

Tobacco taxation, consumption and illicit trade in Germany

London Economics' analysis for ESTA

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Key messages

In 2010, learning from the costly excise mistakes of a decade in which it had sought to increase tobacco revenues to fund headline initiatives, the German government adopted a predictable long-term tobacco excise policy. This policy **balanced** fiscal and public health objectives, **increased government revenue**, and **reduced non-German inflow** of tobacco products, whilst also **decreasing consumption**. Moderate and predictable fine-cut tobacco taxation has played an important role in this turnaround. Following the most recent tax increase in 2015 as part of the Tobacco Duty Model, the German tobacco taxation has been characterised by **a freeze in excise rates**, **a decline in overall consumption**, as well as **a reduction in the share of illicit consumption**.

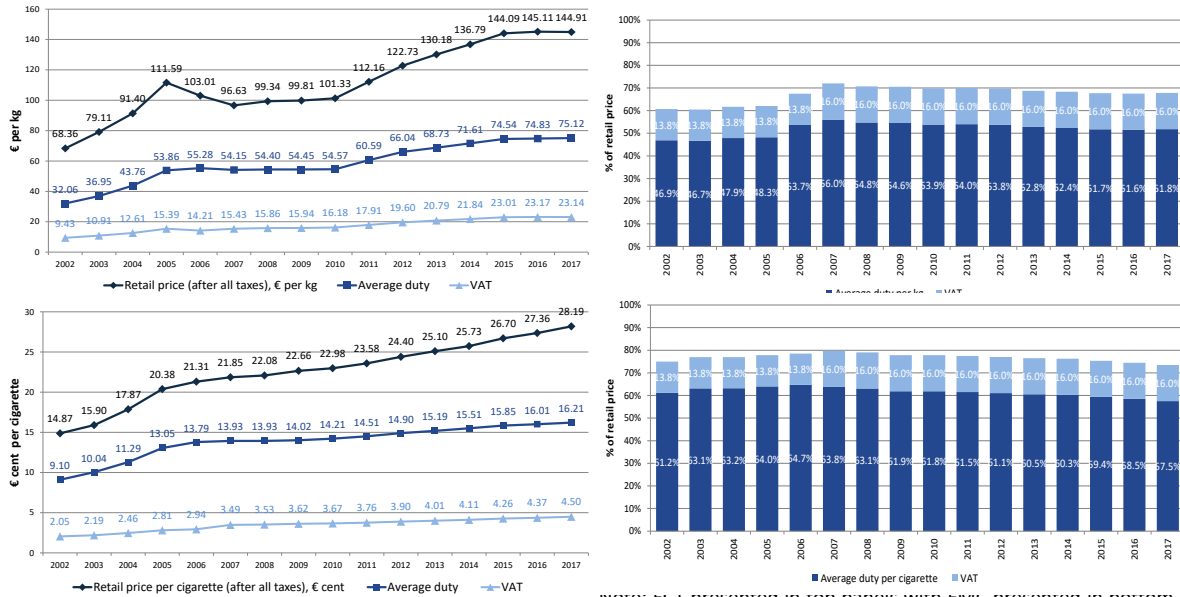
Evolution of tobacco excise duties in Germany

Since 2002, it is possible to distinguish between **four broad phases of tobacco taxation policy** implemented by the German Federal Ministry of Finance. This information is presented Table 2.

1 - 2002 and 2005: Strong upwards adjustment

Following the September 11th terrorist attacks, the German government announced tobacco excise increases to finance the war on terror (Deutscher Bundestag, 2001). In January 2002, the average excise burden for FMC was raised by **14%**, and the burden for FCT increased by **22%** (see 0). In 2003 the government increased the excise burden again, with a **10%** increase in excise on cigarettes and a **12%** increase in excise on FCT. In 2004 and 2005, the government announced further excise increases, leading to a three-step increase of **€1** per pack (for 19 cigarettes and 40g of fine-cut tobacco) over an 18 month period, on this occasion to finance healthcare reforms (Deutscher Bundestag, 2003). However, the result of these excise increases resulted in a number of unintended fiscal consequences: specifically, driven by the decline in revenues associated with FMC, tobacco excise revenue in 2004 declined to a level below that achieved in 2002 (see Figure 25).

Figure 25: Average duties, VAT rates and retail prices for FCT (top) and FMC (bottom) in Germany

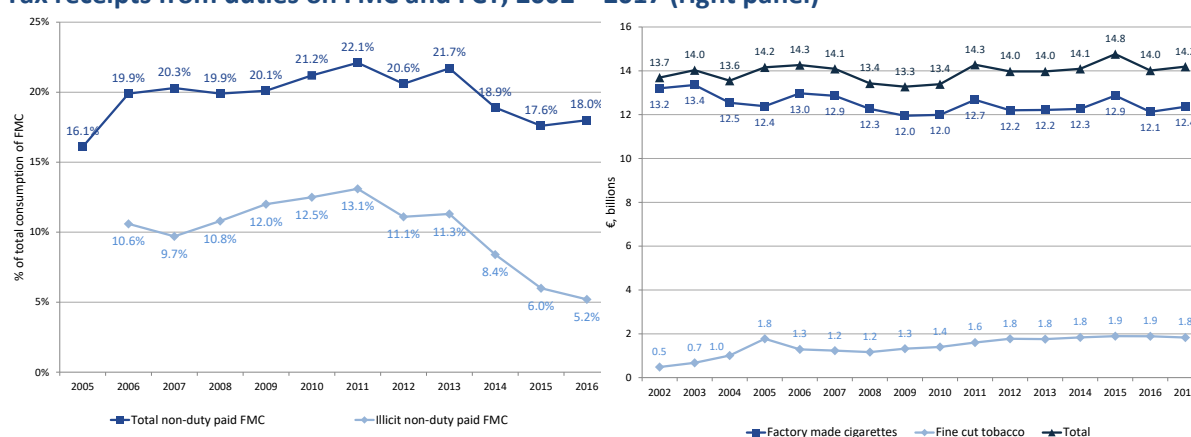


note: FCT presented in top panels with FMC presented in bottom panels. Average duty includes the specific and ad valorem duty, but excluding value added tax per cigarette or kg of fine-cut tobacco, and is calculated by dividing total taxable value by the number of duty paid cigarettes / duty paid kg of fine-cut tobacco. Values for each year incorporate any revisions based on the following year's publication. Numbers of 2017 are based on preliminary estimates. Source: London Economics' analysis based on Statistisches Bundesamt (2018) and Bundesfinanzministerium (2006).

Table 2 Tobacco excises for FMC and FCT until 2021 in Germany

Date of effect of statutory change	Factory-made cigarettes (FMC)		Fine-Cut tobacco (FCT)		VAT (FMC and FCT)
	Specific (€ per 1,000 cigarette)	Ad valorem (% of retail price per cigarette)	Specific (€ per kg)	Ad valorem (% of retail price per kg)	VAT (% of retail price, per cigarette / kg)
January 2002	55.90	23.3%	19.15	17.0%	13.8%
January 2003	61.70	24.2%	21.40	18.3%	13.8%
March 2004	68.50	24.3%	27.03	16.7%	13.8%
December 2004	75.60	24.8%	30.55	17.9%	13.8%
September 2005	82.70	25.3%	34.06	19.0%	13.8%
2006	-	-	-	-	-
January 2007	-	24.7%	-	18.6%	16.0%
2008-2010	-	-	-	-	-
May 2011	90.80	21.9%	41.65	14.3%	16.0%
January 2012	92.60	21.9%	43.31	14.4%	16.0%
January 2013	94.40	21.8%	45.00	14.5%	16.0%
January 2014	96.30	21.7%	46.75	14.6%	16.0%
January 2015 to present	98.20	21.7%	48.49	14.7%	16.0%

Source: Statistisches Bundesamt (2014a) and Bundesfinanzministerium (2006).

Figure 26: Consumption of non-duty paid cigarettes as a % of total, 2005 – 2016 (left panel), and Tax receipts from duties on FMC and FCT, 2002 – 2017 (right panel)

Note: Illicit consumption captures either contraband cigarettes or counterfeit cigarettes. Estimates of total non-duty paid cigarettes are based on Deutscher Zigarettenverband (2014, 2018); estimates of counterfeit and contraband cigarettes are based on KPMG (2014, 2017). Estimates of non-duty paid consumption prior to 2005 are not available; for consumption of illicit non-duty paid cigarettes, no estimates are available prior to 2006. Source: London Economics' analysis of Deutscher Zigarettenverband (2014) and KPMG (2014, 2017). Note: Tax receipts net of public expenditures. Values for each year incorporate any revisions based on the following year's publication. Numbers for 2017 are based on preliminary estimates. Source: London Economics' analysis of Statistisches Bundesamt (2018).

Part of the explanation for this reduction in taxation receipts was increased prevalence of tobacco products from other countries (both legal cross-border shopping and illicit trade) entering the German market. The market share of these "non-German" products increased from around 6% in 2001 to 16.1% in 2005 (IPSOS, 2010¹), while at the same time, many German consumers switched to "StiX", which were pre-portioned tobacco rods used for tubing available at lower price than

¹ IPSOS, Entsorgungsstudie 2010 ([here](#))

traditional manufactured cigarettes. Within three years (2002 to 2005), the duty-paid cigarette market had decreased by one-third, equivalent to **50 billion** sticks (see Figure 26). Sales of FCT – including pre-portioned tobacco – doubled in this period (an increase of **18,000** tonnes²).

As a result of these significant excise duty increases, overall government tobacco excise revenue remained flat or decreased. The price elasticity of demand amongst German consumers had clearly reached a point at which increases in the rate of excise had a negative, rather than positive, impact on excise revenue. The last significant excise increase occurred in September 2005.

2 - 2006 to 2011: Duty stability

Learning from this failed tobacco excise policy, Germany kept the headline tobacco excise rates unchanged between 2006 and 2010, raising only the minimum excise rate in January 2006. Initially, this was successful: inflow of foreign products stopped increasing significantly and tax revenues stabilised.

In March 2006 the European Court of Justice determined that pre-portioned tobacco must be taxed as cigarettes – effectively eliminating this subcategory of FCT. As a result, the fine-cut tobacco market dropped by **one third** (by approximately **10,500** tonnes (equivalent of **10.5 billion** sticks)) (see Figure 25). However, these consumers did not necessarily re-enter the market for German cigarettes, which declined by **2 billion** sticks in 2007, and a further **3.5 billion** sticks in 2008. It appears that rather than encouraging switching from FMC, pre-portioned tobacco acted as a “buffer” that had kept many smokers in the German duty-paid market. The changing tax arrangements relating to pre-portioned tobacco (and subsequent increase in cross-border trade) therefore contributed to an unexpected decrease in tax revenues from 2006-2007.

In response, the German government froze excise rates between 2007 and 2008. However, at the beginning of 2008, Germany’s neighbours, Poland and the Czech Republic, joined the Schengen agreement. The subsequent removal of border controls with these countries was highly significant, because although German cigarettes were more affordable in relation to domestic consumer incomes in Germany than elsewhere in Europe, the **price differentials** to neighbouring countries still offered German consumers a relatively favourable deal – at least for the share of the German population that lived within a short distance of the newly opened borders. Legal cross-border shopping was therefore the obvious consequence. The share of non-domestic products in the German market increased markedly, from its 2005 level of **16.1%** to a “new normal” of **20%** or higher. Between 2008 and 2010 excise revenues fell below 2002 levels.

3 - 2011 to 2015: The Tobacco Duty Model

The *Fünftes Gesetz zur Änderung von Verbrauchsteuergesetzen* (Fifth Act on Excise Amendments, (2010)) introduced the *Tabaksteuermodell* (Tobacco Duty Model). The implementation of the Tobacco Duty Model was aimed at providing greater long term certainty to German tobacco excise policy through the adoption of **moderate increases** in excise duties over a **five-year period** (see Table 2). This approach was applied for both cigarettes and fine-cut tobacco between May 2011 and January 2015.

The changes in fine-cut tobacco excise were, in percentage terms, considerably larger than the respective increases in cigarette duties. These changes specifically targeted the price differentials between fine-cut tobacco and cigarettes, in order to calibrate price levels that discouraged consumer switching from cigarettes to cheaper fine-cut products. However, reducing price

² Note that 1 kilogram of FCT is comparable to 1,000 FMC sticks, so 18,000 tonnes is equivalent to 18 billion sticks

differentials between different products increases the cost of the legal alternative to the more expensive factory-made cigarettes for lower income consumers. This policy diminished the buffer effect of fine-cut tobacco between domestic duty-paid tobacco products and cheaper non-German imports.

Following the introduction of the Tobacco Duty Model, average duty levels have increased annually by around **2%** without any increase in the prevalence of non-German products. Critically, this has led not only to an **increase in excise revenue** but also to **continued declines in consumption** (see Figure 26) of around **3%** per year in all tobacco product categories, in line with the German government's health objectives.

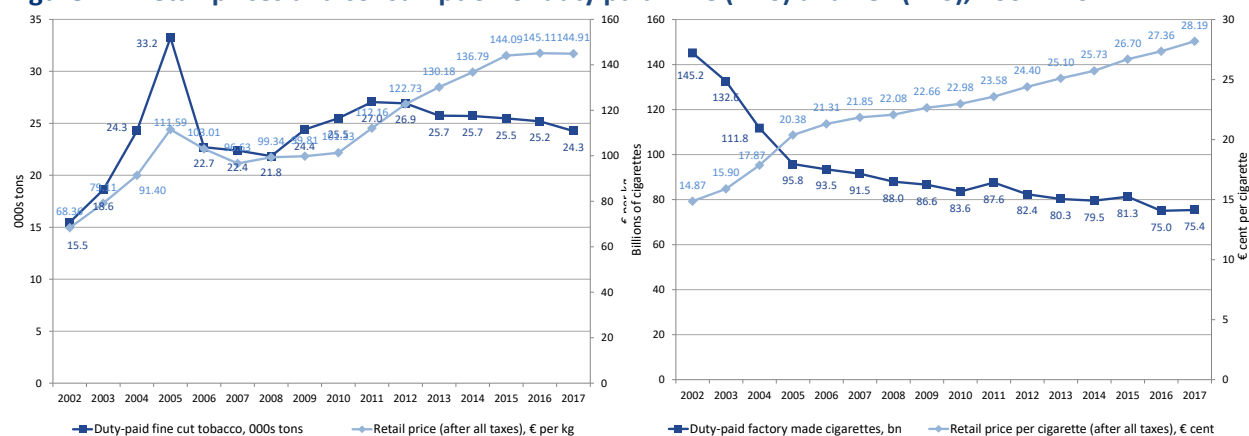
4 - 2016 to present: Duty stability

Following the annual increases in excise duties during the Tobacco Duty Model, the government **froze tobacco excise rates in 2016 and 2017**. Due to the delayed formation of the new government after the general election in September 2017, the acting Finance minister did not announce any changes for 2018 to existing tobacco tax policy. Since the appointment of the new Finance minister in March 2018, there have also been **no official announcements** regarding changes to the taxation of tobacco as of April 2018. Overall **tobacco excise has remained constant** at the level of the previous period despite a continuing reduction in duty-paid consumption of FMC and FCT. Furthermore, the sharp decline in illicit non-duty paid FMC that has been experienced since 2011 continues in part due to the freeze in excise duties, but also due to enhanced enforcement activities.

The buffer function of fine-cut tobacco

While the five year policy of excise stability from 2011-2015 proved successful at both stabilising and growing overall tobacco excise revenue, a further trend also became apparent. Between 2002 and 2017, the size of the market for duty-paid cigarettes had decreased by **70 billion** sticks (equivalent to approximately **50%** of initial consumption) (presented in Figure 27, right hand panel) and purchases of non-German cigarettes had grown to **16.2 billion** sticks (KPMG, 2017). Whilst the total tobacco excise revenue in 2017 was **€0.5 billion** above 2002 levels, revenue from FMC was approximately **6%** lower – reflecting the role played by fine-cut tobacco in maintaining both the tax base and taxation receipts.

Figure 27: Retail prices and consumption of duty paid FMC (RHS) and FCT (LHS), 2002 - 2017



Note: Consumption of duty-paid FMC and FCT net of tax rebates. Values for each year incorporate any revisions based on the following year's publication. Numbers of 2017 are based on preliminary estimates. Note that the significant increases in FCT volumes is in part due to the increase in take up of so called the pre-portioned tobaccos. According to estimates by the German Ministry of Finance, the volumes for pre-portioned tobaccos (included within FCT) in Germany increased from 1,000 tonnes in 2002 to approximately 18,500 tonnes in 2005. Since April 2006 pre-portioned tobaccos have been taxed as cigarettes (see judgement under C-197/04). Even excluding these volumes from the FCT series, between 2002 and 2013, the total volume of FCT increased from 14,500 tonnes in 2002 to 25,700 tonnes. *Source: London Economics' analysis of Statistisches Bundesamt (2018) and Statistisches Bundesamt (2014a, 2017, 2018).*

Historically, excise rates on fine-cut tobacco had followed the same trend as cigarette taxation. However, as FCT started from a lower base, these increases were larger in proportional terms. Between 2002 and 2017, FCT excise more than doubled (**134%**) in terms of average tax per kilogram while FCT taxation increased by around **78%**. In terms of retail prices, FCT remained at around half the price of FMC over the decade.

Fine-Cut tobacco sales increased steadily, by approximately **10,000** tonnes, between 2002 and 2013 (from **15,500** to **25,700** tonnes). This is equivalent to around **10 billion** sticks. From 2013 onwards, FCT sales remained constant at this level for the next 4 years. Government excise revenue from FCT more than **tripled**, over-compensating for any loss from FMC. Indeed a comparison of the growth of fine-cut sales (by the equivalent of **10 billion** cigarettes) with the size of the decrease of the duty-paid cigarette market (**70 billion** sticks) clearly indicates that the government's policy included a certain **degree of substitution between cigarettes and fine-cut tobacco**. However, the size of the non-German cigarette inflows (**16.4 billion** sticks) indicates that there *is* **substantial substitution between German duty-paid and non-German cigarettes**.

Without the existence of excise differentials between cigarettes and fine-cut tobacco, which feed into retail-price differentials, the share of the market represented by non-German inflow would likely be significantly higher. Without the increase in FCT sales volume, government excise revenue in 2017 would be significantly lower than in 2002.

Conclusions

The German government has successfully managed to strike a balance between its fiscal and public health objectives in the Tobacco and Duty Model by maintaining a tax differentiation between FCT and FMC that allows substitution. Modest excise increases, combined with the maintenance of a price differential between FMC and FCT mean that German excise revenues remain stable *both* when consumers who are priced out of the legal market choose to quit smoking, *but also* when they continue to choose to smoke – as the buffer function of fine-cut tobacco now offers them a legal, and excise-generating, alternative.