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The Honorable Orrin G. Hatch
Chairman
The Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate

Electronic Cigarettes: Imports, Tariffs, and Data Collection

Electronic cigarettes, known as e-cigarettes, are becoming more popular and widely used. Although information about the e-cigarette market is incomplete, most e-cigarettes sold in the United States are thought to be imported. U.S. Customs and Border Protection (CBP), an agency of the Department of Homeland Security, enforces U.S. customs laws and collects tariffs for goods imported into the United States.¹ You asked us to examine a number of issues related to the U.S. e-cigarette market and imports. This report—the first of two planned reports responding to your request—provides information on what is known about the volume of and tariff revenue from e-cigarette imports, and how the federal government tracks imports.²

In conducting our work, we analyzed CBP's classification rulings related to e-cigarette imports and fiscal year 2014 tariff revenue data. We assessed the reliability of the data by performing data checks for inconsistency errors and by interviewing cognizant officials. We determined that CBP's tariff revenue data were sufficiently reliable for the purposes of this report. We also reviewed relevant laws and documents. In addition, we interviewed officials from CBP, the U.S. International Trade Commission (USITC), and the U.S. Census Bureau (Census) of the Department of Commerce, as well as industry experts, such as financial analysts and researchers.

We conducted this performance audit from September 2014 to May 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Results in Brief

E-cigarette import volume and tariff revenue are unknown, because the Harmonized Tariff Schedule of the United States (HTS)—which is used to classify U.S. imports and exports for tariff and other purposes—does not contain statistical reporting numbers specific to e-cigarettes. E-cigarettes, e-cigarette parts, and e-cigarette liquid are imported under HTS statistical reporting numbers for residual or basket categories that cover a range of goods, such as special effects strobe lights, seaweed extracts, and hand sanitizer. As a result, although CBP collects

¹Tariffs are customs duties on merchandise imports that can be levied on an ad valorem basis (percentage of value) or a specific basis (e.g., \$7 per 100 kilograms) or on a combined ad valorem and specific basis to create a compound duty rate.

²Tariff revenue, as defined in this report, refers to customs duties paid by importers and does not include applicable federal taxes or import fees.

data on import volume and tariff revenue for the basket categories that include e-cigarettes, parts, and liquid, CBP officials said that they are unable to identify the volume of and tariff revenue from e-cigarette imports within these categories.

The interagency Committee for Statistical Annotation of Tariff Schedules, if requested, can create statistical reporting numbers to classify specific goods to improve an industry's or the federal government's ability to track import and export volume and tariff revenue for imported goods, but there are currently no statistical reporting numbers specific to e-cigarette imports. The committee consists of USITC, Census, and CBP. According to USITC officials, no entity had requested statistical reporting numbers for e-cigarettes, parts, or liquid as of April 1, 2015.

We are not making any recommendations in this report.

Background

The term "e-cigarettes" refers to multiple products that share the same basic design and generally consist of three main parts: a battery, a heating element, and a cartridge or tank containing liquid solution.³ Cartridges and liquid are often sold separately from e-cigarette devices containing the battery and heating element. Liquid typically contains nicotine, a solvent (such as propylene glycol or glycerin), and other additives (such as flavorings). When the user draws air into the e-cigarette, liquid is heated to deliver aerosol containing nicotine and other chemical substances. E-cigarettes come in two main forms:

- closed systems that include disposable e-cigarettes or require users to buy e-cigarette parts, including the cartridge with liquid, from the same manufacturer or brand and
- open systems that enable users to purchase the heating element, battery, tank, and liquid separately and from different manufacturers or brands.

At present, the federal government does not systematically collect data on e-cigarette sales, numbers of manufacturers and importers, or types of products sold. Industry experts we interviewed estimated that e-cigarette sales in the United States were about \$2.5 billion in 2014 and projected continuing rapid growth. Although there are no definitive data to assess the relative proportions of imported and domestically manufactured e-cigarettes, industry experts and researchers told us that the majority of e-cigarettes sold in the United States are imported. Some estimates from industry experts we interviewed suggest that up to 90 percent of e-cigarette devices and closed-system e-cigarettes are imported from China. In addition, industry experts and researchers estimated that most e-cigarette liquid on the U.S. market is either imported or mixed in the United States with at least some ingredients from other countries, such as China, France, India, and Switzerland.

All goods imported into the United States are classified by CBP according to the HTS. The HTS, published and maintained by USITC, provides the legal basis for the classification of every product that enters the United States and the corresponding tariff rate the importer must pay for each product. The HTS is based on the internationally agreed nomenclature commonly known as the Harmonized System, which is maintained by the World Customs Organization.⁴ The

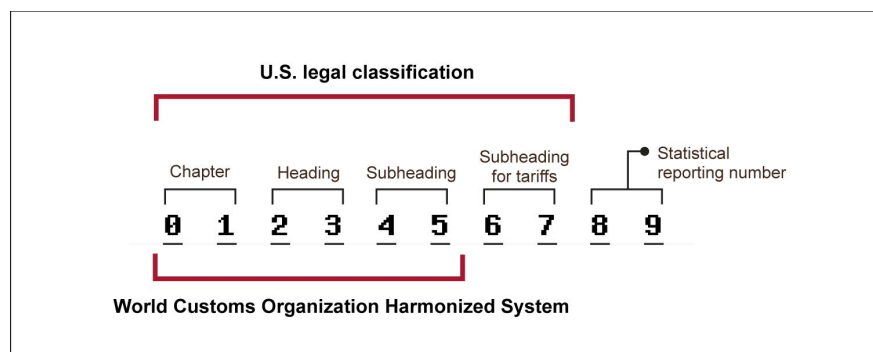
³E-cigarettes are also referred to as electronic nicotine delivery systems in scientific and policy literature. The e-cigarette industry and consumers commonly refer to e-cigarettes as vapor products, to e-cigarette use as vaping, and to e-cigarette liquid as e-liquid or e-juice.

⁴The Harmonized Commodity Description and Coding System, which is set forth in an annex to the Harmonized System Convention administered by the World Customs Organization, became effective for the United States as of January 1, 1989.

Harmonized System is a hierarchical nomenclature for the customs tariff rates and statistical nomenclatures of all major trading countries of the world, including the United States. The Harmonized System establishes the general arrangement or structure of product categories, set forth in numbered provisions that include 2-digit chapters, 4-digit headings, and 6-digit subheadings. The wording, numbering, and coverage of the 4- and 6-digit provisions are internationally agreed upon and are subject to periodic changes.⁵

The HTS further subdivides the Harmonized System by classifying goods at the 8-digit and 10-digit levels.⁶ Under the Omnibus Trade and Competitiveness Act of 1988, the legal text of the HTS extends to the 8-digit level.⁷ The 8-digit level is the level at which tariff rates are set. All U.S. tariff rates are set, directly or indirectly, by Congress, whether in specific legislation, by approving negotiated rates pursuant to trade agreements, or through delegation of limited authority to the President to change rates under certain circumstances specified by Congress. The 10-digit provision or HTS code is known as a statistical reporting number that can be used for tracking and reporting trade statistics.⁸ Figure 1 illustrates the composition of a 10-digit HTS code.

Figure 1: Composition of a 10-Digit Code of the Harmonized Tariff Schedule of the United States



Source: GAO analysis of U.S. International Trade Commission information. | GAO-15-491R.

E-cigarette Import Volume and Tariff Revenue Are Unknown Because the HTS Does Not Contain Statistical Reporting Numbers Specific to E-cigarettes

The volume of e-cigarette imports and the tariff revenue associated with these imports are unknown because e-cigarettes, parts, and liquid are classified under HTS codes for so-called residual or basket categories that cover a range of goods. Although CBP collects data on import volume and tariff revenue for each HTS code, CBP officials said they are unable to identify the volume of e-cigarette imports or the tariff revenue from the imports within these codes because the HTS does not contain statistical reporting numbers specific to e-cigarettes, parts, and liquid.

⁵The World Customs Organization usually recommends changes to the Harmonized System every 5 years. The most recent changes took effect in 2012.

⁶A country that is party to the Harmonized System Convention is permitted to adopt in its national tariff system further subdivisions for classifying goods so long as the subdivision is added and coded at the level beyond the 6-digit numbered provisions provided in the Harmonized System.

⁷Pub. L. No. 100-418, § 1204(a), 102 Stat. 1107, 1148.

⁸Statistical reporting numbers are also known as statistical breakouts or statistical annotations.

CBP's responsibilities related to the HTS include making HTS classification decisions, known as classification rulings, for imported goods. The classification of imported goods is first the responsibility of importers, while the interpretation of the HTS with regard to such goods is the responsibility of CBP.⁹ To meet their requirements, importers can ask CBP for a prospective classification ruling to determine the applicable HTS code in advance of an importation. From August 2006 through December 2014, CBP made 15 prospective classification rulings that classified e-cigarette products based on their physical characteristics and function under existing 10-digit HTS codes.¹⁰

Each of the 10-digit HTS codes used for e-cigarette imports are so-called residual or basket categories, covering multiple types of goods (see table 1 for examples), and are not specific to e-cigarettes, parts, or liquid. E-cigarette imports are classified in the HTS as follows:

- E-cigarettes and parts are classified in HTS chapter 85, "Electrical Machinery and Equipment and Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles."
- E-cigarette liquid is classified in HTS chapter 38, "Miscellaneous Chemical Products."¹¹

Table 1: Harmonized Tariff Schedule (HTS) Classification, Fiscal Year 2014 Tariff Revenue, and Examples of Goods for Basket Categories That Include E-cigarettes, Parts, and Liquid

E-cigarette devices with or without cartridges

HTS code: 8543.70.9650a

- Tariff rate for this HTS code: 2.6 percent of customs value^b
- HTS basket category description:
 - 85: Electrical Machinery and Equipment and Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles
 - 8543: Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this chapter; parts thereof
 - 543.70: Other machines and apparatus
 - 8543.70.96: Other
 - 8543.70.9650: Other
- Examples of other goods with this HTS code:
 - Special effects strobe light, electronic learning device for children, hand-held diet and calorie counter, luminescent shoelaces
- Tariff revenue for this HTS code: \$60,507,558

⁹19 U.S.C. §§ 1484, 1500, 1502. The importer of record is responsible for using reasonable care to enter, classify, and determine the value of imported merchandise. CBP is then responsible for verifying the final classification and value of the merchandise.

¹⁰CBP's classification rulings are available to the public in the online searchable database known as the Customs Rulings Online Search System at <http://rulings.cbp.gov>.

¹¹The World Customs Organization maintains the Harmonized System, the first six digits of which are reflected in the HTS. The organization recommended using code 8543.70 for e-cigarettes in a 2010 classification opinion and code 3824.90 for filled e-cigarette cartridges in a 2011 classification opinion.

E-cigarette parts

HTS code: 8543.90.8880c

- Tariff rate for this HTS code: 2.6 percent of customs value
- HTS basket category description:
 - 85: Electrical Machinery and Equipment and Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles
 - 8543: Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this chapter; parts thereof
 - 8543.90: Parts
 - 8543.90.88: Other
 - 8543.90.8880: Other
- Examples of other goods with this HTS code:
 - Titanium anodes, electrolysis machine components, adhesive electrodes, parts of light-emitting diode (LED) light bulbs
- Tariff revenue for this HTS code: \$9,186,319

E-cigarette liquid or cartridges

HTS code: 3824.90.2800d

- Tariff rate for this HTS code: 6.5 percent of customs value
- HTS basket category description:
- 38:Miscellaneous Chemical Products
 - 3824: Prepared binders for foundry molds or cores; chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included
 - 3824.90: Other
 - 3824.90.28(00): Other: Mixtures containing 5 percent or more by weight of one or more aromatic or modified aromatic substances
- Examples of other goods with this HTS code:
 - Glow light sticks, seaweed extracts, formulated cosmetic components, various chemical mixtures
- Tariff revenue for this HTS code: \$9,285,711

HTS code: 3824.90.9290d

- Tariff rate for this HTS code: 5 percent of customs value
- HTS basket category description:
 - 38: Miscellaneous Chemical Products
 - chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included
 - 3824.90: Other
 - 3824.90.92: Other
 - 3824.90.9290: Other
- Examples of other goods with this HTS code:

- Perfume base, cold gel pack, hand sanitizer, silicon metal by-product, compressed gas mixtures
- Tariff revenue for this HTS code: \$38,108,160

Source: GAO analysis of Customs and Border Protection prospective classification rulings and data and the Harmonized Tariff Schedule of the United States. | GAO-15-491R.

Notes: The tariff rates shown are general tariff rates. General tariff rates are for countries qualifying for most favored nation or normal trade relations status. Most goods imported into the United States receive the general tariff rate. Special tariff rates are provided for certain preferential tariff programs. Tariff revenue, as defined in this report, refers to customs duties and does not include applicable federal taxes or import fees. The tariff revenue amounts used in this table are based on duties initially paid by importers upon entry to the United States and do not include subsequent adjustments because of reclassification or other reasons.

aHTS code 8543.70.9650 covers both closed-system and open-system e-cigarettes if they are imported as functional devices with or without cartridges.

bCustoms value is generally defined as the price actually paid or payable for merchandise when sold for exportation to the United States, excluding U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise to the United States.

cHTS code 8543.90.8880 covers major e-cigarette parts, such as heating elements and cartridges containing heating elements, that are imported separately from e-cigarette devices. Smaller e-cigarette components—such as microprocessors, batteries, tubes containing batteries, or LED lights—that may be used for other products in addition to e-cigarettes, are classified under other applicable HTS provisions.

dHTS codes 3824.90.2800 and 3824.90.9290 cover liquid and cartridges without heating elements that are imported separately from e-cigarette devices. HTS code 3824.90.2800 is used for e-cigarette liquid that contains 5 percent or more by weight of one or more aromatic or modified aromatic substances, which include nicotine, some flavorings, and other chemicals used in liquid. HTS code 3824.90.9290 is used for e-cigarette liquid that contains less than 5 percent of such substances.

Although CBP collects data on import volume and tariff revenue for each HTS code, CBP cannot disaggregate these data to reveal the volume or revenue generated by e-cigarettes. As table 1 shows, the HTS tariff rate for e-cigarette devices and parts is 2.6 percent of customs value and either 6.5 percent or 5 percent of customs value for e-cigarette liquid. Imported goods included in the same basket category have the same tariff rate. For example, a special effects strobe light and an e-cigarette device that are classified under the HTS code 8543.70.9650 both have the same tariff rate. CBP reported that in fiscal year 2014 it collected about \$117 million in tariff revenue from goods imported under the four HTS codes that include e-cigarettes, parts, and liquid.

Unlike the tariff rates for e-cigarettes, tariff rates for tobacco products are generally based on weight or a combination of weight and value.¹² As a result, and because of the wide range of both tobacco products and e-cigarette products, it is difficult to compare the tariff rates for tobacco and e-cigarette products. Table 2 shows the tariff rates for selected tobacco products classified in HTS chapter 24, “Tobacco and Manufactured Tobacco Substitutes.”

Table 2: Tariff Rates and Fiscal Year 2014 Tariff Revenue for Selected Tobacco Products

Tobacco product	Number of 10-digit Harmonized Tariff Schedule codes	Tariff rate ^a	Fiscal year 2014 tariff revenue ^b
Cigarettes	3	<ul style="list-style-type: none"> • 41.7 cents per kilogram + 0.9 percent of customs value • \$1.05 per kilogram +2.3 percent of 	\$17,006,647

¹²Tobacco products are also subject to federal excise taxes; state excise taxes and other applicable state and local taxes; and, in most states, fees imposed by the Master Settlement Agreement, which recovers billions of dollars in costs associated with smoking-related illnesses from the largest tobacco companies.

Tobacco product	Number of 10-digit Harmonized Tariff Schedule codes	Tariff rate ^a	Fiscal year 2014 tariff revenue ^b
		customs value	
		• \$1.5 per kilogram + 3.2 percent of customs value	
Cigars (small and large)	6	• 57 cents per kilogram + 1.4 percent of customs value • \$1.89 per kilogram + 4.7 percent of customs value	\$5,944,514
Roll-your-own tobacco	1	32.8 cents per kilogram	\$31,387
Pipe tobacco	3	32.8 cents per kilogram	\$1,093,985
Chew	1	24.7 cents per kilogram	\$58,886
Snuff	1	24.7 cents per kilogram	\$80,901

Source: GAO analysis of Customs and Border Protection data and the Harmonized Tariff Schedule of the United States. | GAO-15-491R.

Notes: Most federally taxed tobacco products sold in the United States are manufactured domestically. According to data from CBP and the Department of the Treasury, in fiscal year 2014, less than 6 percent of federally taxed smoking tobacco products on the U.S. market were imported. That year, about 3 percent of cigarettes, 4 percent of roll-your-own tobacco and small cigars, 15 percent of pipe tobacco, and 43 percent of large cigars federally taxed in the United States were imported.

^aThe tariff rates shown are general tariff rates. There are multiple HTS codes for some tobacco products, and a different HTS code can be associated with a different tariff rate; for example, there are three 10-digit HTS codes for cigarettes, each with its own tariff rate.

^bThe table presents total tariff revenue for all HTS codes associated with each tobacco product. Tariff revenue, as defined in this report, refers to customs duties and does not include applicable federal taxes or import fees. The tariff revenue amounts used in this table are based on duties initially paid by importers upon entry to the United States and do not include subsequent adjustments because of reclassification or other reasons.

Statistical Reporting Number under the HTS Is a Tool for Tracking Import Volume and Tariff Revenue but Is Currently Not Used for E-cigarette Imports

The interagency Committee for Statistical Annotation of Tariff Schedules, if requested, can create statistical reporting numbers to classify specific goods to improve an industry's or the federal government's ability to track import and export volume and tariff revenue for imported goods. However, there are currently no statistical reporting numbers specific to e-cigarette imports.

Any interested parties—for example, federal agencies, industry associations, or importers—can request that the committee make changes to HTS statistical reporting numbers. The committee formulates descriptions of products and their corresponding statistical reporting numbers. The committee derives its authority from section 484(f) of the Tariff Act of 1930¹³ and consists of three agencies:¹⁴

- USITC, which is charged with keeping the HTS classification codes under continuous review, chairs the committee, and determines the usefulness and validity of the request;
- CBP, which determines the proper HTS classification of imported and exported goods; and
- Census, which surveys importers and exporters to ensure that requests meet appropriate Census criteria.

¹³19 U.S.C. § 1484(f).

¹⁴The three agencies that are members of the Committee for Statistical Annotation of Tariff Schedules do not typically initiate requests for changes. However, USITC sometimes proposes statistical reporting numbers that were, for example, created as part of international changes to the Harmonized System.

The committee generally meets twice a year—in the spring (May/June) and fall (October/November)—to review requests for new statistical reporting numbers. For requests submitted to the committee by April 1, approved changes become effective on July 1 of the same year; for requests submitted by August 1, changes become effective on January 1 of the following year. When such changes become effective, the trading community can start using the new statistical reporting numbers, and CBP and Census begin implementing the new data reporting provisions. Requested changes can include establishing new statistical reporting numbers or units of quantity for specific goods to obtain more accurate data on imports or exports. Requested changes can also include discontinuing, modifying, or subdividing existing HTS statistical reporting numbers but cannot include changing the legal classification of any good or its duty rate. For example, in the fall of 2009 the committee approved a request from the Cigar Association of America to modify the statistical reporting numbers applicable to cigars, to improve the industry's and the federal government's ability to track large cigar imports.¹⁵ Also, in the fall of 2014, the committee considered a request for statistical reporting numbers for plastic ribbons and bows that were classified in 17 different HTS basket categories to better understand and evaluate the U.S. market for ribbons and bows.¹⁶

According to USITC's guidance, each request filed with the committee should indicate precisely the nature of each desired change. The request must include the exact proposed language of any category to be inserted, modified, or deleted, including any relevant units of quantity, along with detailed reasons for the request. Confidential business information should not be submitted. For requests relating to imported products, the requester should provide the names of importers and foreign manufacturers (when known) that are associated with the articles in question and should indicate the countries from which the articles are being imported.

The Committee for Statistical Annotation of Tariff Schedules generally approves requests for new statistical reporting numbers only if these requests satisfy three criteria:

- Each requested statistical reporting number must represent at least \$1 million in trade per year.
- CBP must be able to administer the new statistical reporting number. For example, the article description must be clear, the HTS classification must be correct, and the new number must not require difficult or prohibitively expensive laboratory or other testing.
- Data for any new statistical reporting number must be publishable under Census rules for protecting confidential business information: data must represent imports or exports by at least three importers or exporters, no one or two of which may account for a high percentage of total trade, in order to avoid the disclosure of confidential business information.

To ensure that these criteria are satisfied for imported goods, Census conducts an analysis of import files to obtain information on importers, manufacturers, and tariff numbers and to estimate the total value and type of imported goods to be covered by the requested statistical reporting number. For example, as part of establishing new statistical reporting numbers for cigars, Census prepared a report based on a survey of cigar importers and concluded that the

¹⁵The request followed increases in federal excise tax rates on tobacco products, including large cigars, enacted by Congress in April 2009. The association requested modifications to applicable statistical reporting numbers to enable tracking of large cigars imported under a new, higher tax rate.

¹⁶The committee approved the request in part; it created one new statistical reporting number for bows and one for ribbons, effective January 1, 2015. The committee determined that other requested modifications were misclassified or could not be administered by CBP, among other reasons.

resulting import data met the Census rules described above and represented more than \$1 million in trade annually.

No entity had requested statistical reporting numbers for e-cigarettes, parts, or liquid as of April 1, 2015, according to USITC officials. In the absence of such statistical reporting numbers, the quantity of e-cigarette imports and the tariff revenue derived from these imports are unknown, according to CBP officials.

Agency Comments

We are not making recommendations in this report. We provided a draft of this report to CBP, USITC, Census, the Department of the Treasury, and the Food and Drug Administration. We received technical comments from CBP, USITC, Census, and the Department of the Treasury and incorporated the comments as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to appropriate congressional committees, to the Commissioner of U.S. Customs and Border Protection, the Chairman of the U.S. International Trade Commission, the Director of the U.S. Census Bureau, the Secretary of the Treasury, and the Commissioner of the Food and Drug Administration. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-3149 or gootnickd@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are Christine Broderick (Assistant Director), Christina Werth, Sada Aksartova, Pedro Almoguera, and Srinidhi Vijaykumar.

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