco and the average yield of plantations per hectare. Such calculations show that the growers' income per hectare has increased, as well (Figure 16).

Certainly, changes have affected tobacco plantations, with their number decreasing and acreage increasing. However, it is difficult to establish whether such changes have resulted from the growers' pursuit of better production efficiency or any difficulties caused by the Directive. Assuming that tobacco growers wish to develop their businesses and improve their efficiency, our guess is that it is the former of the two possible reasons that has been responsible for these changes, and that the Tobacco Products Directive has had no negative impact in this regard. Consequently, we consider our hypothesis that the new Directive has not caused negative changes from the perspective of the country's socio-economic development as confirmed.

These are our conclusions regarding the impact of the Directive after 5 years of its operation. It should be noted that the final shape of the Tobacco Products Directive is significantly different from the first draft announced in 2013. The differences mainly lie in the significant relaxation of the regulations for the tobacco products market (with some of them abandoned and others postponed by 4 years).

Thus, returning to the second goal of our article that aimed at assessing the impact of the Tobacco Products Directive on selected socio-economic areas, our conclusion is that there are no grounds for the claim that the Directive has harmed such areas in any way. Importantly, however, arguments to the contrary were raised when Poland objected against the Directive. The main purposes of the Directive were to improve the functioning of the internal market for tobacco and related products while ensuring a high level of health protection for European citizens, and to some extent

this has been achieved. However, there was another side to the story, as cigarette producers allocated huge resources to lobbying for a delay in the works on the Directive or for its provisions to be changed in their favor. They focused on exerting an indirect influence on the developments, and so did the politicians and mass media in Poland criticizing the new law. As result of this, two provisions that the tobacco industry was most concerned about were removed from the Directive, i.e., the ones introducing plain packaging and banning point-of-sale displays.

The tobacco industry uses a variety of unethical, often unlawful tactics to undermine the implementation of life-saving policies. In 2015, the six largest cigarette companies made a profit of \$9,730 per tobacco-related death (The Tobacco Atlas, 2020). Tobacco smoking declines whenever governments manage to implement effective tobacco control policies. More quitting and less initiation of tobacco use contribute to greater individual and societal health and general well-being. Certainly, a successful tobacco control system hurts the financial health of tobacco companies which, consequently, act in their own interest by, for instance, aggressively lobbying and litigating against government tobacco control policies. Notwithstanding, research to date into the costs of smoking for the Polish healthcare and economy indicates that they are approximately twice as high as the state's profits from tobacco taxation (<http://www.kodekswalkizrakiem.pl/>). Therefore, governments must act proactively and assertively to implement interventions and strongly resist the tobacco industry's attempts to undermine these efforts. The EU Tobacco Products Directive in its original shape proposed in 2013 was a good example of such efforts. Unfortunately, the form that the document adopted eventually may be perceived as a defeat.

References:

- Apanowicz, J. 2000. Metodologiczne elementy procesu poznania naukowego w teorii organizacji i zarządzania. Wyd. Bernardinum, Gdynia.
- 12 ways to stay healthy. The European Code against Cancer, Polska Liga Walki z Rakiem. Retrieved from <http://12sposobownazdrowie.pl/>.
- Banski, J. 2010. Dilemmas for Regional Development in the Concepts Seeking to Develop Poland's Spatial Structure. *Regional Studies*, 44(5), 535-549, DOI: 10.1080/00343400902926375.
- Border Guard - statistics for 2012, 2014, 2017 and 2019. Retrieved from <https://www.strazgraniczna.pl/pl/granica/statystyki-sg/2206,Statystyki-SG.html>.
- Capella, M.L. 2007. The de-marketing of smokeless tobacco for harm reduction. *Journal of Consumer Marketing*, 24(2), 68-70. DOI: 10.1108/07363760710737067.
- CASE. 2018. Wpływ produkcji wyrobów tytoniowych na polską gospodarkę. Warszawa.
- CASE. 2020 Report: the impact of production of tobacco products on Polish economy, Warszawa.
- Chaplin, H., Gorton, M., Davidova, S. 2007. Impediments to the Diversification of Rural Economies in Central and Eastern Europe: Evidence from Small-scale Farms in Poland. *Regional Studies*, 41(3), 361-376. DOI: 10.1080/00343400701282129.

- Charron, N., Dijkstra, L., Lapuente, V. 2014. Regional Governance Matters: Quality of Government within European Union Member States. *Regional Studies*, 48(1), 68-90, DOI: 10.1080/00343404.2013.770141.
- Corruption Perceptions Index. Retrieved from <https://www.transparency.org/en/cpi/2019/index/nzl>.
- Costa, J., Mossialos, E. 2006. Which policies effectively enable smoking cessation? Evidence from the European Union. *International Journal of Social Economics*, 33, 77-100. DOI: 10.1108/03068290610636442.
- Directive 2001/37/EC of the European Parliament and of the Council of 5 June 2001 on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco products - Commission statement. 2001. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32001L0037>.
- Directive 2014/40/EU of the European Parliament and of the Council of 3 April 2014 on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products and repealing Directive 2001/37/EC (2014): *Official Journal of the European Union*, 29.4.2014, L 127/1.
- Eurostat. Statistics explained. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Agriculture,_forestry_and_fisheries.
- Excise duty on tobacco products: frequently asked questions. 2008. Retrieved from https://ec.europa.eu/commission/presscorner/detail/de/MEMO_08_506.
- Faostat. Retrieved from <http://www.fao.org/faostat/en/#data/QC> (28.09.2020).
- Global Tobacco Control and Health Taxes. 2019. The World Bank. Retrieved from <https://www.worldbank.org/en/topic/tobacco>.
- GUS. 2017. Wyniki produkcji roślinnej w 2016 r. Retrieved from <http://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/uprawy-rolne-i-ogrodnicze/wyniki-produkcji-roslinnej-w-2016-roku,6,13.html>.
- GUS. 2019. Użytkowanie gruntów i powierzchnia zasiewów w 2018 r. Retrieved from <https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/rolnictwo/uzytkowanie-gruntow-i-powierzchnia-zasiewow-w-2018-roku,8,14.html>.
- GUS. 2020. Statistics Poland. Budżety gospodarstw domowych. Retrieved from <https://stat.gov.pl/obszary-tematyczne/warunki-zycia/dochody-wydatki-i-warunki-zycia-ludnosci/sytuacja-gospodarstw-domowych-w-2019-r-w-swietle-badania-budzetow-gospodarstw-domowych,3,19.html>.
- GUS. 2020. Użytkowanie gruntów i powierzchnia zasiewów w 2019 r. Retrieved from <https://stat.gov.pl/obszary-tematyczne/rolnictwo-lesnictwo/rolnictwo/uzytkowanie-gruntow-i-powierzchnia-zasiewow-w-2019-roku,8,15.html>.
- GUS. Bank Danych Lokalnych. Retrieved from <https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica>.
- GUS. Statistics Poland. Rynek pracy. Retrieved from <https://stat.gov.pl/obszary-tematyczne/rynek-pracy/bezrobocie-rejestrowane/wyrownania-sezonowe-bezrobotni-zarejestrowani-i-stopa-bezrobocia-w-latach-2011-2019,5,1.html>.
- GUS. 2018. Dostawy na rynek krajowy oraz spożycie niektórych artykułów konsumpcyjnych na 1 mieszkańca w 2017 roku. Retrieved from <https://stat.gov.pl/obszary-tematyczne/ceny-handel/handel/dostawy-na-rynek-krajowy-oraz-spozycie-niektorych-artykulow-konsumpcyjnych-na-1-mieszkanca-w-2017-roku,9,8.html>.

- GUS. 2019. Obroty towarowe handlu zagranicznego ogółem i według krajów w okresie styczeń-grudzień 2018 roku. Retrieved from <https://stat.gov.pl/obszary-tematyczne/ceny-handel/handel/obroty-towarowe-handlu-zagranicznego-ogolem-i-wedlug-krajow-w-okresie-styczen-grudzien-2018-roku,1,77.html>.
- GUS. 2020. Obroty towarowe handlu zagranicznego ogółem i według krajów w okresie styczeń-grudzień 2019 roku. Retrieved from <https://stat.gov.pl/obszary-tematyczne/ceny-handel/handel/obroty-towarowe-handlu-zagranicznego-ogolem-i-wedlug-krajow-w-okresie-styczen-grudzien-2019-roku,1,89.html>.
- GUS. Rocznik Statystyczny Przemysłu, 2012, 2013, 2014, 2015, 2016, 2017. Retrieved from <https://stat.gov.pl>.
- Holden, C., Hawkins, B. 2018. Law, market building and public health in the European Union. *Global Social Policy*, 18, 45-61. DOI: 10.1177/1468018117745689.
- Institute for Health Metrics and Evaluation. Retrieved from <https://vizhub.healthdata.org/gbd-compare/>.
- International Statistics Yearbook. 2018. Central Statistical Office. Warsaw.
- International Trade Centre. Retrieved from https://www.trademap.org/tradestat/Country_SelProduct_TS.aspx.
- Jindrichovska, I., Kubickova, D., Stratulat, M. 2019. Early Stage of Sustainability Reporting: Case Study from the Czech Tobacco Industry. *European Research Studies Journal*, 22(1), 128-142. DOI: 10.35808/ersj/1413.
- Karwinski, S. 2015. Branża tytoniowa na wulkanie. Jak rząd może zniszczyć pół miliona miejsc pracy, 30.07.2015. Retrieved from <https://biznes.wprost.pl/gospodarka/516089/branza-tytoniowa-na-wulkanie-jak-rzad-moze-zniszczyc-pol-miliona-miejsc-pracy.html>.
- Lacoste-Badie, S., Gallopel-Morvan, K., Lajante, M., Droulers, O. 2019. How do smokers respond to pictorial and threatening tobacco warnings? The role of threat level, repeated exposure, type of packs and warning size. *Journal of Consumer Marketing*, 36(4), 461-471. DOI: 10.1108/JCM-01-2017-2051.
- Lokhande, S., Glover, M., Selket, K. 2013. Chewing tobacco use among South-East Asian men in Auckland. *International Journal of Migration, Health and Social Care*, 9(1), 46-52. DOI: 10.1108/17479891311318575.
- Macy, J.T., Chassin, L., Presson, C.C., Yeung, E. 2016. Exposure to graphic warning labels on cigarette packages: Effects on implicit and explicit attitudes towards smoking among young adults. *Psychology and health*, 31(3), 349-363. DOI: 10.1080/08870446.2015.1104309.
- Mapy i dane statystyczne imigrantów i służb migracyjnych Polski, <https://migracje.gov.pl/>.
- Martin, T. 2020. Smoking Statistics From Around the World. Retrieved from <https://www.verywellmind.com/global-smoking-statistics-2824393>.
- McKee M., Mossialos E., Belcher P. 1996. The Influence of European Law On National Health Policy. *Journal of European Social Policy*. 6(4), 263-286. DOI:10.1177/095892879600600401.
- Motnyk, M., Chrobot, M., Zemla, B. 2016. Chosen economic and health consequences of tobacco consumption for the state budget and the public sector. *Polish Review of Health Sciences*, 2(47).
- New tobacco directive: what will it change on the Polish cigarette market? 2014. Retrieved from <https://www.polskieradio24.pl/42/273/Artykul/1584734>.
- Örnberg, C.J. 2013. A solitary case: Swedish tobacco policy as harm reduction? *Drugs and Alcohol Today*, 13(2), 102-110. DOI: 10.1108/DAT-02-2013-0007.

- Peeters, S., Costa, H., Stuckler, D., McKee, M., Gilmore, A.B. 2016. The revision of the 2014 European tobacco products directive: an analysis of the tobacco industry's attempts to 'break the health silo'. *Tobacco Control*, 25, 108-117. DOI: 10.1136/tobaccocontrol-2014-051919.
- Poland Central Government Budget. Retrieved from <https://www.ceicdata.com/en/poland/central-government-budget-state-budget-act/central-government-budget-revenue-ytd-tax-direct-personal-ow-flat-rate-income-tax> - accessed on: 23.03.2021.
- Regulation of the Minister of Agriculture and Rural Development from 14 March 2012 on tobacco growing regions. *Journal of Laws* 2012, item 276. Retrieved from <https://www.prawo.pl/akty/dz-u-2012-276,17781245.html>.
- Report Tobacco Sector - Swot Analysis. 2019. Institute of Agricultural Economics and Food Economy, Warsaw. Retrieved from https://krs.org.pl/images/pdfy2019/4_analiza_swot_sektor_tytoniu.pdf.
- Resmini, L. 2007. Regional patterns of industry location in transition countries: does economic integration with the European Union matter? *Regional Studies*, 41, 747-764. DOI: 10.1080/00343400701281741.
- Rostron, B.L., Chang, J.T., Anic, G.M., Tanwar, M., Chang, C.M., Corey, C.G. 2018. Smokeless tobacco use and circulatory disease risk: a systematic review and meta-analysis. *Open Heart*, 5(2), 1-15. DOI: 10.1136/openhrt-2018-000846.
- Rowe, T., Kleiner, B. 2002. New developments concerning tobacco smoke in the workplace. *Managerial Law*, 44(1/2), 156-165. DOI: 10.1108/03090550210770740.
- Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi w sprawie rejonów uprawy tytoniu [Regulation of the Minister of Agriculture and Rural Development on tobacco growing regions], Dz. U. 2012, poz. 276.
- Rule of Law Report. The rule of law situation in the European Union. 2020. Retrieved from https://ec.europa.eu/info/sites/info/files/communication_2020_rule_of_law_report_en.pdf.
- Rynek Wyrobów Tytoniowych. Stan i perspektywy. 2016. Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej – Państwowy Instytut Badawczy, Warszawa.
- Statista. 2021. Leading tobacco producing countries worldwide in 2019 (in 1,000 metric tons)* Retrieved from <https://www.statista.com/statistics/261173/leading-countries-in-tobacco-production/>.
- Statistical Yearbook of Agriculture. 2018. Statistics Poland, Warsaw.
- Statistical Yearbook of Agriculture. 2019. Statistics Poland, Warsaw.
- Supriadi, L. 2018. Role of Culture and Law Enforcement in Determining the Level of IFRS Adoption. *European Research Studies Journal*, 21(1), 56-64. DOI: 10.35808/ersj/929.
- Taxation of tobacco. Over a decade, the excise tax has tripled. 2014. Retrieved from https://www.podatki.biz/artykuly/opodatkowanie-tytoniu-przez-dekade-akcyza-wzrosla-trzykrotnie_16_24275.htm.
- The common agricultural policy (CAP) and agriculture in Europe. 2013. Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/MEMO_13_631
- The EU will trace cigarettes. 2017. Retrieved from https://ec.europa.eu/poland/news/171215_tobacco_pl - accessed: 28.08.2020.
- The situation of households in the light of the results of the household budget survey, GUS, Warszawa 2012, 2014, 2016 and 2019.
- The Tobacco Atlas 2018 and 2020. American Cancer Society. Retrieved from <https://tobaccoatlas.org/>.

- The Tobacco Directive - not everything ends well - especially for trade. 2016. Retrieved from <http://www.pih.org.pl/index.php/1511-dyrektywa-tytoniowa-nie-wszystko-dobrze-si-konczy-zwaszcza-dla-handlu>.
- The World Bank. Retrieved from <https://www.worldbank.org/en/topic/tobacco> - accessed on: 10.02.2021.
- Tobacco directive. Poles oppose. 2014. Retrieved from <http://www.egospodarka.pl/art/galeria/98356,Dyrektywa-tytoniowa-Polacy-przeciwni,1,39,1.html>.
- Tobacco, European Commission. Retrieved from https://ec.europa.eu/health/tobacco/overview_en, accessed 23.03.2021.
- Valek, J. 2019. Impact of the European Union membership on illicit trade in selected goods (case of Slovakia). *European Journal of Transformation Studies*, 7(1): 49-66.
- World No Tobacco Day 2017. WHO. Retrieved from <https://www.who.int/news-room/detail/30-05-2017-world-no-tobacco-day-2017-beating-tobacco-for-health-prosperity-the-environment-and-national-development>.
- Zintegrowany System Rolniczej Informacji Rynkowej. Retrieved from <https://www.gov.pl/web/rolnictwo/rynek-tytoniu>.
- Zwoliński, A. 2010. Na walce z palaczami państwo straci 300 mln zł. Retrieved from <https://www.money.pl/gospodarka/wiadomosci/artykul/na;walce;z;palaczami;panstwo;straci;300;mln;zl,8,0,585992.html>.