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INDUSTRY TRANSFORMATION

Global Trends in Nicotine: 2019 Update

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Global Trends in Nicotine - 2019 Update

Last year, the Foundation published its <u>Global Trends in Nicotine</u> report, which identified the major players in nicotine delivery. The report also outlined the product organization of the companies, as well as their geographic focus and relative production. This research was used as one input toward development of the <u>Smoke-Free Index</u>™, the Foundation's first action related to its <u>Industry Transformation</u> strategy. The Smoke-Free Index™ will provide quantifiable evidence over time of what steps the largest tobacco companies are taking toward achieving a smoke-free world and actions they take to impede that progress. The present report uses 2018 data to update select components of the initial Global Trends in Nicotine report; it also highlights notable trends that have occurred in 2019 to date

In 2018 more than \$800 billion in retail value was generated through the sale of an estimated 6.1 trillion retail cigarette stick equivalents globally. Given the size of the nicotine ecosystem, change will necessarily take time. Yet, signs of change—led by product innovation and consumer demand—are evident in certain markets. The fastest growing product categories offer alternative forms of nicotine delivery to consumers, while the traditional forms are generally declining by volume. E-cigarette sales increased more than 30% in 2018, and heated tobacco product volumes more than doubled. Both product categories constituted less than 2% each of the global nicotine ecosystem by retail value but have far surpassed sales of nicotine replacement therapy (NRT) products during the past several years.

Global nicotine ecosystem remains stable

Globally, the nicotine ecosystem demonstrated retail value growth in 2018, though retail product category volumes associated with cigarettes, smoking tobacco, and smokeless tobacco declined (*See Table 1*). In other words, tobacco companies continued to raise prices on their legacy products. Tobacco products are considered <u>relatively inelastic</u>, based on conventional wisdom that the price elasticity of tobacco products is between –0.3 and –0.5, so the real price increases (through a combination of manufacturer pricing and taxation) are contributing to reduced demand.

Cigarettes constituted more than 87% of global retail value associated with the nicotine ecosystem, which was down from 89% in our last report. Overall nicotine demand, estimated by our cigarette stick equivalent model, remained stable compared to prior years, neither growing nor shrinking significantly.

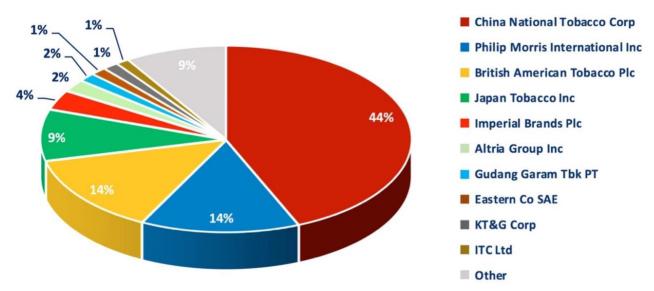
Table 1
Global Product Category Retail Value and Volume Summary for 2018

WORLD Product Category (2018)	Retail Value (USD million)		% Retail Value	Retail Value % Change 2018/17 3-Year CAGR		Retail Volume % Change 2018/17 3-Year CAGI	
Cigarettes	\$	713,662	87.4%	3.0%	0.5%	(0.7%)	(2.1%)
Cigars and Cigarillos		29,899	3.7%	21.8%	11.6%	13.0%	8.8%
Smoking Tobacco		30,148	3.7%	6.8%	4.8%	(0.5%)	(0.4%)
Smokeless Tobacco		13,014	1.6%	2.9%	3.8%	(0.5%)	(0.7%)
Vaping Systems		15,840	1.9%	36.2%	23.6%	33.3%	21.6%
Heated Tobacco Products		11,903	1.5%	110.9%	324.1%	111.8%	344.4%
NRT Smoking Cessation Aids		2,528	0.3%	5.7%	4.3%	1.7%	2.4%
Total	\$	816,993	100.0%	5.0%	1.8%	0.6%	(1.1%)

CAGR, compounded annual growth rate. Source: Euromonitor Passport for World by Retail Value in current prices, USD million. Retail Volume in cigarette stick equivalents based on Euromonitor Passport for World by Retail Volume and Value, and Foundation estimates. Refer to Global Trends in Nicotine Appendix for Sources and Methods.

The largest cigarette producers around the world remained consistent between 2017 and 2018. (See Chart 1). China National Tobacco Corporation (CNTC) had a 44% global share of cigarettes, followed by the multi-national producers and country-specific manufacturers. In China, with approximately 300 million smokers, 2.4 trillion cigarettes sold annually, employment of millions of people, and more than 1 trillion yuan in annual tobacco tax revenue generated for state and local governments, the long-term effects of tobacco are interconnected and complex. Should innovation-driven development in science and technology, which encompasses key goals identified by The 13th Five-Year Plan, be applied to the tobacco industry the impact within China and around the world could be massive. As to whether or not such changes will come to fruition, the signals are admittedly mixed. CNTC recently launched its first heated tobacco product in South Korea and listed its international unit on the Hong Kong stock exchange; on the other hand, China's health agency is considering legislation that would regulate the use of e-cigarettes across the country.

Chart 1
Global Company Retail Volume Share of Cigarettes in 2018



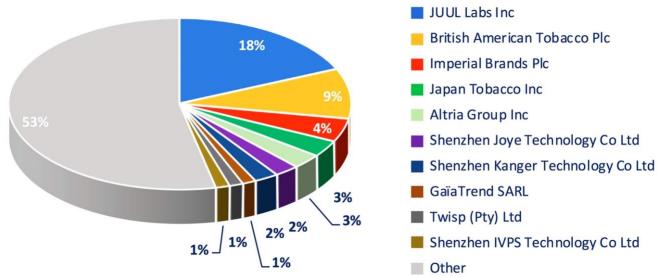
Source: Euromonitor Passport for World by Retail Volume. Japan Tobacco pro forma acquisitions of Akij Group.

Product innovation is driving change

E-cigarettes represent one of the most rapidly changing facets of the nicotine ecosystem. The category constituted about 1.9% of the global nicotine ecosystem in 2018 by retail value, which was up from 1.5% in 2017. In 2015, JUUL had zero market share. The company had less than 1% of the global vaping category share in 2016. That number, according to Euromonitor, increased to 3.9% in 2017 and 18.4% in 2018. All other significant e-cigarette producers either retained or lost share position in 2018. Overall, the e-cigarette category remains relatively fragmented (see Chart 2).

Policy surrounding e-cigarettes remains inconsistent. On one hand, <u>Public Health England</u> insists e-cigarettes are safer than smoking. On the other hand, <u>the government in India</u> announced a ban on the production and sale of e-cigarettes, and <u>San Francisco</u> recently became the first major US city to ban the products.

Chart 2Global Company Retail Value Share of Open and Closed Vaping Systems in 2018

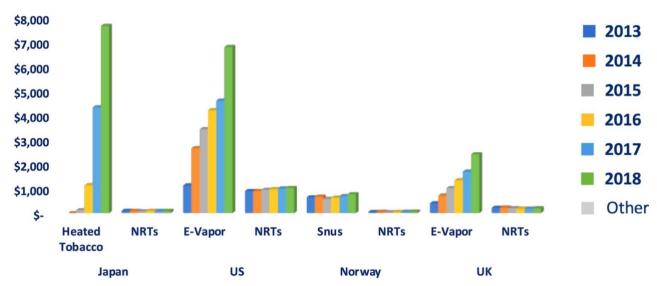


Source: Euromonitor Passport for World by Retail Value.

Across product categories, consumer demand for e-cigarettes and heated tobacco products was strong over the one- and three-year periods, albeit from relatively small market share positions. Volume growth for NRTs remained in the low single-digits on a percentage basis. Globally, as well as in two of the leading vaping markets (the US and the UK), e-cigarette sales have far surpassed NRT sales since the 2013 period and the trend continues, (see Chart 3).

A similar trend is evident among heated tobacco products in Japan. Other markets, such as snus in Norway, also exhibit demand that surpasses that of NRTs. Additional products, such as nicotine pouches, are demonstrating substantial growth from a relatively small share position. Swedish Match reported that US shipments of its nicotine pouch product, called ZYN, amounted to 17.5 million cans during the first six months of 2019, up from 5 million cans in the prior year. This increase can be attributed to a combination of growth from existing stores and store expansion.

Chart 3
Retail Value by Product Category & Country in 2018 (USD million)



Source: Euromonitor Passport Retail Value. Values in USD million at year-over-year currency exchange rates.

In light of growing concern about vaping among young people in the US, specifically related to JUUL, we applied our cigarette stick equivalent methodology to the US data. Here, our objective was to answer the question: *Is the overall US nicotine ecosystem growing?* The analysis indicates that the US nicotine ecosystem expanded slightly in 2018 versus 2017, at a rate of approximately 2.5%, which compares to the three-year compounded annual growth rate of about 1.3%. By comparison, we estimate that the global nicotine ecosystem declined at a three-year compounded annual growth rate of about 1.1%.

Table 2
US Product Category Retail Value and Volume Summary for 2018

US Product Category (2018)	Retail Value (USD million)		% Retail Value	Retail Value % Change 2018/17 3-Year CAGR		Retail Volume % Change 2018/17 3-Year CAG	
Cigarettes	\$	95,322	75.8%	0.1%	0.7%	(4.6%)	(3.7%)
Cigars and Cigarillos		10,839	8.6%	8.6%	8.7%	7.1%	7.4%
Smoking Tobacco		2,292	1.8%	(4.3%)	(3.2%)	(3.5%)	(3.0%)
Smokeless Tobacco		9,448	7.5%	3.3%	4.9%	0.9%	0.7%
Vaping Systems		6,833	5.4%	47.8%	25.5%	69.7%	38.0%
Heated Tobacco Products		-	0.0%	NA	NA	NA	NA
NRT Smoking Cessation Aids		1,040	0.8%	2.3%	2.7%	0.1%	1.0%
Total	\$	125,773	100.0%	2.7%	2.5%	2.5%	1.3%

CAGR, compounded annual growth rate. Source: Euromonitor Passport for US by Retail Value in current prices, USD million. Retail Volume in cigarette stick equivalents based on Euromonitor Passport for US by Retail Volume and Value, and Foundation estimates. Refer to Global Trends in Nicotine Appendix for Sources and Methods.

While the US nicotine ecosystem may be growing, cigarette consumption in the country is dropping. For the first half of 2019, tobacco companies reported that US cigarette industry volumes are declining at elevated levels, compared to the values reflected in Table 2. The companies are forecasting that cigarette sales volumes in the US will continue to drop at a rate that is higher than the historic level. For example, Altria revised its estimate for the 2019 full-year US domestic cigarette industry volume decline rate to a range of 5% to 6%—primarily due to increased adult smoker movement to the e-vapor category. British American Tobacco forecasted the full year US combustible industry decline to be around 5.5%.

Altria estimated approximately 40% category growth for e-vapor in equivalized volume for the first half of 2019 compared to the prior year. Applying this growth rate, combined with a 5.5% volume decline in the combustible segment (while holding constant the rates of change for the remaining product categories), the US nicotine ecosystem would grow about 2% in 2019. In light of the trends, the largest US cigarette producer, Altria has pursued a path of diversification by announcing investments in e-cigarettes through JUUL and cannabinoids through Cronos. Most recently, Altria announced that it is in discussions with Philip Morris International regarding a potential all-stock merger.

Mixed Signals

Not surprisingly, the signals associated with the global nicotine ecosystem are mixed. The fastest growing product categories, led by innovation and consumer demand in certain markets, offer alternative forms of nicotine delivery, while the traditional forms are generally declining by volume. Demand for multiple forms of potentially less harmful nicotine delivery products have in recent years far surpassed demand for traditional NRTs. Inclusive of these trends, the overall nicotine ecosystem remains relatively stable by our estimates, implying product substitution by consumers. Against this backdrop, and in consideration of an inconsistent regulation environment, companies are placing strategic bets around their investments.