Study on the consumption of fine-cut tobacco

Final report for the European Smoking Tobacco Association

London Economics

July 2025

About London Economics

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Executive Summary

Introduction

London Economics were commissioned by the European Smoking Tobacco Association (ESTA) to undertake an analysis of the consumption of fine-cut tobacco (FCT) and its relationship with tobacco taxation policies.

This report builds on previous research done by London Economics[1] and presents case studies analysing domestic and non-domestic tobacco consumption and excise tax policies in France, Germany, the Netherlands, Slovakia, and the UK. The report also includes a cross-border analysis for France and Germany, investigating the effect of pandemic-related border closures and other restrictions on domestic tobacco consumption.

The role of the buffer function in tobacco markets

Past research has shown that the level of excise taxation of domestic FCT can play a critical role in reducing or preventing outpriced domestic FMC consumers from turning to non-domestic tobacco products, including illicit tobacco products, through an effect known as the “buffer function” of FCT. The buffer function is a real-world demonstration of the economic concept of cross-price elasticity, which measures how the demand for one product responds to changes in the price of another. For consumers, domestic factory-made cigarettes (FMC), legal cross-border tobacco, and illicit tobacco can be substitutes for each other, and in the absence of a less expensive domestic alternative, increases in FMC prices are likely to drive consumers towards non-domestic products (including illicitly traded cigarettes). However, the availability of domestic FCT, when excised at a lower rate than FMC, offers a domestically taxed and regulated alternative that appeals to cost-conscious consumers, especially when outpriced. A differential in the excise tax rate between FMC and FCT, with FCT excised at a lower rate, has a direct effect on pricing that can help keep consumers within domestic and legal markets, thereby mitigating the potential loss of tax revenues to cross-border and illicit trade.

France

France has experienced a significant decline in domestic tobacco consumption following substantial increases in tobacco excise taxes between 2011 and 2024. As a result, prices during this period for FCT rose by 198%, while price increases for FMC have been notably lower at 103%. This reflects a large reduction in the FCT-FMC excise tax differential, which diminished FCT's role as a buffer against non-domestic products. This same period also saw a rapid increase in the market share of non-domestic FMC, now approaching 50% of the FMC market.

While nominal revenues from tobacco excise taxes initially rose after 2011, they have declined since 2020 (reaching 0.48% of GDP in 2023, the lowest in this century). And while COVID-19-related border closures temporarily restricted consumers to buy domestic tobacco (notably of FCT) in France, especially in border regions, this development has since reverted to the pre-pandemic trend, demonstrating how France’s current tobacco excise tax strategy, and particularly the erosion of the

[1] London Economics (2018) Study on fine-cut tobacco excise structure in the European Union.

FCT excise differential and its price competitiveness, incentivises non-domestic tobacco consumption, undermining government revenue.

Germany

Germany has a low and declining market share of non-domestic FMC, as non-domestic FMC consumption has fallen disproportionately. In this regard, Germany is relatively successful compared to some other case study countries. The low levels of non-domestic consumption have resulted from a policy of moderate and periodic tobacco excise tax increases that deliberately preserved a significant differential between FMC and FCT. Germany's tobacco excise tax policy design explicitly recognised the buffer function role of FCT, as detailed by the German Federal Ministry of Finance, to "prevent a stronger migration of consumers" to non-domestic tobacco. This strategy has allowed domestic FCT to function as an effective buffer, with its consumption declining more slowly than FMC, and disincentivising outpriced domestic FMC consumers from switching to illicit or legal cross-border tobacco sources, even as overall domestic consumption falls.

While overall domestic tobacco consumption in Germany has declined, nominal tobacco excise receipts have largely remained stable. Germany's experience demonstrates that overall tobacco consumption can be reduced while maintaining control over the level of non-domestic tobacco consumption. This suggests that tobacco excise tax policies supporting the price competitiveness of FCT can contribute to mitigating the growth of illicit trade.

Netherlands

The Netherlands has shifted from moderate tobacco taxation and a stable non-domestic market share (around 20%) to implementing substantial excise tax increases on tobacco products between 2022 and 2024. These increases have likely accelerated declines in domestic tobacco consumption, with FCT consumption falling faster than FMC. The relatively faster decline in FCT consumption stands out in comparison to the other case study countries and indicates high price sensitivity amongst FCT consumers and the maturity of the Dutch FCT market.

In 2024, the FCT-FMC excise tax differential was reduced, and may affect the Dutch market's resilience to non-domestic tobacco consumption in the future. While nominal tobacco tax revenues have increased due to higher excise rates, they have declined as a percentage of GDP.

Following this increase in the excise tax burden, the Netherlands has experienced a significant increase in the non-domestic share of the FMC market in 2024. Further estimates suggest that this trend is also observed in the Dutch FCT market, and to a greater extent. Given that these changes affected FCT disproportionately more, it appears that the excise tax changes have eroded the price advantage of domestic FCT, leading to the growth of the illicit and non-domestic market, and thereby limiting government revenue potential.

Slovakia

Slovakia is characterised by its minimal consumption of non-domestic tobacco within the broader backdrop of a long-term decline in total tobacco consumption. While domestic FCT sales have increased since 2014, FCT remains a minor portion of the Slovakian tobacco market. A broader fall in FMC consumption drives the overall trend in the domestic tobacco market.

Slovakia implemented substantial FCT-specific excise tax increases in 2024, aimed at generating additional revenue. These excise tax increases have disproportionately increased the domestic price of FCT. In comparison to other case study countries, Slovakia stands out in that FCT is more expensive than FMC when using the standard 1g to 1 stick conversion rate across the 2011 to 2024 period.

Recent tax excise increases have coincided with growing non-domestic market shares, but these remain low relative to other case studies. The recent excise tax change limits longer-term analysis. These outcomes might depend on Slovakia's continued price competitiveness relative to other European countries, due to a diminished FCT buffer. Slovakia's nominal tobacco tax revenues have historically risen over time, remaining stable as a percentage of GDP. While FCT consumption is relatively small in Slovakia, the diminished FCT buffer could risk diverting consumers from domestic FCT towards non-domestic tobacco in this scenario, potentially undermining Slovakia's success in controlling illicit consumption and reducing overall tobacco excise tax receipts, contrary to the policy's stated objective.

United Kingdom

The United Kingdom has experienced a significant decline in the volume and market share of domestically taxed tobacco between 2011 and 2024. The market share of legal cross-border and illicit FMC has increased from 13% to 38% during the same period, coinciding with increases in tobacco excise rates in the UK, making it one of the most expensive European markets for tobacco. FCT-specific increases in the excise rate have further reduced the price differential between FCT and FMC during this period, weakening the incentive for outpriced domestic FMC consumers to purchase domestic FCT instead of illicit and legal cross-border tobacco.

These developments indicate that tax receipts from tobacco duties are following an overall downward trend in the UK due to the reduction in domestic tobacco consumption, while the amount of foregone tax revenue from non-domestic FMC consumption has been increasing over time. A tobacco tax policy that encouraged substitution towards domestic FCT instead of non-domestic tobacco would prevent a loss of tobacco excise tax revenues for the UK Exchequer. The UK's relatively large non-domestic tobacco consumption also weakens the government's long-term objective to reduce tobacco consumption.

Conclusion

The case studies suggest that FCT continues to play an important, though increasingly fragile, role as a buffer in European tobacco markets. When the price differential between FMC and FCT is maintained, FCT can contribute to limiting non-domestic and illicit substitution and protect public revenues. When taxation policies erode the price differential, consumers may turn to non-domestic tobacco, weakening the effectiveness of both fiscal and tobacco control policies.

1 Introduction

London Economics were commissioned by the European Smoking Tobacco Association (ESTA) to undertake an economic analysis of the consumption of fine-cut tobacco (FCT) and its relationship with tobacco taxation policies in Europe.

Scope

This report examines the relationship between tobacco excise tax policies, consumer behaviour, and fiscal outcomes between 2011 and 2024 across five European countries: France, Germany, the Netherlands, Slovakia and the United Kingdom, building upon previous research done by London Economics in 2018[2].

A central focus of the analysis is the price differential between domestic FCT and FMC, and the concept of FCT's "buffer function", which refers to the potential role of domestic FCT as a less expensive alternative that retains outpriced consumers within the legal market when domestic FMC prices rise.

The report also includes an analysis of the effects of the COVID-19 pandemic on domestic tobacco consumption in France and Germany, serving as a natural experiment of the buffer function.

Definitions

Fine-cut tobacco (*FCT*), also known as “hand rolling tobacco”, refers to “smoking tobacco in which more than 25% by weight of the tobacco particles have a cut width of less than 1.5 millimetre”, as defined by Article 5.2 of the Council Directive 2011/64/EU. FCT consumers must also buy papers and/or filters to make a cigarette. Smoking tobacco is defined under Article 5.1 as:

1. tobacco which has been cut or otherwise split, twisted or pressed into blocks and is capable of being smoked without further industrial processing;
2. tobacco refuse put up for retail sale which does not fall under Article 3 [cigarettes] and Article 4(1) [cigars or cigarillos] and which can be smoked. For the purpose of this Article, tobacco refuse shall be deemed to be remnants of tobacco leaves and by-products obtained from tobacco processing or the manufacture of tobacco products.

Factory-made cigarettes (*FMC*) refer to cigarettes as defined by Article 3.1 of the Council Directive 2011/64/EU as:

1. rolls of tobacco capable of being smoked as they are and which are not cigars or cigarillos within the meaning of Article 4(1);
2. rolls of tobacco which, by simple non-industrial handling, are inserted into cigarette-paper tubes;
3. rolls of tobacco which, by simple non-industrial handling, are wrapped in cigarette paper.

The analysis distinguishes between **domestically and non-domestically sourced tobacco**. *Domestic tobacco* is defined as tobacco that is subject to tobacco excise duties on its sale within the country

[2] London Economics (2018) Study on fine-cut tobacco excise structure in the European Union.

where it is consumed. Definitions of domestic status are made relative to the country of consideration within the analysis.

Non-domestic tobacco is defined as the tobacco that does not meet the criteria of domestic tobacco. Non-domestic tobacco can be legal when imported directly for 'own-use'. However, **non-domestic tobacco also includes illicit tobacco**, such as smuggled or illegally manufactured tobacco. While illicit tobacco within the EU can be partially sourced from other EU member states, this tobacco also frequently originates from non-EU countries.

Total domestic tobacco sales are defined within the French cross-border analysis of the pandemic period as the combined sales of domestic FCT, FMC and other domestic tobacco products.

Tobacco excise duties are the taxes levied upon the sale of tobacco products, normally consisting of a fixed specific excise rate, a variable ad valorem rate or a mix of both components.

Outpriced consumers refer to consumers who change their tobacco purchasing behaviour, reducing their consumption of domestic FMC, due to increases in tobacco prices (including tobacco excise duties) or other financial constraints such as cost-of-living crises, economic downturn, or unemployment. Another term that is often used to describe these types of consumers is price-sensitive, referring to consumers' greater willingness for demand substitution in the event of increasing prices. Past research identifies that FCT consumers are not only more price sensitive[3] but also that they (in general) face tighter budget constraints (and hence affordability issues) compared to FMC consumers[4].

The *pandemic period* is broadly defined as the time period following the international outbreak of COVID-19 from early 2020 until 2021 (and in some instances 2022). Slow and non-linear pandemic recoveries mean that the return to normalcy in the data is often gradual and can vary across countries.

Methods

Units of measurement for pricing and tax purposes differ between FCT and FMC. FCT is measured in kilograms, while FMC is measured in cigarette sticks. A conversion rate is necessary to compare the prices of these two tobacco types. Directive 92/80/EEC expressed the tax rate for FCT in kilogrammes, while Directive 2011/64/EU assessed the different tobacco categories through a tax rate for FMC measured in 1,000 cigarettes. Historically, the standard for comparing FCT and FMC is that 1 gram of FCT equals 1 stick (or cigarette). However, recent policy changes in some markets have introduced different stated or implied conversion rates. To ensure meaningful results when assessing tobacco policies, it is necessary to compare like-for-like when analysing the relationship between consumption, prices and taxation over time. In other words, the conversion rate must remain constant over the period of analysis. Since only relative taxation rates and prices matter for analysis, any constant conversion rate will show the same patterns in the data. Consequently, the traditional 1 gram to 1 stick conversion rate is used throughout this report to ensure consistency.

Average prices of domestic FMC and FCT products are calculated following the European Union's preferred methodology to calculate the weighted average price (WAP): the division of the total value of all relevant products released for consumption by the total quantity of relevant products released

[3] Ministerie van Volksgezondheid, Welzijn en Sport (2025) Gedragseffecten van de accijnsverhoging op tabak in 2024.

[4] London Economics (2018) Characteristics of FCT consumers and affordability.

for consumption. The European Union's methodology introduces a time lag of one year in the variables (the value and volume of products released) within their calculation of the WAP to facilitate timely policy analysis of current excise duty rates when the present value of these variables is unobtainable, as this data is not recorded in real-time. This study constitutes an analysis of historical data; therefore, for accuracy, this lag is not included in the calculation of price data. Consequently, calculated average prices reflect the value and volume of domestic tobacco within the respective year and not the prior year, as found in other datasets.

The annual tobacco excise tax burden on average-priced FCT and FMC products is calculated by applying tobacco excise duty rates to the calculated average price of domestic FCT or FMC. The minimum tobacco excise duty replaces the calculated tobacco excise tax burden if it lies below the minimum level, reflecting actual practice. Monthly tobacco excise duty rates are averaged across each year by component to calculate the average value of each component of the tobacco excise duty across the year for the calculation of the annual tobacco excise tax burden.

European tobacco excise duties are largely calculated under a mixed excise tax system, containing both a fixed specific tax and an ad valorem tax. Consequently, the tobacco excise tax burden does not increase linearly with the price. The lack of distributional data of domestic tobacco prices limits the study's analysis to the tobacco excise tax burden on FCT or FMC when priced according to its average price, calculated according to the aforementioned methodology. This may differ from the average tobacco excise tax burden depending on the distribution of tobacco prices.

Separated FCT and FMC excise duty revenues are available for the United Kingdom. Project STAR, Project SUN, Project STELLA, and Illicit Cigarette Consumption in Europe reports published between 2012 and 2025 by KPMG present empty pack survey estimates of non-domestic and illicit FMC consumption between 2011 and 2024. These estimates are used to calculate the revenue that has been foregone by these products being domestically untaxed. The impact on domestic FCT sales is estimated by the conversion of non-domestic FMC volumes into domestic FCT sales, calculated under a 1 gram of FCT to 1 FMC stick conversion rate. The foregone excise duty revenues are then calculated by applying the percentage increase in hypothetical domestic FCT sales to the excise duty revenue generated by domestic FCT sales.

These calculations assume that, if non-domestic FMC were replaced by domestic FCT, the distribution of FCT prices does not change, such that the average FCT tax burden is constant.

Sources

Annual domestic FCT and FMC sales and volumes from Euromonitor are used to calculate average domestic FCT and FMC prices. Additionally, Imperial Brands' dataset of country-level tobacco excise duty rates, as sourced from national authorities, is used to calculate tobacco excise tax burdens.

Estimates of non-domestic FMC consumption used within this report are sourced from KPMG's Project STAR, Project SUN, Project STELLA, and Illicit Cigarette Consumption in Europe reports published between 2012 and 2025[5], supplemented by further regional studies on non-domestic market shares from Kantar (for VSK), the Dutch Ministry of Finance, and Ipsos (for DZV). These estimates are derived from empty pack surveys, which are acknowledged by European Commission

[5] KPMG's annual reports are released in the subsequent calendar year to the period of observation. These reports cover activity between 2011 and 2023.

research[6] as a high-quality method of estimating non-domestic FMC consumption patterns. The KPMG reports typically divide non-domestic tobacco consumption into estimates of legal cross-border imports, counterfeit and contraband. These estimates must be interpreted appropriately and in context, as inherent difficulties exist in determining and measuring the legality and quantities of non-domestic tobacco.

Tobacco excise revenue data is sourced from the European Commission for the study's analysis of France, Germany, the Netherlands and Slovakia and from HMRC and the OBR for the United Kingdom case study.

Publicly accessible data from Logista France, measuring domestic tobacco sales at the French departmental level, is used within the French cross-border analysis of the pandemic period.

[6] European Commission (2021) Study to identify an approach to measure the illicit market for tobacco products

2 The role of the buffer function in tobacco markets

Past research by London Economics[7] has identified that outpriced consumers are less likely to seek non-domestic FMC when competitively priced FCT is available domestically. This relationship is known as the "buffer function" of FCT and is underpinned by the economic concept of cross-price elasticity. Cross-price elasticity measures the sensitivity of the quantity demanded of one good in response to a change in the price of another good. And while tobacco product prices are ultimately set by market actors, these prices are directly influenced by national tobacco excise tax rates and policies.

Consumers can choose between domestic FMC, legally acquired cross-border tobacco, and illicit tobacco (including smuggled, counterfeit and contraband tobacco), making them substitutes to one another. Since demand for tobacco products tends to go down as prices increase, an increase in the price of domestic FMC can drive demand towards less expensive non-domestic and illicit alternatives in the absence of a relatively less expensive domestic option.

The availability of affordable domestic FCT as an additional substitute modifies this dynamic. FCT tends to be less expensive than FMC, due in part to lower excise rates, creating a price differential between FCT and FMC. This price differential incentivises outpriced FMC consumers to switch to the relatively less expensive, but still domestically taxed and regulated, FCT instead of alternatives. Across most European markets, the local tobacco excise tax contributes a significant proportion of the final retail price of tobacco products. Setting a lower excise duty on FCT compared to FMC contributes towards a price differential that can secure tobacco excise tax revenues that would otherwise be lost to non-domestic consumption.

FCT can thus, depending on local tobacco excise tax rates and policies, serve as a buffer and mitigate the shift towards illicit or non-domestic tobacco, prevent losses in government revenue, and keep tobacco sales within a domestically taxed and regulated framework. The buffer function of FCT can, thus, be an effective tool for governments in their pursuit of tobacco policy objectives.

[7] London Economics (2018) Study on fine-cut tobacco excise structure in the European Union.

3 Tobacco taxation, prices and consumption in France

3.1 Key findings

France has experienced a significant decline in domestic tobacco consumption following substantial tobacco excise tax increases between 2011 and 2024. During this period, prices for FCT rose by 198%, while prices for FMC rose by 103%. This has reduced the FCT-FMC price differential significantly, diminishing FCT's role as a buffer against non-domestic products. At the same time, the market share of non-domestic FMC in France has rapidly increased, today approaching 50% of the FMC market. Between 2019 and 2024, the decrease in domestic FMC has been completely offset by the increase in non-domestic FMC, leading to a stagnant total FMC consumption.

While nominal tax revenues from tobacco initially rose as excise rates increased, tobacco tax revenue has declined since 2020 (reaching 0.48% of GDP in 2023, the lowest result in this century). While COVID-19 pandemic-related border closures temporarily boosted domestic sales, especially in France's border regions, the overall picture demonstrates that current French tobacco taxation policies, and particularly the erosion of FCT's price competitiveness due to significant excise tax increases, provides financial incentives for non-domestic tobacco consumption, undermining both government revenues and the broader effectiveness of tobacco control policies in France.

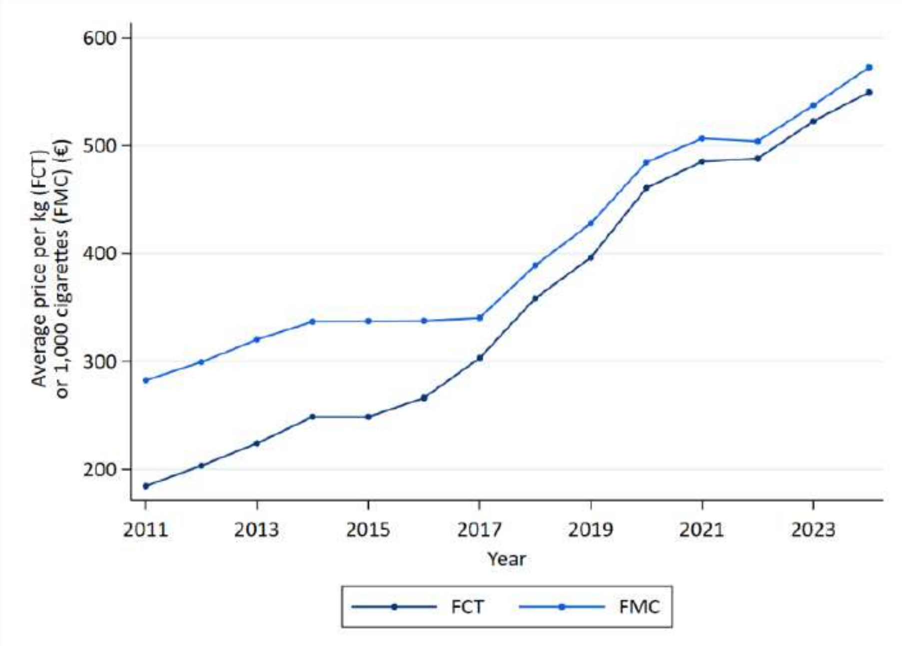
3.2 Trends in tobacco prices and consumption

3.2.1 Tobacco prices and taxes

As noted above, tobacco prices in France increased by 198% for FCT and 103% for FMC between 2011 and 2024 (see Figure 1) as a result of related increases in the tobacco excise rates for these and other product categories. Consequently, the price differential between FCT and FMC also decreased significantly during this period, especially as large increases in FCT taxation were introduced between 2016 and 2018, as well as between 2021 and 2022. The result was increases in tobacco prices, the largest of which came during the period between 2017 and 2020, with additional increases in 2023 and 2024, following a period of lesser increases in excise rates during the COVID-19 pandemic. The overall trend was that prices increased significantly, primarily driven by substantial increases in tobacco excise taxes over the 13 years, which represented approximately 84% of the price of both FCT and FMC in 2024 (see Figure 2), nearly erasing the excise tax differential between the two categories.

The reduction in excise and price differentials reduced the competitiveness of domestic FCT in relation to FMC and may weaken the potential buffer function against non-domestic tobacco.

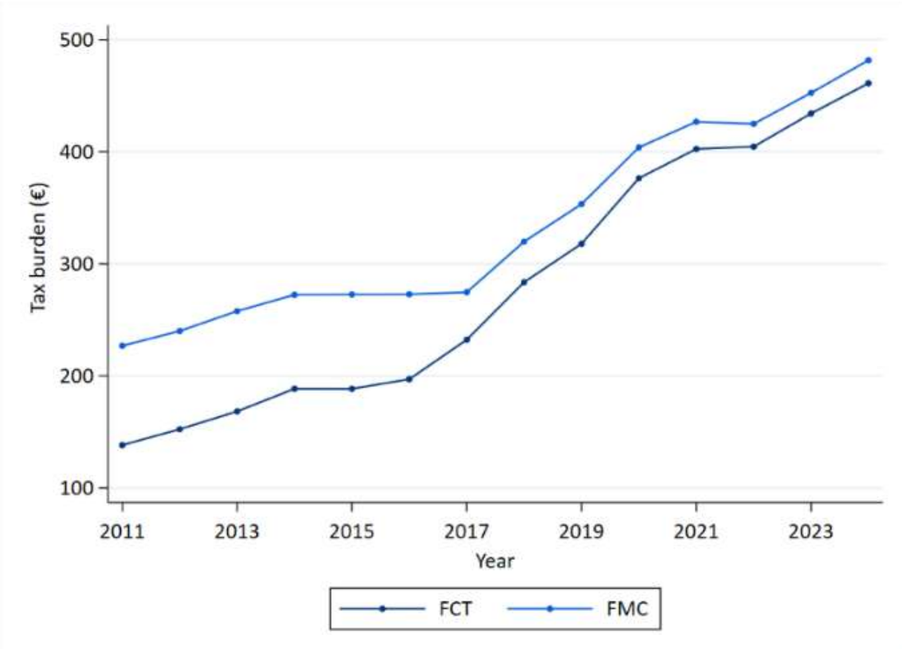
Figure 1 Average prices of FCT and FMC



Note: Average prices are calculated by dividing the total value of domestic FCT or FMC consumption by the volume of domestic FCT or FMC consumption.

Source: London Economics' analysis of Euromonitor data

Figure 2 Tobacco excise tax burden on average-priced FCT and FMC



Note: The tobacco excise tax burden is calculated by applying tobacco duty rates to the average price of the respective tobacco category.

Source: London Economics' analysis of Euromonitor data and Imperial Brands' dataset of tax rate structures.

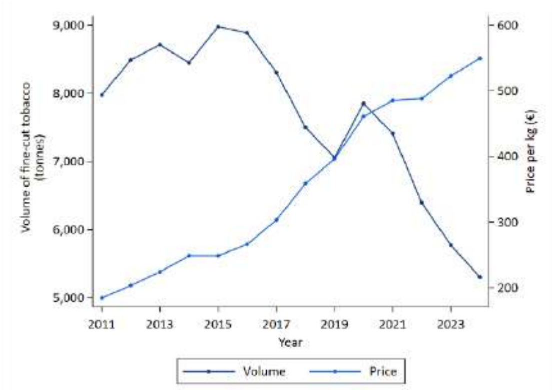
3.2.2 Tobacco taxation, prices and consumption

The consumption patterns of domestic FCT and FMC differ over the 2011 to 2024 sample period, with notable sub-periods identified as 2011 to 2014, 2014 to 2017, and 2017 to 2024 (see Figure 3 and Figure 4). Within the 2017 to 2024 subperiod, for example, a temporary disruption to the overall trend is observed during the COVID-19 pandemic period. The following provides a detailed discussion of each of the periods:

- **Proportionate growth in prices (2011 to 2014):** Domestic FCT consumption grew, and domestic FMC consumption decreased between 2011 and 2014, while prices of both tobacco categories increased linearly. The decline in domestic FMC consumption during this period can be interpreted as corresponding to the economic principle that consumers reduce their consumption of a good as prices rise, potentially consuming more affordable substitutes as a replacement. The increase in domestic FCT consumption, despite higher prices, could be seen as contradicting this principle. However, this fits within the broader FCT buffer function effect, suggesting the increase may represent movement by some consumers away from FMC and towards domestic FCT, as domestic FMC prices rose and domestic FCT presented better value.
- **Stable FMC consumption (2014 to 2017):** During this period, domestic FMC prices remained stable, while domestic FCT prices increased incrementally, narrowing the price differential. Domestic FMC consumption decreased moderately over the period. In contrast, domestic FCT consumption also continuously decreased from 2015 onwards, a time period corresponding to the largest increases in FCT excise taxes and thus, prices, during this period, ostensibly aligning with economic theory.
- **Return to price growth (2017 to 2024, excluding the pandemic period):** Both domestic FCT and FMC consumption have declined since 2017, excluding an increase in domestic FCT consumption during the COVID-19 pandemic period. This period also corresponds with substantial excise tax and related price increases in both product categories between 2017 and 2024, further reducing the incentive for consumers to purchase domestic tobacco.
- **Increase in domestic FCT consumption during the pandemic period:** While domestic FMC consumption continued to decrease in line with its 2017-2024 trend during the pandemic period, an increase in domestic FCT consumption was experienced in 2020 and, to a lesser extent, in 2021. Changes in pricing alone do not explain this trend. However, the introduction of border closures and other restrictions, coupled with France's high domestic tobacco prices compared to its European neighbours, could explain this change. Border closures and other restrictions led to limited availability of non-domestic tobacco. In turn, French citizens could only purchase more expensive domestic tobacco. The removal of pandemic lockdown restrictions coincides with the 2022 decrease in domestic FCT consumption, a reversal of the 2017-2024 trend. This can be interpreted that domestic FCT could prevent the substitution of domestic FMC with non-domestic FMC, if domestic FCT is competitively priced compared to the costs of obtaining non-domestic FMC. Overall, the observed patterns in both the consumption of domestic FCT and the lack of significant change in domestic FMC align with economic theory and the FCT buffer function.

The initial increase in domestic FCT consumption reflects the role of FCT as a buffer to outpriced consumers and an incentive to not switch to non-domestic tobacco. However, a weakening of the price differential between FCT and FMC and price increases across both categories corresponded with decreases in domestic tobacco sales, disproportionately impacting domestic FCT sales.

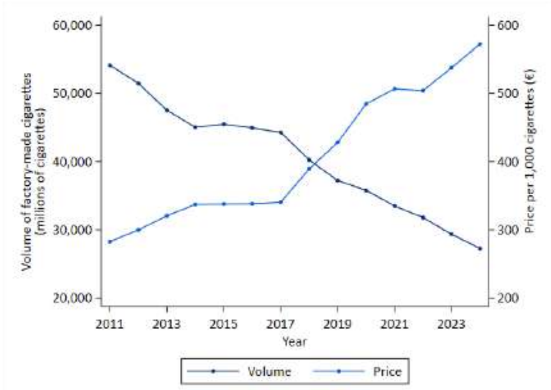
Figure 3 Volume and average price of (domestic) FCT



Note: Average prices are calculated based on the total value of domestic FCT consumption divided by the volume of domestic FCT consumption.

Source: London Economics' analysis of Euromonitor data

Figure 4 Volume and average price of (domestic) FMC



Note: Average prices are calculated based on the total value of domestic FMC consumption divided by the volume of domestic FMC consumption.

Source: London Economics' analysis of Euromonitor data

3.2.3 Non-domestic FMC consumption

Patterns in French non-domestic FMC consumption differ over the sample period (see Figure 5). Here, clear distinctions are observed in consumption patterns between 2011 and 2019, and those observed between 2020 and 2024:

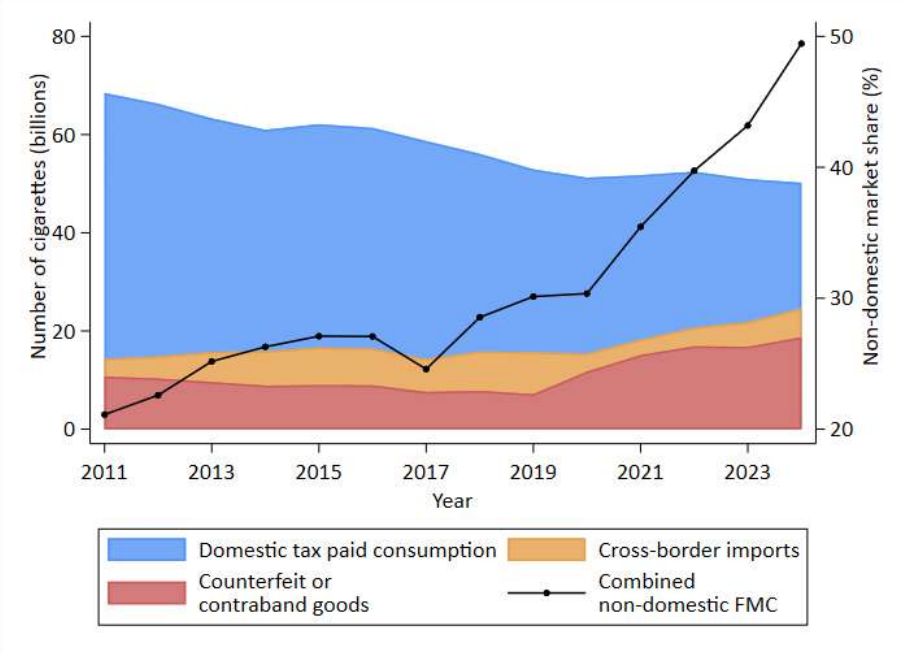
- **The 2010s (2011-2019)**: Domestic FMC sales decreased from 54.1 billion sticks in 2011 to 37.21 billion in 2019, while the volume of non-domestic FMC consumption remained largely unchanged. This meant that the market share of non-domestic FMC consumption saw a continuous increase prior to 2020, from 21% in 2011 to 30% in 2019. Despite unchanged non-domestic FMC sales, illicit FMC sales decreased during this period.
- **The 2020s (2020-2024)**: While domestic FMC consumption decreased at an accelerated rate during this period, non-domestic FMC consumption rose in absolute terms. This was driven by consumption of illicit tobacco, with legal cross-border imports remaining at historically low levels after the COVID-19 pandemic.[8] This co-occurrence suggests that French consumers were increasingly likely to substitute domestic tobacco for its non-domestic equivalent between 2020 and 2024. This growth in illicit tobacco could also explain some of the disproportionate decrease in domestic FCT consumption since 2020.
- **In 2024**, non-domestic FMC accounted for 49% of the FMC market, according to KPMG. If the recent trend continues, non-domestic FMC will soon overtake domestic FMC as the primary source of French FMC. Increasing non-domestic tobacco consumption, is likely to

[8] Estimates of legal cross-border tobacco may include illicitly smuggled products due to the challenges in verifying their legality. Nevertheless, consistent relative trends in these estimates can still offer a valuable approximation of legal cross-border consumption patterns, even if they are not perfect.

be driven by France's very high relative tobacco excise rates and their effect on prices, and the resulting reduced price differential between FMC and FCT, and increased consumer price consciousness during the pandemic and inflation-driven, cost-of-living crisis.

The weakening competitiveness of domestic FCT in France coincided with greater non-domestic consumption, highlighting the role of domestic FCT as a buffer to non-domestic tobacco.

Figure 5 Factory-made cigarettes by tax origin of purchase over time



Source: KPMG Project STAR / Project SUN / Project STELLA / Illicit cigarette consumption in Europe

3.3 Cross-border analysis of the pandemic period

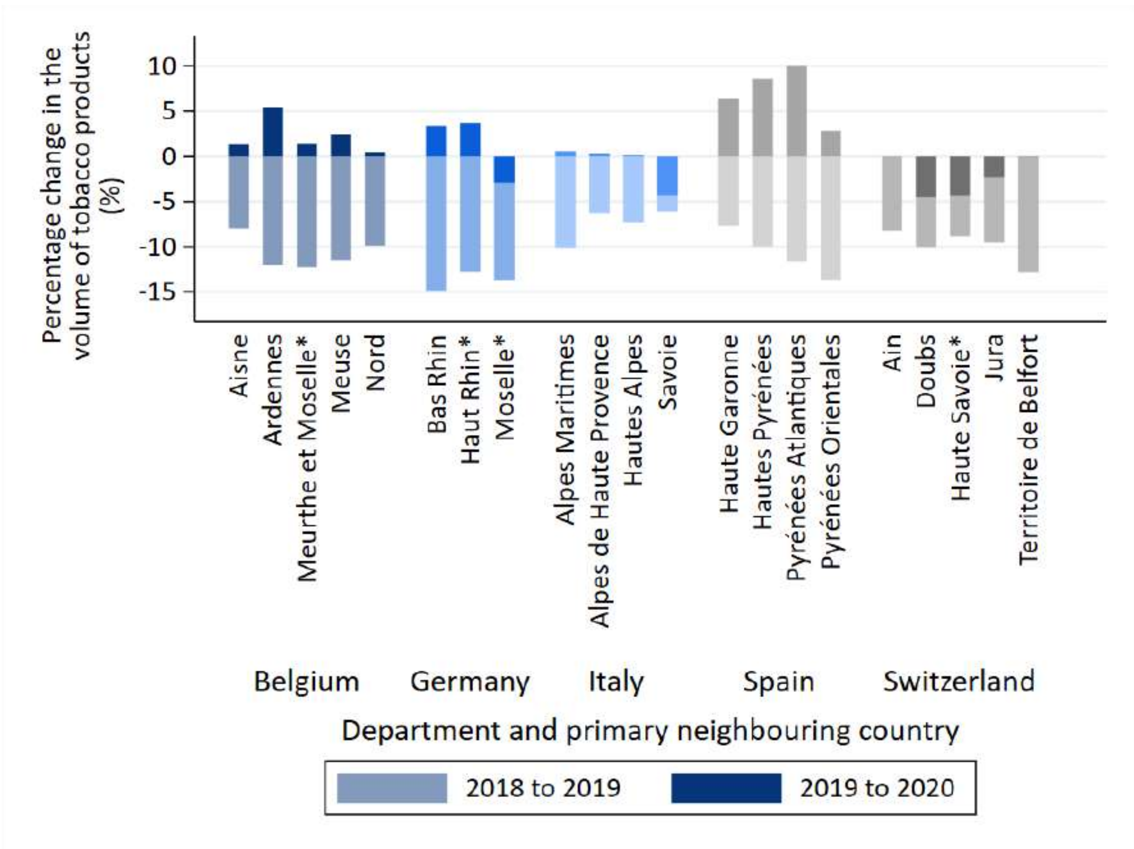
During the COVID-19 pandemic, lockdowns, border closures and other restrictions reduced the ability for smugglers to import illicit tobacco into the country as well as people's ability to travel and, as a result, the availability of less expensive non-domestic tobacco. Consequently, consumers had fewer substitutes for domestic tobacco during the pandemic. This section investigates the impact of restrictions in French administrative regions (departments) bordering neighbouring countries by comparing domestic tobacco sales in these areas during 2019 and 2020.

Figure 6 illustrates the percentage change in the sale of domestic tobacco by departments in 2018-2019 (as transparent bars) and 2019-2020 (as opaque bars). Total domestic tobacco sales included in Figure 6 includes FMC (80% of the total in 2020), FCT (16%), and other tobacco products (OTP) (4%). Departments are grouped based on the primary country they border for ease of interpretability. Due to similar tobacco prices and limited data, Monaco and its bordering department are not considered separately.

In this analysis, we assumed that a reduced availability of non-domestic tobacco would lead to an increase in domestic sales growth in 2020 when compared to 2019. Departments that are bordering countries with lower tobacco prices would be more likely to have a higher volume of purchased (including smuggled/illicit) non-domestic tobacco in 2019 due to proximity and are, as a result, expected to see larger relative increases in non-domestic tobacco purchases in 2020 compared to 2019.

The data show that every department experienced a relative increase in non-domestic sales growth (i.e. a higher growth rate in 2020 compared to 2019), supporting the above-mentioned hypothesis. Patterns in departmental domestic tobacco sales varied by bordering country and are elaborated on below.

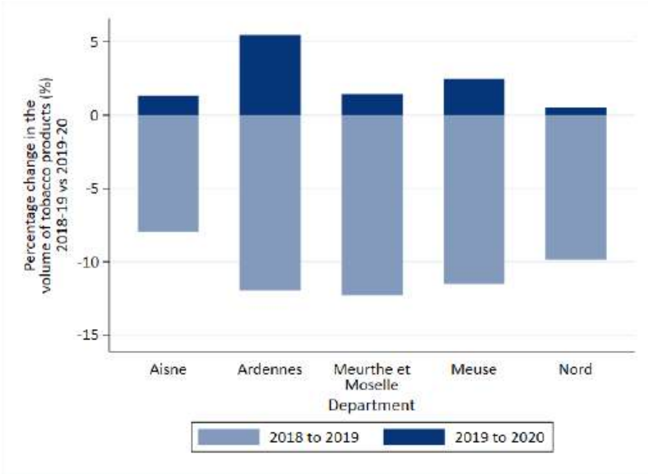
Figure 6 Change in domestic tobacco sales by French department in 2019 and 2020



Note: Departments followed by an asterisk (*) border multiple countries. The country with which it shares a larger border was chosen for the visualisation. These departments are Meurthe et Moselle (Belgium, Luxembourg), Moselle (Germany, Luxembourg), Haut Rhin (Germany, Switzerland), and Haute Savoie (Switzerland, Italy).

Source: Logista France Report 2024: The Challenges of the Nicotine Market in France

Figure 7 Change in domestic tobacco consumption in 2019 and 2020: departments on the Belgian border

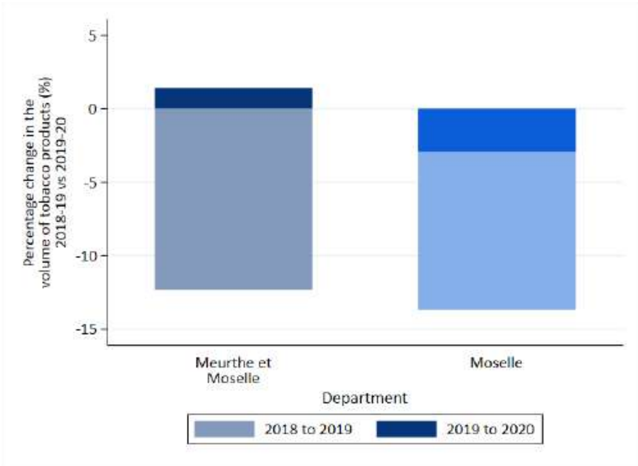


Note: A refined view of departments from Figure 6. Departments are colour-coded following the largest border selection criteria from Figure 6.

Source: Logista France Report 2024: The Challenges of the Nicotine Market in France

Departments bordering **Belgium** uniformly saw an increase in total domestic tobacco sales in 2020 in absolute terms, despite decreases of approximately 10% in 2019 (see Figure 7). In a comparison of 2020 prices, Belgium FMC was €142 less expensive per 1,000 cigarettes, and FCT was €303 less expensive per kg than in France. This difference in prices provides a significant incentive for smugglers and consumers close to the border to travel to Belgium to source non-domestic tobacco. Border closures and other restrictions were likely to have disrupted this trade and led to an increase in total domestic tobacco sales[9], supporting the theory that outpriced consumers increase non-domestic tobacco consumption in response to high prices and price differentials.

Figure 8 Change in domestic tobacco consumption in 2019 and 2020: departments on the Luxembourgish border



Note: A refined view of departments from Figure 6. Departments are colour-coded following the largest border selection criteria from Figure 6.

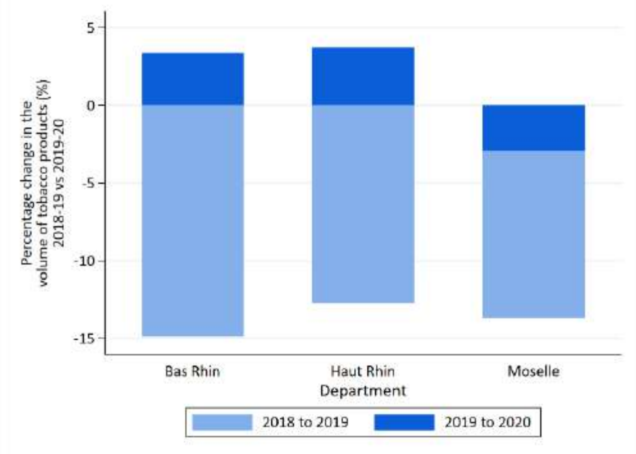
Source: Logista France Report 2024: The Challenges of the Nicotine Market in France

Two French departments border **Luxembourg**: Meurthe-et-Moselle (which also borders Belgium) and Moselle (which also borders Germany). While Meurthe-et-Moselle experienced growth in total domestic tobacco consumption in 2020, Moselle saw a decrease in domestic tobacco consumption (see Figure 8). However, this decrease was over 10 percentage points less than the 2019 decrease. In a comparison of 2020 prices, FCT and FMC were less expensive in Luxembourg (€298 and €253 respectively). The large pre-pandemic price incentive for non-domestic tobacco consumption explains why total domestic tobacco sales decreased less in 2020 than in 2019 when non-domestic tobacco was more

[12] The term 'total domestic tobacco' refers to the combination of domestic FMC, FCT and other tobacco products and is used with this definition throughout the French cross-border analysis of the pandemic period.

accessible. Other research suggests that domestic tobacco consumption in Moselle grew year-over-year.[10]

Figure 9 Change in domestic tobacco consumption in 2019 and 2020: departments on the German border

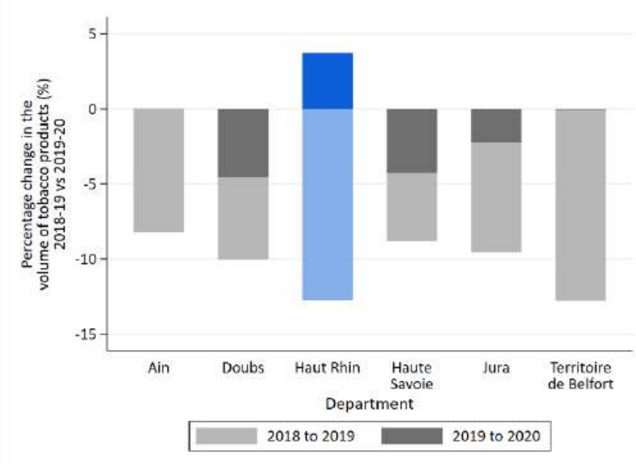


Note: A refined view of departments from Figure 6. Departments are colour-coded following the largest border selection criteria from Figure 6.

Source: Logista France Report 2024: The Challenges of the Nicotine Market in France

Departments bordering **Germany** saw increases in total domestic tobacco sales in absolute terms in 2020 (see Figure 9), excluding Moselle which only saw a relative growth. Haut-Rhin and Bas-Rhin are highly populated areas alongside the border of Germany, with Bas-Rhin's prefecture of Strasbourg directly on the border. In a comparison of 2020 prices, FCT and FMC were less expensive in Germany (€312 and €176 respectively). This difference in prices provides a significant incentive for smugglers and consumers close to the border to travel to Germany to source non-domestic tobacco. Total domestic tobacco consumption increased in 2020 in these departments on average. Additionally, the pandemic-related effect was larger than in other border regions due to above-average decreases in total domestic tobacco sales pre-pandemic.

Figure 10 Change in domestic tobacco consumption in 2019 and 2020: departments on the Swiss border



Note: A refined view of departments from Figure 6. Departments are colour-coded following the largest border selection criteria from Figure 6.

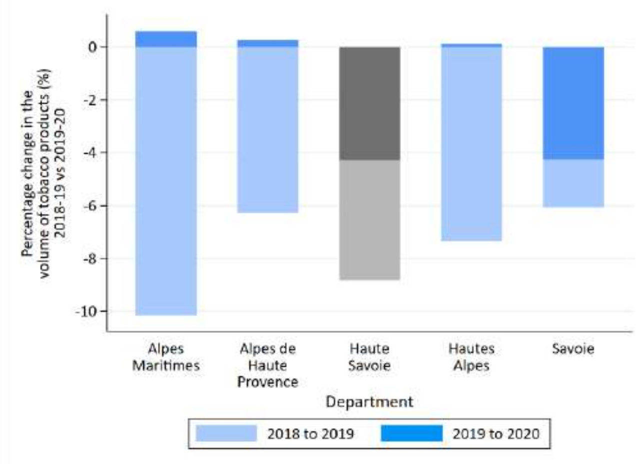
Source: Logista France Report 2024: The Challenges of the Nicotine Market in France

The six departments that border **Switzerland** showed no significant change or reductions in absolute total domestic tobacco consumption in 2020 compared to 2019, excluding Haut-Rhin (see Figure 10). However, all these departments experienced smaller reductions in Total domestic tobacco sales between 2019 and 2020 than between 2018 and 2019. Of all the bordering countries considered, Switzerland has the most comparable FMC prices to France in 2020, with FMC only €45 less expensive, although FCT was €253 less expensive. The comparable FMC prices provide less financial incentive for cross-border consumption of FMC, which could explain the lower relative growth

[10] Assemblée Nationale (2021) Rapport d'Information.

compared to other departments.[11] Additionally, lower travel allowances on the amount of personal tobacco permitted from Switzerland compared to EU countries may mean fewer consumers typically source non-domestic tobacco from Switzerland, explaining the smaller pandemic-related increase observed.

Figure 11 Change in domestic tobacco consumption in 2019 and 2020: departments on the Italian border



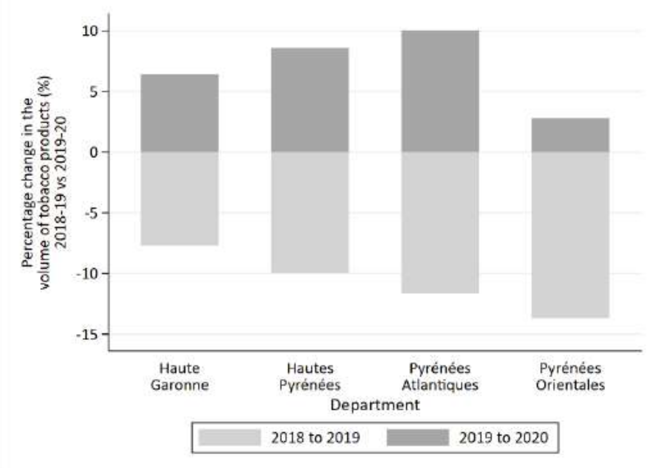
Note: A refined view of departments from Figure 6. Departments are colour-coded following the largest border selection criteria from Figure 6.

Source: Logista France Report 2024: The Challenges of the Nicotine Market in France

Italy borders five French departments along the Alps. There is a financial incentive for smugglers and consumers to source Italian tobacco, with FMC about €219 less expensive and FCT €265 less expensive in 2020. However, the mountain range increases transportation costs between urban centres on each side of the border (a one-way trip between Turin and Grenoble takes approximately 3 hours). The time and cost associated with traversing the Alps could deter smugglers and consumers from sourcing Italian tobacco, especially in the northern border departments where the Alps are harder to traverse. As a result, one would expect to see a smaller change a) in the northern departments compared to southern departments, and b) in Italian-bordering departments compared to other departments. The percentage increase in Total domestic tobacco sales was, in fact, small in the southern border regions and negative in the northern border regions of Savoie and Haute-Savoie (see Figure 11). The absolute and relative increase was largest in the southernmost region, Alpes-Maritimes. Overall, the data supports the hypothesis that southern regions had a higher incentive for cross-border trade in 2019 due to being more connected to Italy, which might have led to the larger relative increase in 2020.

[11] The financial incentive to import FCT could explain the remaining relative increase in consumption against the decrease in the prior year.

Figure 12 Change in domestic tobacco consumption in 2019 and 2020: departments on the Spanish border



Note: A refined view of departments from Figure 6. Departments are colour-coded following the largest border selection criteria from Figure 6.

Source: Logista France Report 2024: The Challenges of the Nicotine Market in France

France borders **Spain** and **Andorra** along the Pyrenees. These border regions experienced the largest absolute increases in total domestic tobacco sales and the largest pandemic-related increases (see Figure 12). These shifts highlight the large volume of tobacco that is being procured by smugglers and outpriced consumers from outside of France.

Historic pricing data on Andorra is limited; however, the tobacco excise tax rate is relatively low.[12] Andorran tobacco is significantly less expensive than French tobacco. Spanish tobacco prices in 2020 were also lower than in France, with FCT and FMC less expensive by €288 and €263, respectively. There are, therefore, strong incentives for smugglers and outpriced French consumers to purchase tobacco in either country.

The cross-border analysis identifies strong pandemic-related increases in domestic tobacco consumption across all border departments. The high propensity of border departments to consume non-domestic tobacco suggests that **non-domestic tobacco is outcompeting domestic tobacco during non-pandemic periods, pointing to the lack of competitive domestic tobacco options.**

3.4 Tobacco excise revenue

Revenues from tobacco excise taxes are a product of the volume and value of domestic tobacco sold. Therefore, while consumption of domestic tobacco has fallen, significant excise tax increases have generated greater amounts of revenue in nominal terms between 2011 and 2024. Three key subperiods can be identified:

- **Constant tax revenue (2011-2017):** Moderate increases in tobacco excise taxes and reductions in domestic consumption led to stable tax receipts. Inflation was insubstantial during this period, leading to only small nominal changes. Tobacco excise tax receipts as a percentage of GDP were comparable in 2017 (0.5%) to those in 2022 (0.51%).
- **Pre-pandemic growth (2017-2021)**: Tobacco excise tax increases outpaced the decrease in domestic tobacco sales, leading to increases in nominal tax receipts. Increased domestic tobacco sales during the pandemic period in 2020 and 2021 also likely contributed to the peak receipts in these years.
- **Post-pandemic period (2022-2023):** Nominal excise tax receipts decreased during this period.[13] This was initially partially attributable to the removal of Covid-19 lockdown restrictions, which facilitated a temporary increase in domestic FCT consumption. Further

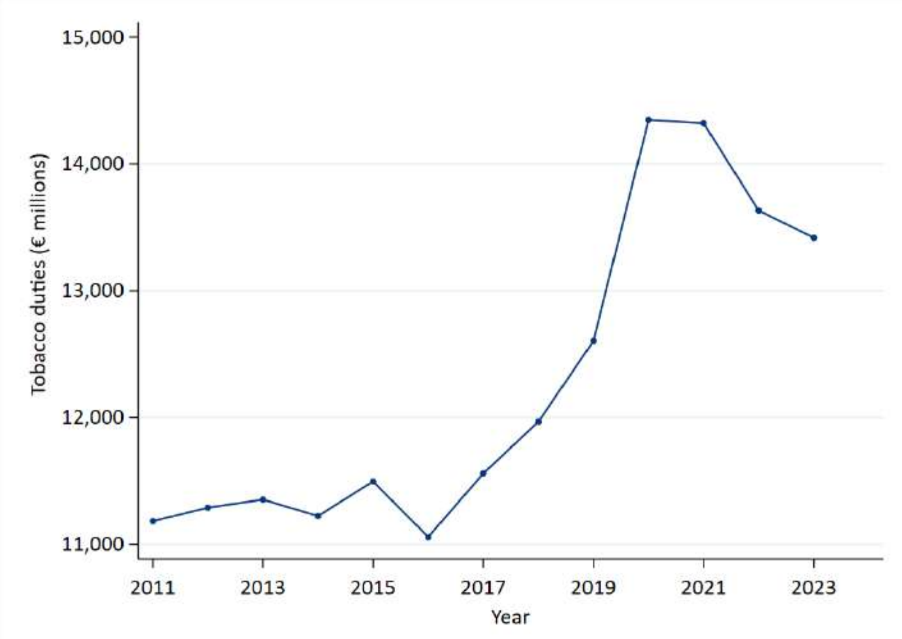
[12] Andorran Government (2022) Llei 1/2022, del 20 de gener, de modificació de la tarifa general de taxes sobre el consum.

[13] This period corresponds to a period of inflationary pressure, so the decrease was more substantial in real terms.

decreases reflect the substantial reductions in domestic tobacco consumption observed since the pandemic. As a result, excise tax revenues from tobacco decreased from 0.62% of GDP in 2020 to 0.48% of GDP in 2023, the lowest level recorded in this century.

While nominal tobacco excise tax receipts have been decreasing since 2020, the level of foregone tobacco excise tax receipts has increased significantly due to the growing market share of non-domestic tobacco in France. **Restoring the buffer function to through excise taxation policies that allow a clear FMC-FCT differential and encourage competitively priced domestic FCT could help partially recoup these foregone revenues.**

Figure 13 Government receipts from tobacco duties over time



Note: Revenues are given in nominal terms. VAT receipts are not included as these are standardised across most products sold.

Source: European Commission Taxes in Europe v4

4 Tobacco taxation, prices and consumption in Germany

4.1 Key findings

Germany has had a low and declining market share of non-domestic FMC for many years. In this regard, Germany has been relatively successful compared to some other case study countries at discouraging non-domestic tobacco consumption. The low consumption levels of non-domestic FMC have been achieved through a tax policy that explicitly recognised the buffer function of FCT in preventing a stronger migration of consumers to non-domestic tobacco. The German Ministry of Finance implemented moderate and periodic tobacco excise tax increases with the stated goal of preserving a significant price differential between FMC and FCT. This predictable and mid-term strategy has allowed domestic FCT to function as an effective buffer, with its consumption declining more slowly than FMC, but simultaneously disincentivising outpriced consumers from switching to non-domestic tobacco sources.

And, while overall domestic tobacco consumption in Germany has declined, nominal tobacco excise tax receipts have remained relatively stable. Germany's experience demonstrates that overall tobacco consumption can be reduced while containing non-domestic consumption and maintaining tobacco excise tax revenues. This suggests that tax policies supporting the price competitiveness of domestic FCT can mitigate the growth of non-domestic tobacco while achieving policy goals (i.e. a reduction in overall tobacco consumption).

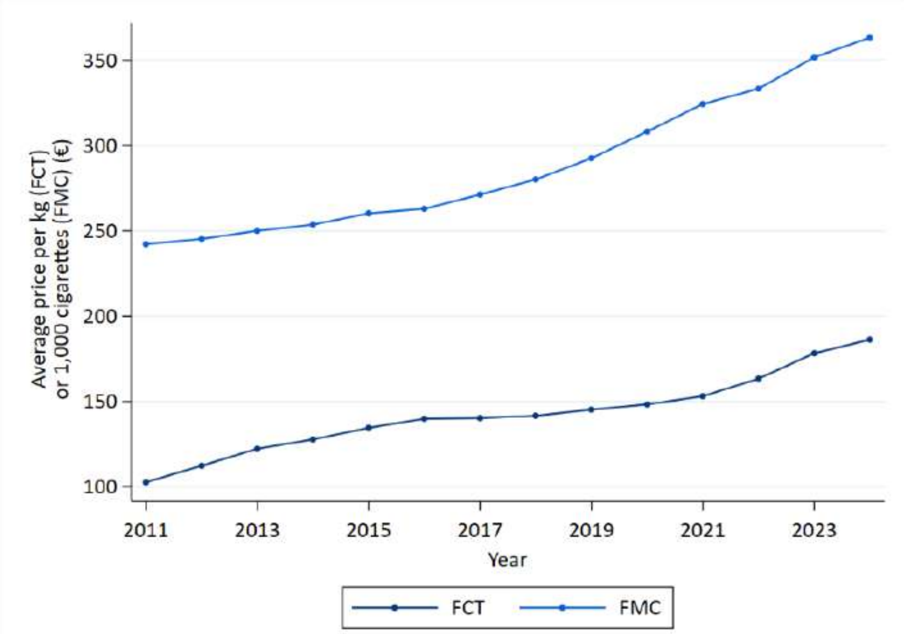
4.2 Trends in tobacco prices and consumption

4.2.1 Tobacco prices and taxes

German domestic tobacco prices increased moderately between 2011 and 2024, mostly reflecting regular but limited excise tax adjustments (see Figure 14). Domestic FMC prices rose by 50% and domestic FCT prices by 81% over these 13 years. Between 2015 and 2021, excise tax rates remained stable (see Figure 15). Price changes stemmed primarily from inflation and growth in the ad valorem tax component. A significant price differential between domestic FCT and FMC has thus existed throughout the 2011-2024 period. The stable price differential was an intended outcome of Germany's tobacco excise tax design, preventing "a stronger migration of consumers" to non-domestic tobacco**,** as outlined by the German Federal Ministry of Finance.[14] **This deliberately consistent price differential, supported by moderate tobacco excise tax policies and a recognition of the buffer function of FCT, maintained domestic FCT as an effective buffer to non-domestic tobacco.**

[14] Bundesministeriums der Finanzen (2021) Entwurf eines Gesetzes zur Modernisierung des Tabaksteuergesetzes.

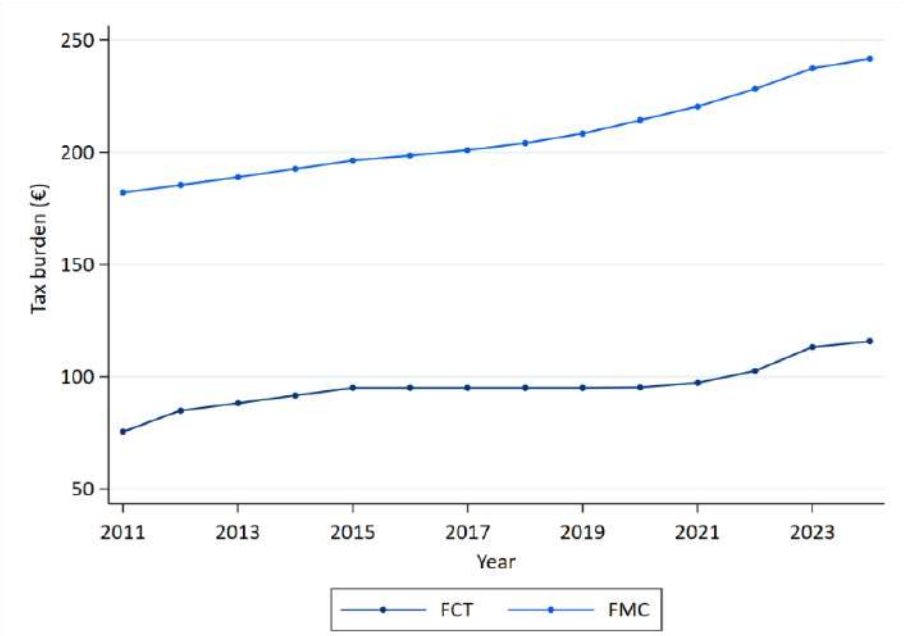
Figure 14 Average prices of FCT and FMC



Note: Average prices are calculated by dividing the total value of domestic FCT or FMC consumption by the volume of domestic FCT or FMC consumption.

Source: London Economics' analysis of Euromonitor data

Figure 15 Tobacco excise tax burden on average-priced FCT and FMC



Note: The tobacco excise tax burden is calculated by applying tobacco duty rates to the average price of the respective tobacco category.

Source: London Economics' analysis of Euromonitor data and Imperial Brands' dataset of tax rate structures.

4.2.2 Tobacco prices and consumption

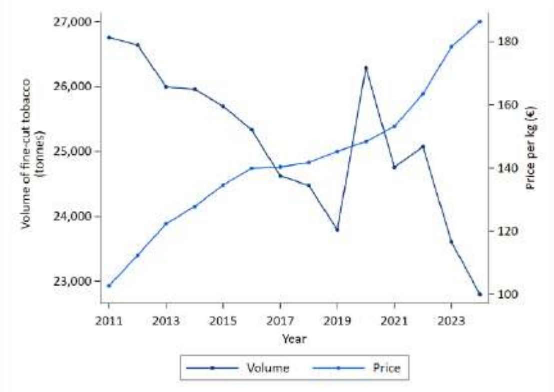
Three distinct periods corresponding to changes in tobacco excise tax rates can be identified during this period: 2011-2016, 2016-2021, and 2021-2024. Overall, the consumption of domestic FCT and FMC declined between 2011 and 2024 (see Figure 16 and Figure 17). The drop in FCT consumption was less pronounced, potentially indicating a shift towards FCT by some consumers priced out of FMC, consistent with the buffer effect of FCT.

- **Gradual price increases (2011 to 2016):** Consumption of domestic FCT and FMC consistently decreased, in response to price increases for both categories. A notable consumption decrease occurred in 2013, likely driven not by price changes but rather the introduction of state-level anti-smoking legislation.[15] However, this outlier did not significantly alter the long-term consumption trends for domestic FCT and FMC.
- **Increasing price differentials (2016 to 2021):** Domestic FCT excise tax and related price increases were moderate compared to the previous period. Nevertheless, FCT consumption continued its pre-2016 downward trend (excluding pandemic effects). Domestic FMC consumption also continued its pre-2016 decline, but FMC prices rose at an accelerated rate. The decline in domestic FMC consumption slowed temporarily between 2019 and 2021, likely influenced by the COVID-19 pandemic and potentially other minor factors, though causality cannot be confirmed.
- **Increase in domestic consumption during the pandemic period:** Domestic FCT consumption rose between 2020 and 2022, coinciding with the COVID-19 pandemic period. During the same period, the decline in domestic FMC consumption slowed. The more notable increase in FCT consumption suggests that some customers that had previously been outpriced returned to the domestic market during the pandemic period, also illustrating the potential of competitively priced FCT. A detailed discussion of these changes and the effect of the pandemic are presented in Section 4.2.3.
- **Post-pandemic period (2021 to 2024):** Consumption for both categories resumed their pre-pandemic period downward trends between 2021 and 2024 after accelerated declines, with the exception of a brief rise in domestic FCT consumption in 2022. These broader declines coincided with recurring price increases for domestic tobacco.

Disproportionate decreases in consumption of FMC reflect economic theory, as substitution toward domestic FCT is expected when a strong excise tax and related price differentials are maintained. This evidence supports the idea that a robust buffer function of domestic FCT can co-exist within broader overall declines in tobacco consumption.

[15] For example, North Rhine-Westphalia's ban on smoking in restaurants. North Rhine-Westphalia is Germany's most populous and densely populated state.

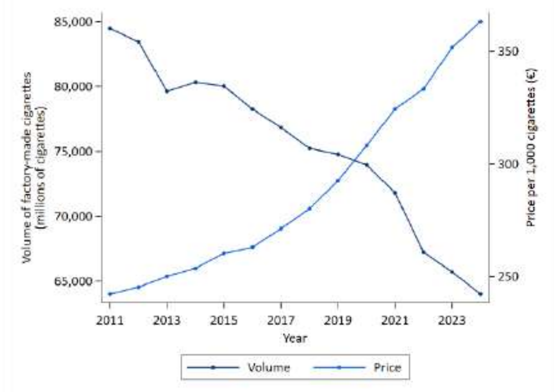
Figure 16 Volume and average price of (domestic) FCT



Note: Average prices are calculated based on the total value of domestic FCT consumption divided by the volume of domestic FCT consumption.

Source: London Economics' analysis of Euromonitor data

Figure 17 Volume and average price of (domestic) FMC



Note: Average prices are calculated based on the total value of domestic FMC consumption divided by the volume of domestic FMC consumption.

Source: London Economics' analysis of Euromonitor data

4.2.3 Tobacco consumption during the pandemic period

During the pandemic period, domestic FCT consumption increased suddenly from 2019 to 2020. The increase, which was close to 10%, raised the volume of domestic FCT consumption above the level from 2013. While FCT consumption subsequently decreased following an initial spike, it was still notably above pre-pandemic levels in 2021 and 2022.

Conversely, the pandemic appears to have had only a minor – if any – effect on domestic FMC consumption, which decreased almost linearly from 2015 to 2024. While there was a minor slowing in the decrease in FMC consumption during the pandemic, it had already started before 2019.

Germany borders nine countries, of which:

- Four had higher average FCT and FMC prices (Belgium, France, the Netherlands, and Switzerland);
- Three have higher average FCT prices but lower FMC prices (Austria, Denmark, and Luxembourg); and
- Two have lower average FCT and FMC prices in 2020 (the Czech Republic and Poland).

Although German tobacco prices are competitive relative to its Western European neighbours, smugglers and consumers still have an incentive to source tobacco from less expensive non-domestic sources on the eastern border.

Pandemic-related border closures and other restrictions limited smuggling and cross-border purchasing, reducing the availability of non-domestic tobacco. Consequently, substitution from non-domestic sources towards domestic FCT likely occurred during the pandemic period. This effect likely explains some aspects of the increase in FCT consumption during the pandemic period.

The fact that the relative increase is larger for domestic FCT, which is taxed at a lower rate and is less expensive in Germany compared to FMC, suggests that consumers who previously have purchased non-domestic tobacco are likely to be price sensitive. This shift in consumption is in line with FCT's buffer function role and suggests that competitively priced domestic FCT could displace non-domestic tobacco consumption.

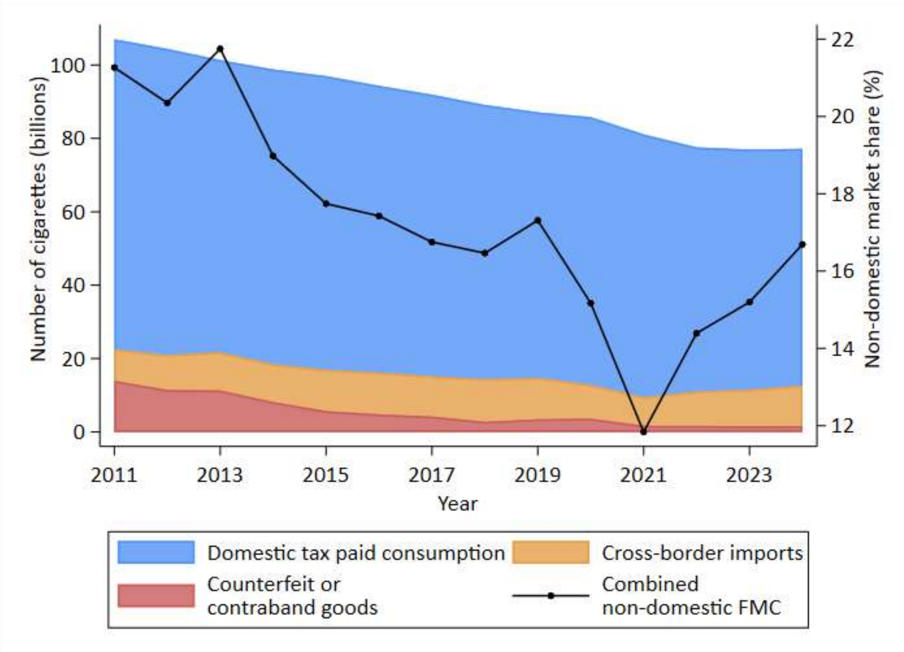
4.2.4 Non-domestic FMC consumption

Non-domestic FMC market shares in Germany were notably lower than in some other case-study countries during 2011 to 2024. Non-domestic FMC market shares decreased from 21.2% in 2011 to 16.7% in 2024 (see Figure 18).[16] These market characteristics suggest that **German tobacco tax policy, which maintained a clear excise tax differential between FCT and FMC during this period, effectively suppressed the purchase of non-domestic FMC**. This reduction occurred alongside decreased overall tobacco consumption, despite implementing moderate excise tax increases.

The domestic market share of FMC temporarily increased in 2021, consistent with the above-trend growth in 2020 and likely attributable to reduced legal cross-border imports. This period coincided with the pandemic and associated restrictions. This behaviour also reflects a reinforcement of the buffer function, as increased barriers to non-domestic tobacco consumption encouraged substitution towards domestic products.

KPMG estimates indicate that counterfeit and contraband FMC significantly decreased in Germany between 2011 and 2024 relative to legal cross-border purchases.[17] This reduction could reflect **German tobacco excise tax policy, which had the effect of rendering illicit tobacco smuggling relatively unprofitable** by disincentivising non-domestic tobacco consumption.

Figure 18 Factory-made cigarettes by tax origin of purchase over time



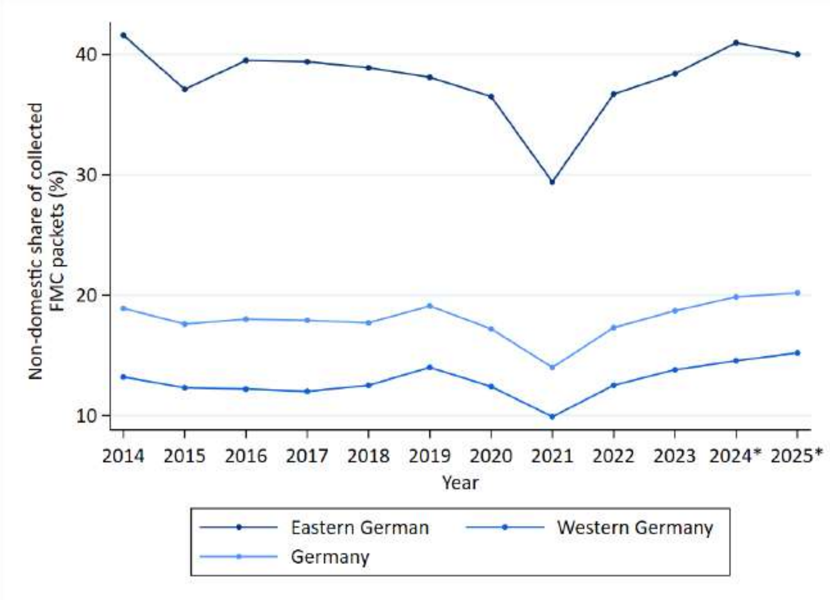
Source: KPMG Project STAR / Project SUN / Project STELLA / Illicit cigarette consumption in Europe

[16] Figures are given according to KPMG's estimates, consistent with the other case studies. However, Ipsos' estimates suggest that non-domestic market shares have grown since the pandemic. These estimates indicate that recent non-domestic market shares are comparable to 2014, the first Ipsos estimate under the current methodology. This recent trend could reflect a greater number of outpriced consumers due to broader economic difficulties. These estimates remain low relative to other case-study countries and still indicate that Germany performed better at suppressing non-domestic tobacco.

[17] Estimates of legal cross-border tobacco may include illicitly smuggled products due to the challenges in verifying their legality. Nevertheless, consistent relative trends in these estimates can still offer a valuable approximation of legal cross-border consumption patterns, even if they are not perfect.

While German tobacco is competitively priced compared to most other case study countries, less expensive tobacco is available in countries on its eastern border (see Section 4.2.3). Eastern German residents face more incentives to consume less expensive non-domestic tobacco, due to their proximity reducing transportation costs. Therefore, higher non-domestic market shares are expected in eastern Germany given the uniform federal-level tobacco excise duty regime, under the buffer function. Non-domestic tobacco market shares are consistently larger in eastern Germany between 2011 and 2025[18], according to Ipsos' empty pack survey of German non-domestic FMC consumption (see Figure 19). These empirical findings align with the predictions of economic theory under the buffer function.

Figure 19 Non-domestic FMC market share by German region



Note: Estimates in 2024 are calculated from the average of quarterly estimates. Estimates in 2025 only reflect the first quarter.

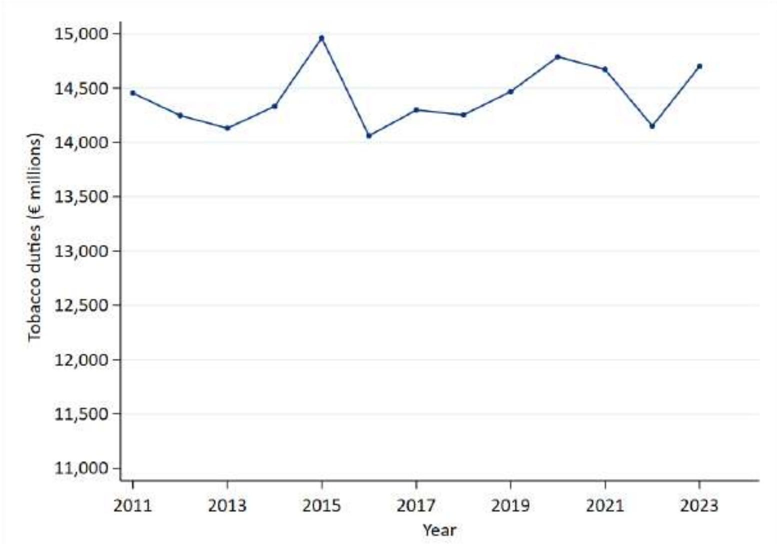
Source: Ipsos/DSV Schätzung des Anteils nicht in Deutschland versteuerter Zigaretten

4.3 Tobacco excise revenue

Nominal tobacco excise tax receipts fluctuated within a narrow range, showing no clear long-term trend between 2011 and 2024 (see Figure 20). However, tobacco excise revenues as a percentage of GDP consistently decreased over this period. This decline, consistent with trends in other European countries, reflects falling domestic tobacco consumption.

[18] Methodology changes from 2014 prevent the comparison of pre-2014 and post-2014 data, and these figures are not presented in Figure 19 due to the limited sample size of pre-2014 data. However, non-domestic market shares in Eastern Germany remained larger between 2011 and 2014 under the old methodology.

Figure 20 Government receipts from tobacco excise over time



Note: Revenues are given in nominal terms. VAT receipts are not included as these are standardised across most products sold. For comparison, the same y-axis range is used as with the French case study.

Source: European Commission Taxes in Europe v4

5 Tobacco taxation, consumption and illicit trade in the Netherlands

5.1 Key findings

The Netherlands has shifted from moderate tobacco taxation and a stable non-domestic market share (around 20%) to implementing substantial tobacco excise tax increases between 2022 and 2024. These increases have likely accelerated declines in domestic tobacco consumption, with FCT consumption falling faster than FMC. The relatively faster decline in FCT consumption stands out in comparison to the other case study countries and indicates high price sensitivity amongst FCT consumers. This is likely due to the Netherlands being a more 'mature' market, in which FCT consumption has historically been relatively more established.

Recent changes in tobacco excise tax rates align with sharp increases in non-domestic market shares, which nearly doubled between 2023 and 2024. The 2024 excise rate increase was doubled from the planned increase. While boosting government revenue was a stated objective, early data indicate that nominal tobacco excise tax revenues have declined because non-domestic FMC consumption grew at the expense of domestic FMC. As a result, the volume of total FMC consumption was largely unchanged. The 2024 excise tax changes have disproportionately affected FCT and further eroded the price advantage of domestic FCT. This change likely led to the observed expansion of the non-domestic FMC market (instead of a shift to FCT).

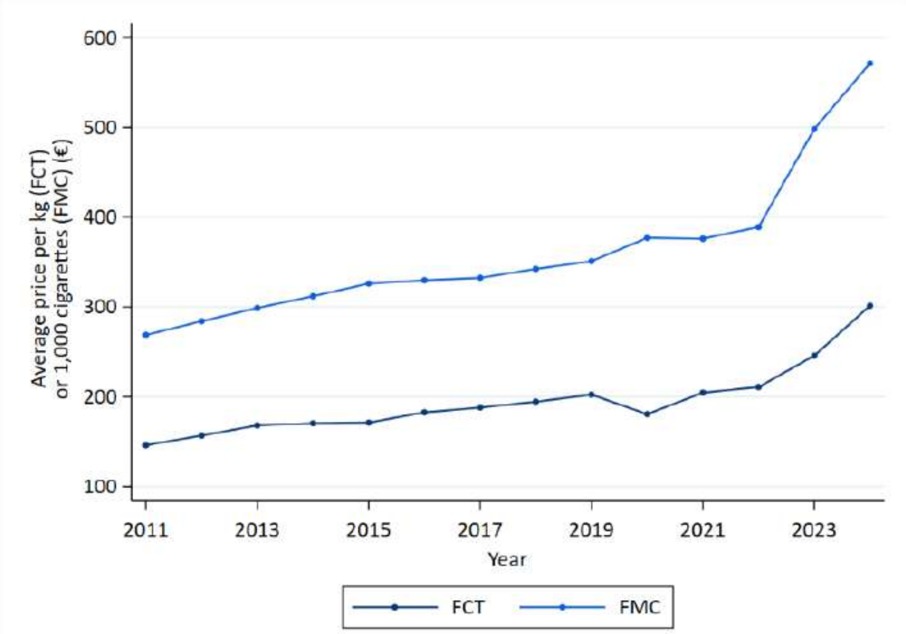
5.2 Trends in tobacco taxation, prices and consumption

5.2.1 Tobacco taxes and prices

Domestic tobacco prices in the Netherlands experienced moderate increases until 2022 (see Figure 21). The price of domestic FMC and domestic FCT increased by 3.4% **per annum** between 2011 and 2022. However, substantial increases in tobacco excise rates drove considerable price hikes between 2022 and 2024, with FMC prices increasing by 21.2% and **FCT prices by 19.6% per annum**. These figures are likely to be underestimating the actual increase in FCT prices in 2024, due to the stockpiling of FCT in the months before the excise tax change in April 2024 and the differences in methodologies used to calculate the underlying prices and tax burdens.[19]

[19] Average prices are calculated by dividing the total value of domestic FCT or FMC consumption by the volume of domestic FCT or FMC consumption. Price data weighs each transaction equally, due to the method of calculation. However, similar data is not available for excise tax burdens, which are calculated using the annual average of monthly excise tax rates. Consequently, excise tax burden calculations assume a uniform distribution of tobacco consumption over the calendar year. This is normally sufficiently accurate; however, significant Dutch excise tax increases led to stockpiling before the increases took effect in April 2023 and April 2024. Consequently, the calculated excise tax burdens are not representative of the tax faced by many consumers and price data underrepresents the convergence in FCT-FMC prices after April 2024. In 2024, calculated excise tax burdens exceed the calculated retail price due to this methodological difference in their construction.

Figure 21 Average prices of FCT and FMC



Note: Average prices are calculated by dividing the total value of domestic FCT or FMC consumption by the volume of domestic FCT or FMC consumption.

Source: London Economics' analysis of Euromonitor data

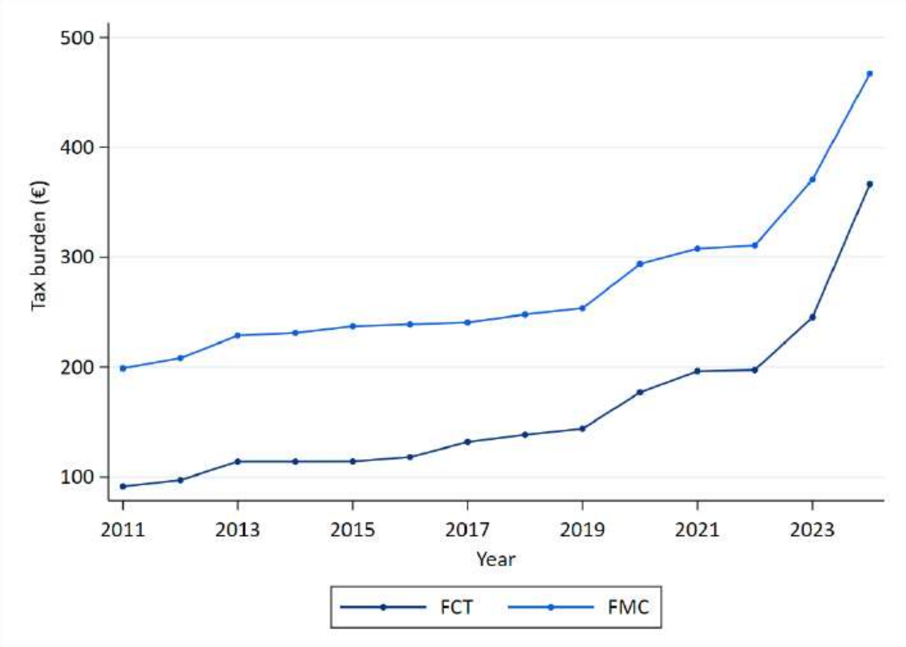
While the excise tax differential between domestic FCT and FMC had been relatively stable in the years preceding 2022, it narrowed by approximately €25 (20%) during 2024 (see Figure 22). Consequently, **the buffer against non-domestic tobacco would presumably have been weakened from April 2024** due to the worsening competitiveness of domestic tobacco from the excise tax increases.

The long-term price trend is primarily linked to changes in excise rates, which constitute 70-80% of retail tobacco prices. The co-movement between changes in prices and in tobacco excise taxes can be generally observed over the period of investigation. However, two main exceptions to this direct relationship between excise tax changes and average prices are noted:

- During the **pandemic period (2020-2022)**, tobacco excise taxes increased. However, average prices paid instead decreased in 2020 for domestic FCT. This could reflect consumers moving towards lower-priced FCT products within the domestic FCT market due to the economic uncertainty created by the pandemic period, although no specific reason has been identified within existing research.
- Recent excise tax increases between **2022 and 2024** were not fully reflected in domestic FCT prices. While the FCT-FMC price differential widened, the excise tax differential narrowed. The slower rise in FCT prices compared to tax burdens or FMC prices suggests FCT consumers may have engaged in stockpiling before the April tobacco duty hikes.[20] Consequently, a convergence in FCT and FMC prices after April 2024 that is not yet observable in the data is likely to have occurred as tobacco excise taxes make up the large majority of retail prices.

[20] See footnote 19.

Figure 22 Tobacco excise tax burden on average-priced FCT and FMC



Note: The tobacco excise tax burden is calculated by applying tobacco excise tax rates to the average price of the respective tobacco category. Tax rates are not weighted by the time of purchase, due to data availability, which can overestimate tax burdens if stockpiling occurs before a mid-year tax change.

Source: London Economics' analysis of Euromonitor data and Imperial Brands' dataset of tax rate structures

5.2.2 Tobacco prices and consumption

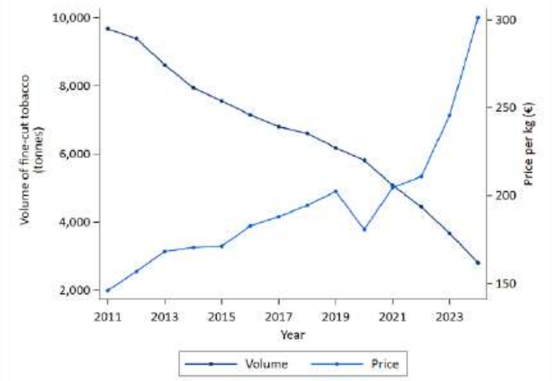
Consumption of both domestic FCT and FMC shows a long-term decrease in the Netherlands between 2011 and 2024 (see Figure 23 and Figure 24). Domestic FCT consumption in the Netherlands decreased at a faster rate than domestic FMC (71% versus 38%), unique among case-study countries. This finding might be related to the fact that the Netherlands is a more 'mature' market, in which FCT consumption has historically been relatively more established. Three distinct subperiods in consumption patterns are observed:

- **Declining tobacco consumption (2011-2015)**: Consumption of both domestic FCT and FMC consistently decreased in combination with increasing tobacco excise rates and prices.
- **Stable FMC consumption (2015-2019)**: Domestic FCT consumption continued its pre-2015 downward trend alongside FCT price increases. Meanwhile, domestic FMC consumption stabilised during this period, with marginal decreases in domestic FMC consumption. This period coincides with increasing domestic FMC prices.
- **Increasing excise taxes during the pandemic period (2019-2024)**: Domestic FMC consumption resumed its pre-2015 rate of decrease. An above-average decrease was observed in 2024 following a 45% price rise over two years.

Decreases in domestic FCT consumption from 2020 were slightly faster than the pre-2019 trend. Although excise tax increases between 2019 and 2022 did not lead to proportional growth in FCT prices, the decline in FCT consumption is in line with expectations following an increase in prices. The disproportionate decrease in FCT between 2019 and 2022 may indicate that FCT consumers are more price-sensitive than FMC consumers. The availability of a less expensive domestic tobacco option – serving as a buffer function – is particularly relevant for this type of outpriced consumer.

Potential stockpiling by FCT consumers before the April 2024 excise tax changes suggests that 2025 consumption levels might show a further significant decrease if non-domestic substitution occurs. No transitory impact from the pandemic period on consumption levels is observed.

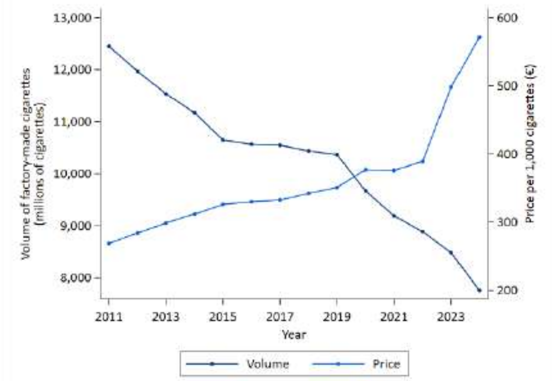
Figure 23 Volume and average price of (domestic) FCT



Note: Average prices are calculated based on the total value of domestic FCT consumption divided by the volume of domestic FCT consumption.

Source: London Economics' analysis of Euromonitor data

Figure 24 Volume and average price of (domestic) FMC



Note: Average prices are calculated based on the total value of domestic FMC consumption divided by the volume of domestic FMC consumption.

Source: London Economics' analysis of Euromonitor data

5.2.3 Non-domestic tobacco consumption

The market share of non-domestic tobacco in the Netherlands remained relatively stable, fluctuating around 20% between 2011 and 2023 (see Figure 25). However, the market share of non-domestic tobacco nearly doubled between 2023 and 2024, coinciding with a narrowing of the FCT-FMC excise tax differential in 2024. Temporary disturbances and the changing trends in non-domestic FMC sales are evident between 2011 and 2024:

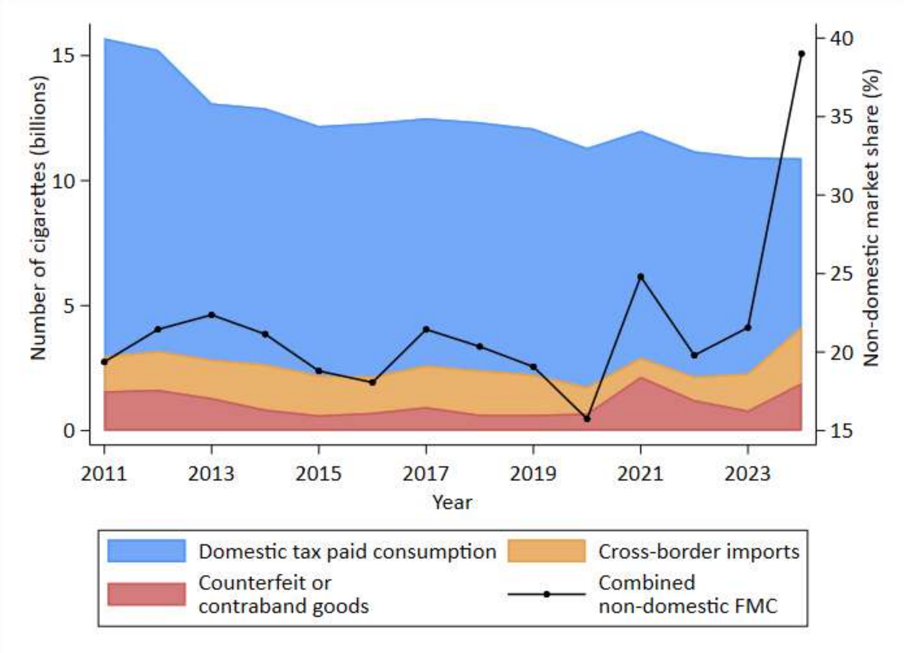
- **The moderation of non-domestic tobacco (2012-2019)**: The market share of non-domestic FMC decreased between 2012 and 2016, driven by decreasing contraband and counterfeit FMC consumption.[21] This reduction became a consistent market feature until 2020. During this period, there were no sudden price changes, and the excise and price differential was maintained. These conditions should aid in the prevention of substitution towards non-domestic tobacco. Furthermore, significant excise tax increases in nearby EU countries (e.g., France) may have reduced the relative profitability of smuggling non-EU contraband into the Netherlands. Stable domestic pricing, therefore, likely contributed to the fall in contraband and counterfeit FMC.
- **The COVID-19 pandemic period (2020-2021)**: A temporary decrease in non-domestic and overall FMC, driven by reduced legal cross-border imports, occurred in 2020. This likely reflected pandemic-related border closures and other restrictions, a phenomenon also seen in other case-study countries, although the Netherlands does not show any net substitution toward domestic alternatives. The decrease in non-domestic FMC consumption was followed by an increase in 2021, driven by a rise in contraband and counterfeit FMC. This shift coincided with above-average increases in tobacco excise taxes

[21] Estimates of legal cross-border tobacco may include illicitly smuggled products due to the challenges in verifying their legality. Nevertheless, consistent relative trends in these estimates can still offer a valuable approximation of legal cross-border consumption patterns.

between 2019 and 2021. The increase likely reflects outpriced consumers switching to less expensive non-domestic alternatives.

- **Tobacco excise tax changes (2024):** The FMC-FCT excise tax differential on domestic tobacco narrowed in 2024. Domestic tobacco prices are expected to reflect this change going forward, given the high tax-price ratio (between 72% and 82% over the sample period for FMC).[22] More expensive domestic FCT reduces the incentive for consumers to substitute domestic FMC with domestic FCT. An increase in non-domestic market shares from 21.6% in 2023 to 39% in 2024 coincides with the April 2024 excise tax change. Additional empty pack surveys by the Dutch Customs National Tactical Centre confirm this change, finding non-domestic market shares of 45.1% in 2024, 25% in 2023 and 15.3% in 2021 within surveyed areas.[23] For new non-domestic smokers in 2024, excise duty changes were the primary driver for 88% and a contributing factor for another 9%, according to a 2025 report by the Dutch National Institute for Public Health and the Environment (RIVM).[24]

Figure 25 Factory-made cigarettes by tax origin of purchase over time



Source: KPMG Project STAR / Project SUN / Project STELLA / Illicit cigarette consumption in Europe

Kantar empty pack survey estimates[25] follow the same recent trend as the KPMG and Dutch government figures, but also present estimates for the FCT market (see Figure 26). Non-domestic FCT market shares are approximately 10% higher than non-domestic FMC market shares within their

[22] See footnote 19.

[23] Ministerie van Financiën (2025) Empty Pack Survey 2024.

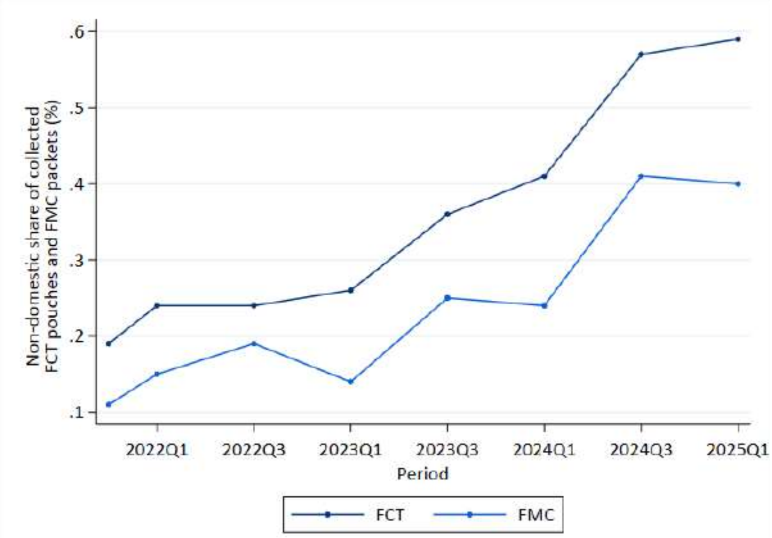
[24] Ministerie van Volksgezondheid, Welzijn en Sport (2025) Gedragseffecten van de accijnsverhoging op tabak in 2024.

[25] Commissioned by Vereniging Nederlandse Sigaretten-en Kerftabakfabrikanten (VSK), the association for Dutch cigarette and fine cut tobacco manufacturers.

respective markets in 2022 and approximately 20% higher in 2025.[26] Kantar's estimates suggest the trends observed within the FMC market since the excise tax changes are more pronounced in the FCT market.

A persistent price differential between domestic FCT and FMC allows domestic FCT to act as a buffer against non-domestic tobacco, according to the functioning of the buffer function. Consequently, **the formerly stable price differential in the Netherlands may have contributed to the stability of non-domestic market shares prior to 2023**. However, **non-domestic market shares grew once this price differential was weakened in 2024 alongside broader tobacco duty increases**. This growth in non-domestic consumption highlights the role of less expensive domestic FCT as a buffer to non-domestic tobacco.

Figure 26 Post-pandemic non-domestic market shares by category of tobacco



Note: Kantar's estimated market shares follow a similar trend to KPMG's Dutch estimates but are not directly comparable with the KPMG figures presented in other case studies due to potential methodological differences.

Source: Kantar Empty Pack Survey Data, on behalf of Vereniging Nederlandse Sigaretten-en Kerftabakfabrikanten (VSK)

5.3 Tobacco excise revenue

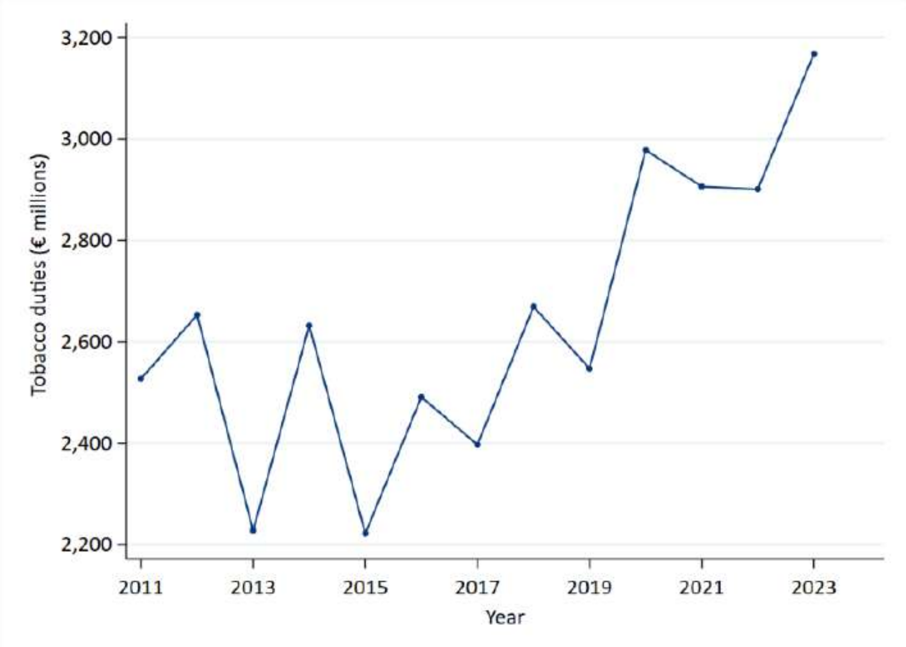
Prior to 2015, nominal tobacco excise revenues fluctuated annually within a relatively small and consistent margin (see Figure 27). From 2015 onwards, excise tax receipts increased. Between 2015 and 2019, this trend was driven by moderate excise tax increases and relatively stable domestic FMC consumption. From 2019, it was driven by a combination of significant increases in tobacco excise rates and a reduction in FMC consumption. However, when expressed as a percentage of GDP, tobacco excise tax revenues decrease, reaching their lowest recorded level in 2022 (0.29%). This relative reduction reflects declining domestic tobacco sales since 2011.

While there are no official figures by the European Commission yet on the tobacco tax revenue from 2024, Dutch Ministry of Finance (Ministerie van Financiën) data shows tobacco excise revenues fell

[26] Larger non-domestic market shares in the FCT market are also observed in official HMRC data in the United Kingdom (see Section 7).

from €3.12 billion[27] to €2.99 billion[28], driven by falling domestic consumption as Dutch consumers increasingly purchased non-domestic tobacco.[29] Additionally, nominal monthly tobacco excise revenues have fallen in the first four months of 2025 compared to the same months in 2024, decreasing on average from €240.87 million to €211.93 million, according to data from Accijnsmonitor.[30] Monthly tobacco excise revenues were also typically larger in 2023 than in 2024, from June.[31] These decreases in monthly tobacco excise revenues represented a combined loss of €211.07 million.

Figure 27 Government receipts from tobacco duties over time



Note: Revenues are given in nominal terms. VAT receipts are not included as these are standardised across most products sold.

Source: European Commission Taxes in Europe v4

[27] Ministerie van Financiën (2024) Financieel jaarverslag 2023.

[28] Ministerie van Financiën (2025) Financieel jaarverslag 2024.

[29] Ministerie van Volksgezondheid, Welzijn en Sport (2025) Gedragseffecten van de accijnsverhoging op tabak in 2024.

[30] Accijnsmonitor (n.d.) Overzicht van accijnsopbrengsten uit sigaretten en rooktabak voor de Nederlandse schatkist.

[31] Accijnsmonitor (n.d.) Overzicht van accijnsopbrengsten uit sigaretten en rooktabak voor de Nederlandse schatkist.

6 Tobacco taxation, prices and consumption in Slovakia

6.1 Key findings

Slovakia has seen minimal consumption of non-domestic tobacco, accompanied by a broader decline in overall tobacco consumption. While domestic FCT sales have risen, FCT remains a minor portion of the Slovakian tobacco market. As a result, the fall in FMC consumption drives the overall downward trend in tobacco consumption.

Slovakia implemented substantial FCT-specific excise tax increases in 2024, designed to generate revenue. However, these excise tax increases have disproportionately increased the domestic price of FCT. In comparison to other case study countries, it stands out that FCT in Slovakia was more expensive compared to FMC when using the standard 1g to 1 stick conversion rate across the 2011 to 2024 period. Instead, Slovakia's low level of non-domestic tobacco consumption seems to have been largely driven by its relatively low domestic prices and the stability (until 2024) of its tobacco excise tax regime.

Because relatively little time has passed since the excise tax changes in 2024, its long-term effects cannot yet be observed in the data. Slovakia's nominal tobacco excise tax revenues have historically risen, remaining stable as a percentage of GDP. However, further increases could impact that trend due to a weakened domestic FCT buffer. Such a shift risks diverting consumers from domestic FMC towards non-domestic tobacco. This would potentially undermine Slovakia's success in controlling the illicit market and reducing overall tobacco excise tax receipts - contrary to the policy's stated objective.

6.2 Trends in tobacco prices and consumption

6.2.1 Tobacco taxes and prices

Between 2011 and 2020, the prices of FCT and FMC in Slovakia experienced a gradual increase, rising by 30% and 33%, respectively, over the nine-year period (see Figure 28). This trend accelerated significantly between 2020 and 2024, with FCT prices increasing by 51% and FMC prices increasing by 45%.

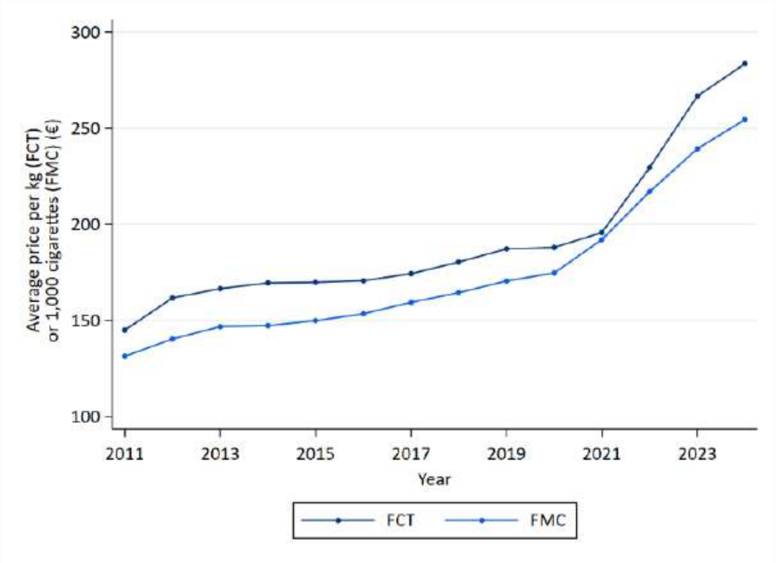
The Slovakian price differential between FCT and FMC was negative between 2011 and 2024 when using the 1g to 1 stick conversion rate, meaning that FCT was more expensive than FMC. This feature of the Slovakian market stands out in comparison to other case study countries. The price differential remained relatively stable between 2011 and 2020. A temporary elimination of this differential in 2021 occurred due to a comparatively larger increase in the average FMC price. Subsequently, FCT prices rose faster than FMC prices, widening the price differential in 2023 and 2024. The 2024 implementation of FCT-specific excise taxation could further widen this inverted price differential.

In 2024, FMC prices remained low in comparison to other case-study countries, with FMC 30% and 56% less expensive than in Germany and France, respectively. FCT prices were the second most affordable in 2024 (behind Germany). However, the negative price differential meant that Slovakian domestic FCT offered less of a relative discount than domestic FMC.

Low relative prices disincentivise substitution towards non-domestic tobacco, diminishing the relevance of the price differential and the effect of a domestic FCT buffer during this period.

However, this weakening of a domestic buffer could prove insufficient if future price increases begin to incentivise non-domestic tobacco consumption.

Figure 28 Average prices of FCT and FMC



Note: Average prices are calculated by dividing the total value of domestic FCT or FMC consumption by the volume of domestic FCT or FMC consumption.

Source: London Economics' analysis of Euromonitor data

6.2.2 Domestic tobacco consumption

Consumption patterns diverged over the period of investigation. While FMC consumption decreased with price increases since 2020 (see Figure 30), FCT consumption consistently rose throughout the period (see Figure 29), despite increasing prices. An analysis of the impact of the 2024 FCT-specific excise tax increase is not feasible due to limited data since its introduction.

- **Minimal domestic FCT consumption (2011-2014):** While FMC consumption remained around 7 billion sticks of cigarettes between 2011 and 2014, it decreased between 2011 and 2013 before experiencing moderate growth in 2013-2014. FCT consumption in Slovakia was very low at 0.7% of total domestic FCT and FMC consumption in 2014, as compared to 14% to 42% in the other case-study countries.[32] Additionally, no substantial increase occurred during this period. Consequently, the role of domestic FCT was limited.
- **Pre-significant excise tax increases (2015-2020):** FMC consumption showed modest growth between 2015 and 2019, followed by a decline in 2020. This 2020 decrease occurred despite no disruption to the moderate FMC price trend and may be attributable to non-pricing factors, such as the start of the COVID-19 pandemic. Conversely, FCT consumption experienced a more consistent and substantial relative increase between 2015 and 2020. Nonetheless, domestic FCT consumption remained very low in absolute terms relative to domestic FMC consumption.
- **Significant excise tax increases (2021-2024):** From 2021, substantial increases in tobacco excise taxes accelerated prices at a pace faster than the pre-2021 trend. In line with economic theory, FMC consumption declined substantially between 2021 and 2024. At the same time, the popularity of FCT continued to increase albeit at a slower rate than during

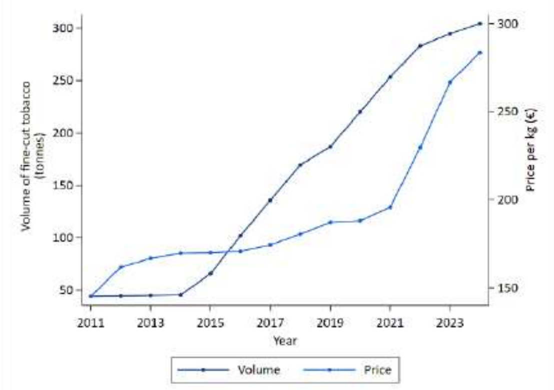
[32] The percentage of total FCT and FMC consumption is calculated using the standard assumption of a 1g to 1 stick conversion rate.

the 2015 and 2020 period. By 2024, FCT consumption made up 5% of total FMC-FCT sales. Insufficient data exists to evaluate the impact on domestic tobacco consumption from the weakened FMC-FCT price differential from 2024.

Domestic FMC sales have fallen alongside rising prices since 2020 potentially due to price rises and the difficult economic climate.

Domestic FCT consumption as a fraction of domestic FMC consumption was relatively low in Slovakia. This low uptake could be due to the high prices of FCT compared to FMC in Slovakia. **Increasing FCT consumption has not prevented the overall decrease in tobacco consumption.**

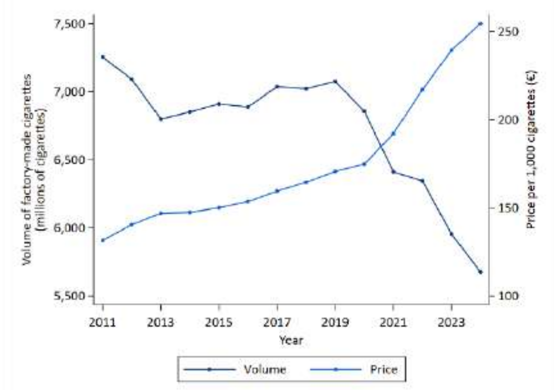
Figure 29 Volume and average price of (domestic) FCT



Note: Average prices are calculated based on the total value of domestic FCT consumption divided by the volume of domestic FCT consumption.

Source: London Economics' analysis of Euromonitor data

Figure 30 Volume and average price of (domestic) FMC



Note: Average prices are calculated based on the total value of domestic FMC consumption divided by the volume of domestic FMC consumption.

Source: London Economics' analysis of Euromonitor data

6.2.3 Non-domestic FMC consumption

Non-domestic FMC consumption in Slovakia remains minimal (see Figure 31). However, Slovakia serves as a transit country for illicit tobacco smuggled from Belarus and Ukraine to Western Europe, where higher tobacco prices may offer more lucrative opportunities for smugglers than in Slovakia, thereby keeping illicit market shares low.[33] Observed temporary disturbances in non-domestic market shares between 2011 and 2024 include:

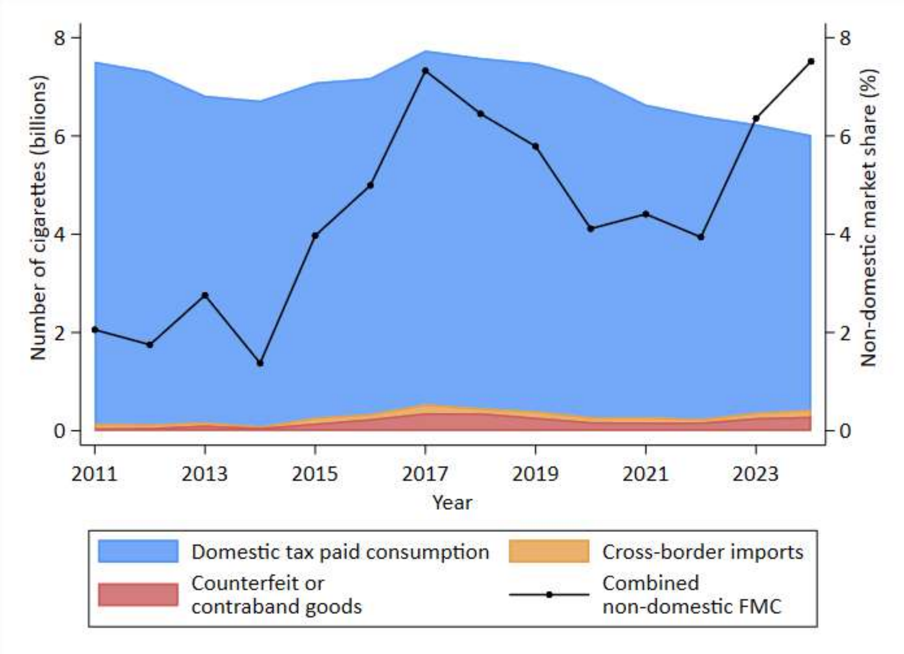
- **Temporary reduction in 2014**: A temporary fall in non-domestic FMC market shares to relatively insignificant levels (1.4% of the FMC market). While no apparent domestic pricing change explains this, the 2014 conflict in Ukraine may have disrupted tobacco smuggling operations from outside the European Union. Non-domestic FMC consumption subsequently tripled in 2015, as levels recovered.
- **Increasing non-domestic tobacco consumption (2015-2019)**: An increase in non-domestic FMC consumption occurred despite no significant changes to domestic tobacco pricing structures. This coincided with a broader rise in domestic tobacco consumption, suggesting non-pricing factors influenced this short-term trend. Even at its 2017 peak, the non-domestic market share did not exceed 7.3%.

[33] Čipka, D and Šalková, T. (2024). The fight against illegal tobacco products. Potravinarstvo Slovak Journal of Food Sciences. 18. 951-963. 10.5219/2033.

- **Recent excise tax increases (2023-2024)**: An increase in non-domestic FMC consumption occurred in 2023, alongside excise tax increases since 2020. A further smaller increase was observed in 2024, resulting in Slovakia's largest non-domestic market shares since 2006. However, non-domestic FMC market shares in Slovakia remain low relative to other case study countries.

Relatively low domestic tobacco prices may have contributed to Slovakia's minimal non-domestic consumption, despite its proximity to non-EU illicit tobacco origin countries. Data is only available until 2023, limiting the evaluation of the impact of disproportionate tax and price increases on domestic FCT in 2024.

Figure 31 Factory-made cigarettes by tax origin of purchase over time



Source: KPMG Project STAR / Project SUN / Project STELLA / Illicit cigarette consumption in Europe

6.3 Tobacco excise revenue

Tobacco excise tax receipts are a significant revenue source for the Slovak government. In response to fiscal pressures, Slovakia has increased these excise taxes to increase revenue and mitigate budget deficits.[34]

Nominal revenues from tobacco excise taxes have historically increased over time (see Figure 32). However, there are two notable exceptions to this trend, both linked to falling FMC consumption absent significant price changes. They are:

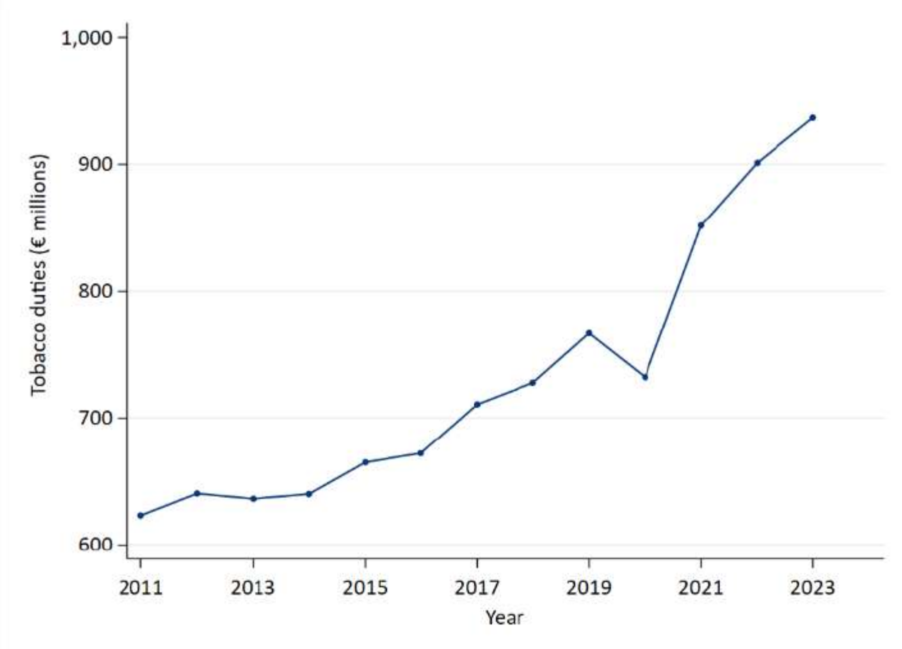
- Stable tobacco excise tax receipts between 2012 and 2014
- Decline in FMC consumption in 2020
    - More than offset by a substantial increase in excise tax in 2021

[34] Reuters (2024) Slovak government plans soft drinks tax as part of EUR 1.4 bln deficit reduction.

As a proportion of GDP, tobacco excise receipts remained relatively constant between 2011 and 2024. Tobacco excise revenue also constituted a growing proportion of broader Slovak excise revenues.[35] **These trends outperform those of other European case-study countries, underscoring the success of Slovakia's tobacco excise regime in limiting non-domestically taxed tobacco consumption between 2011 and 2024**.

Due to the lack of data, the impact of the disproportionate 2024 excise tax increase on FCT remains uncertain.

Figure 32 Government receipts from tobacco duties over time



Note: Tax revenues are in nominal terms. VAT receipts are not included as these are standardised across most products sold in Slovakia.

Source: European Commission Taxes in Europe Database v4

[35] Institute of Economic Research SAS (2024) Landscape view of the tobacco market in Slovakia

7 Tobacco taxation, prices and consumption in the United Kingdom

7.1 Key findings

The United Kingdom has experienced a significant decline in the volume and market share of domestically taxed tobacco. The market share of legal cross-border and illicit FMC increased from 13% in 2011 to 38% in 2024. This growth coincided with increases in tobacco excise rates as part of the UK's tobacco tax escalator, making the UK one of the most expensive European markets for tobacco. FCT-specific increases in the excise rate have further reduced the price differential between FCT and FMC, weakening the incentive for outpriced consumers to purchase domestic FCT instead of illicit and legal cross-border tobacco. The UK's non-domestic FMC market shares were below-average in Europe in 2011 but have transformed into some of the largest by 2024.

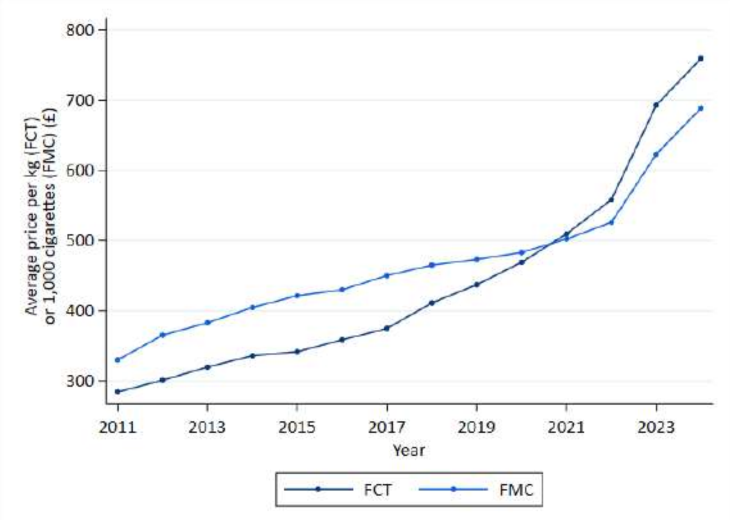
While excise tax receipts from tobacco are following an overall downward trend because of the reduction in domestic tobacco consumption, the amount of foregone tax revenue from non-domestic FMC consumption has been growing over time. Substitution towards domestic FCT instead of non-domestic tobacco would prevent a loss of tax revenues for the UK Exchequer. Additionally, non-domestic tobacco consumption has been stable over time, unlike domestic tobacco. The relatively large non-domestic tobacco consumption weakens the control of the government over consumption and the impact of tobacco consumption in the UK, as it is domestically untaxed and may not comply with UK regulations.

7.2 Trends in tobacco prices and consumption

7.2.1 Tobacco prices and the UK tobacco duty escalator

The prices of FCT and FMC increased consistently between 2011 and 2024, by 167% for FCT and 109% for FMC over the 13-year period (see Figure 33). Prices for FCT and FMC followed a similar trend until 2017, after which FCT prices have increased more rapidly than FMC. As a result, whereas the price differential between the two products was relatively stable between 2011 and 2017, this gap has decreased continuously in subsequent years. **The reduction in the price differential has led to a weakening of the buffer function of FCT over this period**.

Figure 33 Average prices of FCT and FMC



Note: Average prices are calculated based on the total value of domestic FCT or FMC consumption divided by the volume of domestic FCT or FMC consumption.

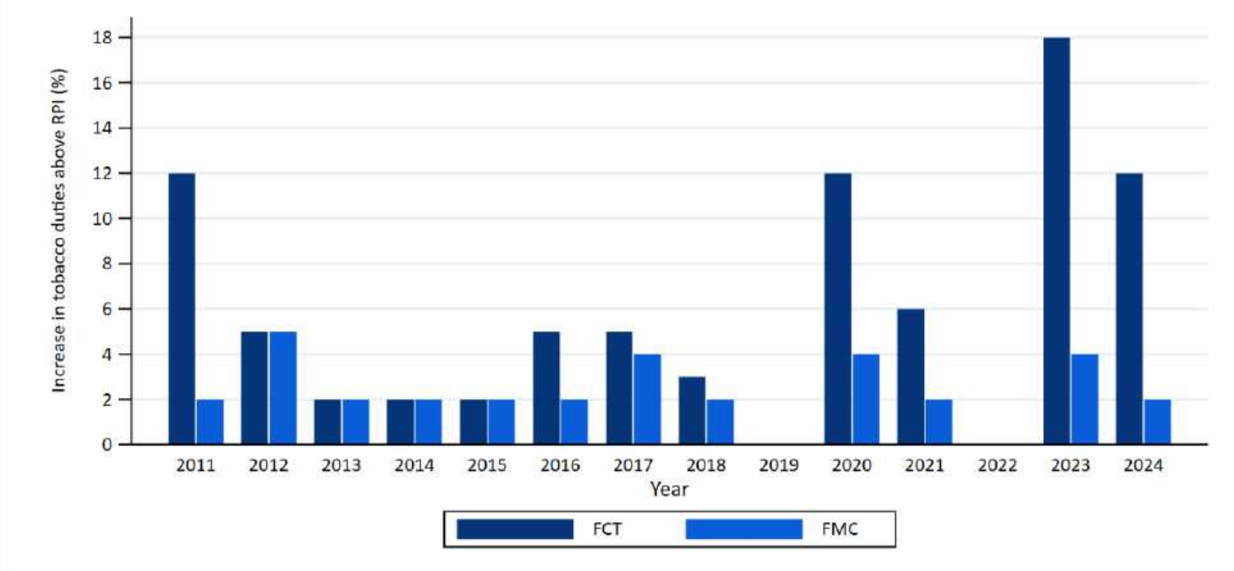
Source: London Economics' analysis of Euromonitor data

The increase in prices was mainly driven by two factors: inflation and the UK's tobacco duty escalator policy.

- While the overall **inflation rate** was modest, an average of 2%[36] from 2011 to 2021, there were sharp increases in inflation (around 7-9%) during the cost-of-living crisis in 2022 and 2023. As a result, inflation contributed significant increases in both FCT and FMC tobacco prices from 2022.
- The **tobacco duty escalator** is a policy designed to reduce tobacco consumption by increasing excise taxes on tobacco at an above-inflation rate. While the escalator defines the annual percentage increase in excise duties for FCT and FMC, the rate has increased considerably more for FCT (see Figure 34). In particular, excise increases on FCT were more substantial than those imposed on FMC in 2011, with additional increases from 2016, and significant FCT-specific increases in excise since 2020. These disproportionate increases in excise on FCT have been the driving factor in narrowing the price differential between FCT and FMC.

[36] The figure refers to the annual CPI rate from the UK Office for National Statistics.

Figure 34 UK tobacco duty escalator for FCT and FMC



Note: The increases relating to the tobacco duty escalator are applied on top of general increases in RPI.

Source: London Economics' analysis of government budget announcements from GOV.UK

7.2.2 Domestic tobacco consumption

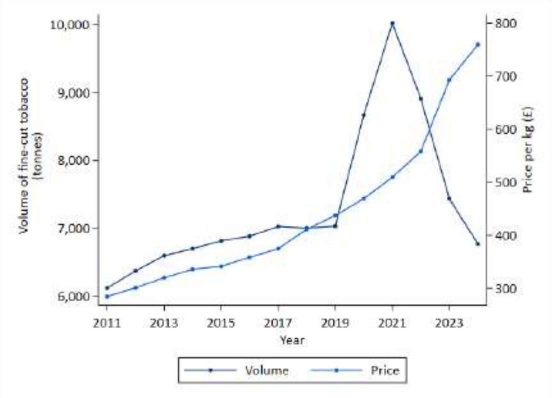
While prices increased for both FCT and FMC, consumption patterns followed different trajectories, with some notable distinctions identified before, during, and after the COVID-19 pandemic period. Overall, the trends observed in the consumption data are in line with economic theory and support the concept that FCT provides a buffer function for consumers who are being priced out of FMC.

- **Pre-pandemic period (2011-2019)**: Economic theory suggests that relative price increases lead to a reduction in consumption. Consumers can also substitute higher-priced goods for others that cost less. In line with the theory, quantity demanded decreased for FMC between 2011 and 2019 as prices increased (see Figure 36). However, for FCT, the opposite trend – an increase in quantity demanded – is observed between 2011 and 2017 as the price of FCT increased (see Figure 35). The difference in the responses to price increases between the two products suggests that some consumers switched from FMC to domestic FCT due to the price differential.
- **Introduction of minimum excise duties (2017)**: In 2017, the above-mentioned increase in FCT consumption and the decrease in FMC consumption were more pronounced compared to previous years. This phenomenon coincides with the introduction of minimum excise duties for FMC. Minimum excise duties establish a tax floor, which increases the price of low-cost FMC, and consequently, the incentive for FMC consumers to switch to FCT. The resulting consumption pattern is in line with the expected effect of the buffer function.
- **Pandemic period (2020-2022):** Domestic FCT consumption increased significantly during the COVID-19 pandemic period, reaching a peak level in 2021. FMC consumption remained relatively stable during this period, ending the previous downward trend. The temporary increase in consumption of domestic tobacco, FCT in particular, was likely caused by limited cross-border imports due to border closures and other restrictions. Other measures taken during that period also restricted the ability of smugglers to make cheap tobacco available on the illicit market, forcing their usual consumers to temporarily seek a replacement product. This period **highlights how domestic FCT can capture outpriced consumers who**

would otherwise elect to purchase less expensive alternatives, including those from **non-domestic sources**.

- **Post-pandemic period (2021-2024)**: Following the pandemic period, FMC consumption continued to decline from 2021, while FCT consumption returned to pre-pandemic levels. In fact, FMC consumption declined at a faster rate than during the pre-pandemic period. Unlike in previous periods, where a reduction in FMC consumption was accompanied by an increase in FCT consumption, in the post-pandemic period, domestic FCT consumption also decreased and had dipped below pre-pandemic levels by 2024. It is important to note that it is not currently possible to identify a definitive trend in relative consumption due to the limited number of years of post-pandemic and the effects of the cost-of-living crisis. However, **the analysis suggests that by reducing the price differential between FCT and FMC since 2017**, and by imposing significant FCT-specific increases in excise duties from 2020 onwards, **the buffer function of FCT has been gradually eroded**. The result is that there has been a reduced incentive to substitute FMC with domestic FCT instead of legal cross-border or illicit tobacco. Research by London Economics has previously identified that affordability constraints from adverse macroeconomic conditions drive increased substitution from FMC to FCT.[37] The report only considered the impact of increases in unemployment; however, broader macroeconomic conditions could increase the price consciousness of consumers, such as the high inflation and economic downturn associated with the recovery from the pandemic period. Domestic tobacco is particularly vulnerable to price increases due to high ad valorem taxes and the inflation-linked tobacco escalator. Consumers may have been more willing to substitute towards non-domestic tobacco consumption, given these factors. This initial conclusion is supported by the evidence that non-domestic FMC consumption started increasing again following the pandemic period (see Section 7.2.3).

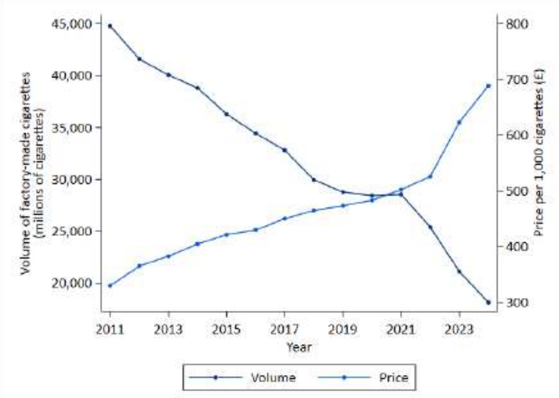
Figure 35 Volume and average price of (domestic) FCT



Note: Average prices are calculated based on the total value of domestic FCT consumption divided by the volume of domestic FCT consumption.

Source: London Economics' analysis of Euromonitor data

Figure 36 Volume and average price of (domestic) FMC



Note: Average prices are calculated based on the total value of domestic FMC consumption divided by the volume of domestic FMC consumption.

Source: London Economics' analysis of Euromonitor data

[37] London Economics (2021) Impact of the state of the economy on consumption of Fine-Cut Tobacco (FCT) and excise duties.

7.2.3 Non-domestic FMC consumption

While there has been a continuous reduction in the consumption of FMC over the period of investigation, the volume of consumption of non-domestic FMC has remained relatively constant. This means that the share of non-domestic FMC (both legal and illegal) has increased from 12.7% to 37.8% in thirteen years (see Figure 37).[38] This suggests that the UK, despite not being part of the Schengen Area, **went from having a below-average market share of non-domestic tobacco consumption to one of the highest within Europe**.

Even though the consumption of non-domestic tobacco has remained at a similar level over time, the data shows some notable fluctuations across the years:

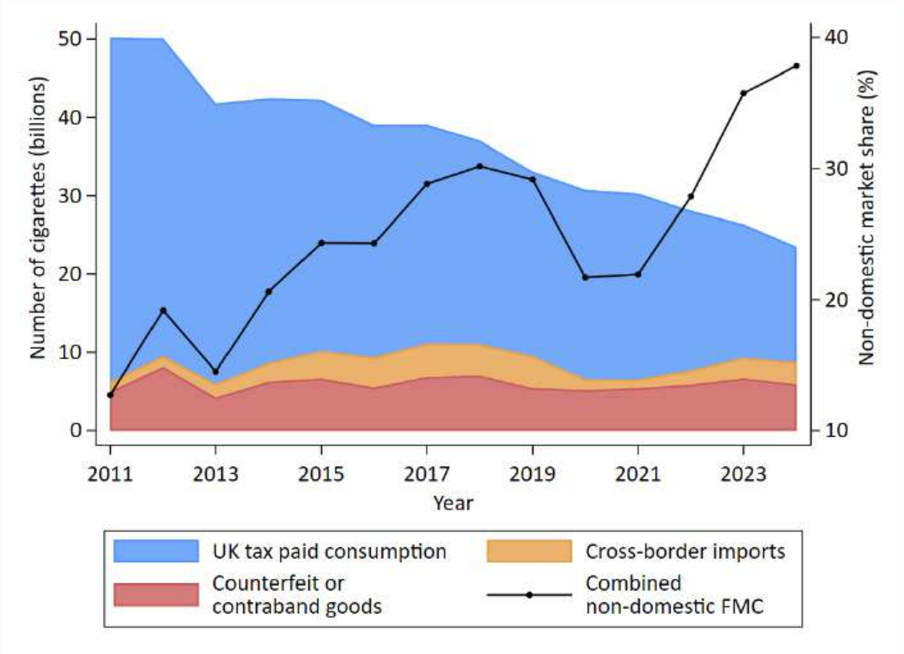
- Following large increases in excise rates in 2012, the UK experienced a sudden increase in the consumption of illicit tobacco in 2012. While illicit consumption reverted to previous levels in the following years, the market share of legal cross-border imports gradually increased from 2.7% in 2011 to 12.5% in 2019. Since this period coincides with yearly increases in the tobacco tax duty escalator, consumers were likely shifting their consumption towards non-domestic tobacco to avoid the UK's comparatively high and increasing tobacco prices. The increase also follows the targeted increases in FCT excise in 2011 (and from 2016 onwards), reducing the incentive to switch from domestic FMC to domestic FCT.
- During the pandemic period, illicit tobacco consumption remained relatively unchanged and (unsurprisingly) legal cross-border imports decreased.[39] The reduction in legal cross-border imports was likely a result of pandemic-related border closures and other restrictions. As restrictions were lifted, non-domestic tobacco consumption again increased and reached its peak in 2024. Due to the additional FCT-specific excise duty increase imposed in 2023 and 2024, **the buffer function of FCT has become weaker and less effective in countering the increase in the level and market share of non-domestic FMC in the UK**.

[38] The figures presented are based on studies produced by KPMG on illicit cigarette consumption in Europe. KPMG does not produce estimates on illicit FCT consumption. It should be noted that HMRC also publish estimates of illicit FCT and FMC consumption in the UK, which differ compared to the estimates presented by KPMG in terms of both level and trend. HMRC's estimates indicate an illicit market share (only) of 7% for FMC and of 33% for FCT in the financial year 2022/23. HMRC's estimates also indicate a relatively constant trend in the illicit market share for FMC and a slight downward trend for FCT from FY2011/12 to FY2022/23.

The main difference across KMPG and HMRC's figures appears to be the methodology used to estimate the volume of illicit tobacco. KPMG utilises discarded pack surveys to estimate the illicit and cross-border market for FMC, whereas HMRC utilise a residual approach, where illicit consumption is estimated based on the difference between consumer survey estimates of tobacco consumption and sales data. In a study on illicit market estimation methodologies for the European Commission (2021), the authors concluded that discarded pack surveys "represent one of the best options to capture the illicit market in cigarettes" despite its cost. Meanwhile, there is a risk that HMRC's method relies on self-reported consumption data, which could introduce bias and other sources of error. Furthermore, HMRC amended the methodological approach for its estimates from FY2020/21 because of changes to the underlying survey questions asked by the Office of National Statistics. As a result of the issues, the analysis presented in this study is based on the KPMG estimates.

[39] Estimates of legal cross-border tobacco may include illicitly smuggled products due to the challenges in verifying their legality. Nevertheless, consistent relative trends in these estimates can still offer a valuable approximation of legal cross-border consumption patterns, even if they are not perfect.

Figure 37 Factory-made cigarettes by tax origin of purchase over time



Source: KPMG Project STAR / Project SUN / Project STELLA / Illicit cigarette consumption in Europe

7.3 Tobacco excise revenue

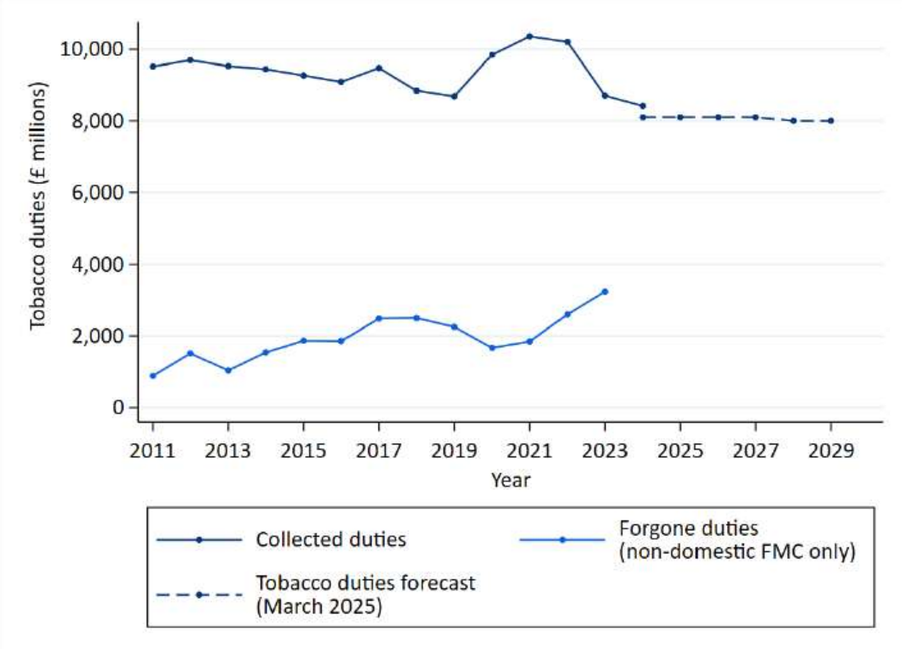
Government excise tax receipts from tobacco products depend on the volume and price of domestic tobacco. Although FMC prices and FCT prices have increased over time, tax receipts from tobacco duties have generally declined since 2012 (see Figure 38). The reduction in Exchequer tax receipts has been driven by the downward trend in domestic FMC consumption, as it is larger than the counter-effect of the increase in domestic FCT. The exceptions to this long-term trend are a moderate increase in 2017 and the temporary effects during the pandemic period:

- The increase in excise tax receipts in 2017 coincides with the introduction of minimum excise duties, increasing the effective tax rate on lower-priced FMC. The positive effect on excise tax receipts is more than offset in the following years due to disproportionate decreases in domestic FMC consumption.
- The large increase in excise tax receipts during the pandemic period was caused by the increases in domestic FCT consumption following the pandemic-related reduction in cross-border trade. The resumption of 'normal' trade after the pandemic period led to an increase in foregone FMC government receipts of £3.2 billion in 2023 from its 2021 low. Further revenue may have been lost from non-domestic FCT consumption. During the pandemic period, increases in domestic FCT consumption suggest that this lost revenue could be partially recovered through a strengthened buffer of domestic FCT.

Neither of these exceptions appears to have altered the overall downward trend in government tax receipts from tobacco duties.

OBR forecasts that tobacco duties will remain largely stable over the next five years, decreasing from £8.1 billion in the 2024-2025 fiscal year to £8.0 billion by 2029-2030. This stagnation in nominal figures represents a decrease in real terms despite tobacco duties increasing in real terms – if the tobacco duty escalator remains.

Figure 38 Government receipts from tobacco duties over time and forgone receipts from non-domestic FMC consumption[40]



Note: HMRC revenues in nominal terms from tobacco duties. VAT receipts are not included as these are standardised across most products sold in the UK. Foregone tax receipts from consumers purchasing non-domestic FMC instead of domestic FCT.

Source: HMRC tax receipts and National Insurance contributions for the UK from GOV.UK, London Economics' analysis of KPMG Illicit cigarette consumption in Europe data, OBR Economic and Fiscal outlook March 2025, and National Statistics on Tobacco Duty from HMRC

While tobacco excise tax receipts are experiencing a downward trend, the level of foregone excise tax revenue from non-domestic FMC consumption has been growing over time (see Figure 38). This trend is based on the relatively constant level of illicit and cross-border tobacco consumption over time alongside increasing tobacco prices.

In 2023, the level of foregone tobacco duty receipts for FMC is estimated at £3.2 billion based on all (i.e. legal and illegal) non-domestic FMC consumption and £2.3 billion based on consumption of illicit FMC only.[41] The value of foregone duty receipts highlights the importance of discouraging non-domestic tobacco consumption.

The evidence presented suggests that the erosion of FCT's buffer function by reducing the price differential between FCT and FMC can have adverse fiscal consequences and entrench the increase in UK non-domestic tobacco consumption.

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[40] The foregone tax receipts from non-domestic FMC consumption are estimated by multiplying the volume of non-domestic FMC consumption by the average excise rates for FCT in each year. To be conservative, it has been assumed that non-domestic FMC would be substituted with domestic FCT, which was less expensive than FMC until 2021. A conversion rate of 1kg of FCT for 1,000 cigarettes of FMC has been assumed.

[41] HMRC estimate a tax gap of £0.6 billion from illicit FMC and £1.1 billion from illicit FCT in 2023. The values are lower compared to the ones presented in this study, as they are based on HMRC's lower estimates of illicit tobacco consumption in the UK. Footnote 38 outlines the methodological differences that are driving the differences between the two sources and the reasons for relying on the estimates from KPMG's studies.

8 Conclusion

This report assesses the evolving role of FCT as a price-sensitive buffer against non-domestic tobacco consumption across the United Kingdom and four EU Member States: France, Germany, the Netherlands, and Slovakia.

Drawing on economic theory and empirical data, the analysis demonstrates that competitively priced, domestically taxed FCT can serve a critical function in maintaining government tobacco excise revenues and reducing reliance on non-domestic tobacco, including both legal cross-border purchases and illicit trade. When the price differential between FMC and FCT is preserved through a meaningful excise tax differential, outpriced consumers are more likely to remain within the legal domestic market by switching to FCT rather than seeking less expensive alternatives from non-domestic sources. This "buffer function" of FCT helps governments achieve dual objectives: keeping consumers within a legal and regulated framework and protecting public finances by reducing the volume of untaxed or illicit consumption.

Germany provides the most robust example of this policy in action. A strategy of moderate, gradual excise tax increases – while preserving a clear FMC-FCT price differential – has contributed to declining domestic consumption overall, while keeping non-domestic tobacco consumption low and tobacco excise tax receipts relatively stable. This experience shows that it is possible to advance tobacco control objectives without significantly incentivising illicit trade or cross-border shopping.

France and the United Kingdom, in contrast, illustrate the risks of eroding the buffer function. In both countries, substantial and disproportionate increases in FCT excise taxes have narrowed or even reversed the price differential with FMC. This has undermined the competitiveness of FCT, reducing its attractiveness to outpriced consumers and providing a financial incentive for purchasing non-domestic tobacco. France has seen a sharp rise in non-domestic market share, approaching 50% of FMC consumption, alongside a post-pandemic period decline in tobacco excise receipts. The UK has also seen its non-domestic FMC market share rise from 13% in 2011 to 38% in 2024. In the UK case study, forgone tax revenues from non-domestic consumption now reach billions of pounds annually. These revenues that might otherwise have been partially retained through a more calibrated excise policy.

The Netherlands and Slovakia offer more complex, transitional pictures. In the Netherlands, recent steep excise tax increases, particularly in 2024, have substantially reduced the price differential between FMC and FCT. Although long-term data is not yet available, early indicators suggest that the buffer function in the Netherlands may be weakening, with a 2024 rise in non-domestic consumption. Slovakia, meanwhile, has historically seen little non-domestic consumption, aided by relatively low tobacco prices and a stable excise tax regime. However, recent FCT-specific excise increases could threaten this balance. Notably, FCT has long been more expensive than FMC in Slovakia using standard conversion rates and has played a minor role in the Slovakian tobacco market. The latest tobacco excise rate increase is likely to further limit the potential role of FCT.

Across all five markets, the COVID-19 pandemic provided a natural experiment that reinforces this study's analysis. With border closures and other restrictions limiting access to non-domestic tobacco, many countries experienced a temporary spike in domestic tobacco sales, especially in FCT. As the pandemic restrictions lifted, FCT sales receded, and non-domestic consumption resumed its upward trend. The increase in FCT during pandemic related restrictions showcases that people purchasing non-domestic tobacco are more likely to purchase FCT than FMC. This supports the theory that these consumers have been outpriced and might be willing to remain in the domestic legal market if reasonably priced alternatives are available.

Taken together, the evidence suggests that FCT continues to play an important, though increasingly fragile, role as a buffer in European tobacco markets. These findings build upon the 2021 London Economics' report,[42] which identifies that financial hardship contributes to smokers switching to illicit consumption. This report's analysis shows that competitively priced domestic FCT can capture these priced-out consumers. Therefore, competitively priced FCT acts as a buffer against non-domestic tobacco, as found in the 2021 report. Consequently, when the price differential between FMC and FCT is maintained, FCT can contribute to limiting non-domestic and illicit substitution and protect public revenues. When taxation policies erode the price differential, consumers may turn to non-domestic tobacco, weakening the effectiveness of both fiscal and tobacco control policies.

[42] London Economics (2021) Impact of the state of the economy on consumption of Fine-Cut Tobacco (FCT) and excise duties.