Ceramic Tile from China

Investigation Nos. 701-TA-621 and 731-TA-1447 (Final)

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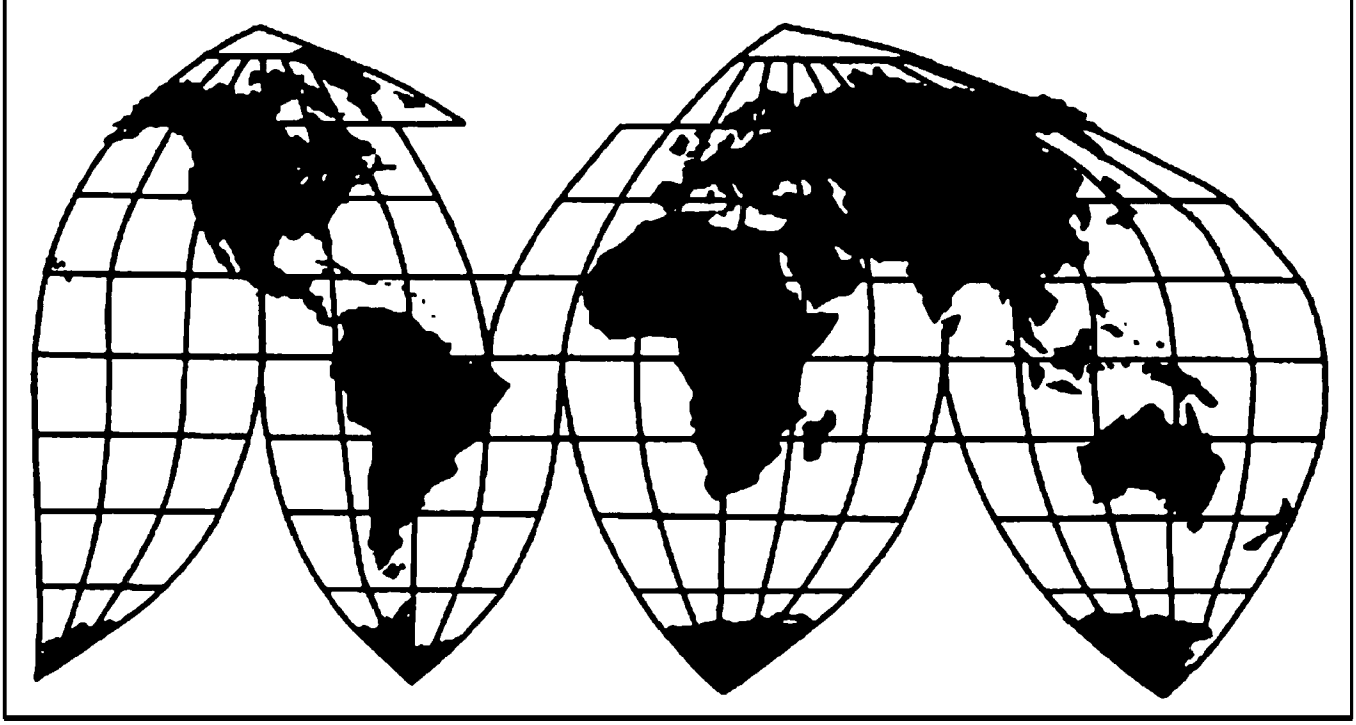
U.S. International Trade Commission



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U.S. International Trade Commission

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Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified by brackets in confidential reports and is deleted and replaced with asterisks (***) in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-621 and 731-TA-1447 (Final)

Ceramic Tile from China

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is materially injured by reason of imports of ceramic tile from China, provided for in heading 6907 of the Harmonized Tariff Schedule of the United States, that have been found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV"), and to be subsidized by the government of China.[2] [3]

BACKGROUND

The Commission instituted these investigations effective April 10, 2019, following receipt of petitions filed with the Commission and Commerce by the Coalition for Fair Trade in Ceramic Tile. The final phase of the investigations was scheduled by the Commission following notification of preliminary determinations by Commerce that imports of ceramic tile from China were subsidized within the meaning of section 703(b) of the Act (19 U.S.C. 1671b(b)) and sold at LTFV within the meaning of 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigations and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the

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[1] The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

[2] The Commission also finds that imports subject to Commerce's affirmative critical circumstances determination are not likely to undermine seriously the remedial effect of the antidumping duty order on Ceramic Tile from China.

[3] Chairman David S. Johanson dissenting and Commissioner Randolph J. Stayin not participating.

Federal Register on December 2, 2019 (84 FR 66010). In light of the restrictions on access to the Commission building due to the COVID-19 pandemic, the Commission conducted its hearing (originally scheduled for April 2, 2020) through a series of written questions, submissions of written testimony, written responses to questions, posthearing briefs, and closing arguments/rebuttal remarks via videoconference. All persons who requested the opportunity were permitted to participate.

Views of the Commission

Based on the record in the final phase of these investigations, we determine that an industry in the United States is materially injured by reason of imports of ceramic tile from China found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value and subsidized by the government of China.[1] In addition, we find that critical circumstances do not exist with respect to imports of ceramic tile from China that are subject to Commerce's final affirmative critical circumstances determination in the antidumping investigation.

I. Background

Parties to the Investigation. The petitions in these investigations were filed by the Coalition for Fair Trade in Ceramic Tile ("Coalition") and its individual members (collectively "Petitioner"). The individual members of the Coalition include American Wonder Porcelain ("American Wonder"), Crossville, Inc., Dal-Tile Corporation (part of Mohawk Industries ("Mohawk")) ("Dal-Tile"), Del Conca USA, Inc. ("Del Conca"), Florida Tile, Inc. ("Florida Tile"); Florim USA ("Florim"), Landmark Ceramics ("Landmark"), and Stonepeak Ceramics, each of which is a domestic producer of ceramic tile. Petitioner participated in the hearing,[2] submitted a prehearing brief, witness testimony, responses to Commission questions, a posthearing brief, and final comments.[3]

Several respondent parties participated in the investigations, including Bedrosians Tile & Stone, China Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters and its members, Jeffrey Court, Inc., and M S International, Inc. (collectively, the "Respondents"), importers of subject merchandise.[4] Respondents participated in the hearing

[1] Chairman David S. Johanson determines that a domestic industry is neither materially injured nor threatened with material injury by reason of dumped and subsidized imports of ceramic tile from China. *See* Dissenting Views of Chairman David S. Johanson. He joins section I through IV.B. of these Views.

Commissioner Stayin did not participate in these investigations.

[2] In accordance with 19 U.S.C. § 1677c(a)(1), and in light of the restrictions on access to the Commission building due to the COVID-19 pandemic, the Commission conducted its hearing, originally scheduled for April 2, 2020, through a series of written questions, submissions of written testimony, written responses to questions, posthearing briefs, and closing arguments/rebuttal remarks by videoconference as set forth in procedures provided to the parties and announced on its website. *See* Letters from Secretary to Counsel, EDIS Docs. 706461 (March 30, 2020) and 706859 (April 2, 2020) (explaining hearing procedures).

[3] Confidential Report ("CR") at I-1, Public Report ("PR") at I-1.

[4] Home Depot U.S.A. Inc., an importer of subject merchandise, filed comments on the draft questionnaires but did not submit briefs or participate in the hearing. *See* Home Depot U.S.A. Inc., Comments on Draft Questionnaires, EDIS Doc. 6583509 (July 29, 2019). The China Chamber of Commerce Metals Minerals and Chemicals Importers and Exporters filed separate comments on the draft questionnaires. *See* China Chamber of Commerce Metals Minerals and Chemicals Importers and Exporters, Comments on Draft Questionnaires, EDIS Doc. 683456 (July 29, 2019).

and jointly submitted a prehearing brief, witness testimony, responses to Commission questions, a posthearing brief, and final comments.

Data Coverage. U.S. industry data are based on the questionnaire responses of 13 firms believed to account for the vast majority of U.S. production of ceramic tile in 2018.[5] U.S. import data are based on official Commerce statistics and responses to the Commission's importer questionnaires.[6] The Commission received questionnaire responses from 38 importers of ceramic tile, accounting for approximately *** percent of U.S. imports, by quantity, from China and approximately *** percent of U.S. imports, by quantity, from nonsubject sources in 2018.[7] Foreign industry data are based on questionnaire responses from 43 producers or exporters of ceramic tile from China, whose exports accounted for approximately 50.7 percent of subject imports in 2018.[8]

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the "domestic like product" and the "industry."[9] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[10] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[11]

By statute, the Commission's "domestic like product" analysis begins with the "article subject to an investigation," *i.e.*, the subject merchandise as determined by Commerce.[12] Therefore, Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value is "necessarily the starting point of the Commission's like product analysis."[13] The Commission then defines the domestic like product

[5] CR/PR at I-4.

[6] CR/PR at I-4, IV-1, and Table IV-1.

[7] CR/PR at I-4, IV-1, and Table IV-1.

[8] CR/PR at VII-5.

[9] 19 U.S.C. § 1677(4)(A).

[10] 19 U.S.C. § 1677(4)(A).

[11] 19 U.S.C. § 1677(10).

[12] 19 U.S.C. § 1677(10). The Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value. *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[13] *Cleo Inc. v. United States*, 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v.*

in light of the imported articles Commerce has identified.[14] The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[15] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[16] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[17]

B. Product Description

Commerce defined the scope of the imported merchandise under investigation as follows:

> {C}eramic flooring tile, wall tile, paving tile, hearth tile, porcelain tile, mosaic tile, flags, finishing tile, and the like (hereinafter ceramic tile). Ceramic tiles are articles containing a mixture of minerals including clay (generally hydrous silicates of alumina or magnesium) that are fired so the raw materials are fused to produce a finished good that is less than 3.2 cm in actual thickness. All ceramic tile is subject to the scope regardless of end use, surface area, and weight, regardless of whether the tile is glazed or unglazed, regardless of the

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United States, Case No. 19-1289, slip op. at 8-9 (Fed. Circ. Feb. 7, 2020) (the statute requires the Commission to start with Commerce's subject merchandise in reaching its own like product determination).

[14] *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Torrington*, 747 F. Supp. at 748–52 (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

[15] *See, e.g., Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington Co. v. United States*, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors, including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[16] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[17] *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49; *see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

water absorption coefficient by weight, regardless of the extent of vitrification, and regardless of whether or not the tile is on a backing. Subject merchandise includes ceramic tile with decorative features that may in spots exceed 3.2 cm in thickness and includes ceramic tile "slabs" or "panels" (tiles that are larger than 1 meter^2 (11 ft.^{2}).

Subject merchandise includes ceramic tile that undergoes minor processing in a third country prior to importation into the United States. Similarly, subject merchandise includes ceramic tile produced that undergoes minor processing after importation into the United States. Such minor processing includes, but is not limited to, one or more of the following: Beveling, cutting, trimming, staining, painting, polishing, finishing, additional firing, or any other processing that would otherwise not remove the merchandise from the scope of the investigation if performed in the country of manufacture of the in-scope product.[18]

Ceramic tile is a masonry product containing clays and other minerals that is fired at high temperatures to bond together the constituent particles. The tiles are often flat, with beveled edges, and are available in various shapes, sizes, and colors. Tiles can be formed into "slabs" or "panels" as large as 5-feet by 15-feet or more and into pieces smaller than 1-inch by 1-inch. Tile thickness can be larger than three centimeters or be as thin as two millimeters, with some tiles exceeding these dimensions. "Paving tile" or "pavers" are flat tile used for flooring or walking surfaces. Ceramic tile is used in the residential and commercial sector to cover surfaces, including floors, walls, counters, and swimming pools, among others.[19] Ceramic tile used as "floor tile" generally requires greater strength and durability than wall tile.[20] It includes numerous varieties such as finishing tile (tile in shapes such as bases, caps, corners, moldings, and angles), mosaic tile (sold as part of a combination of different ceramic tiles or other materials usually set in a small format and usually set on a mesh sheet), and porcelain ceramic tile (tile made to higher water absorption requirements).[21] Ceramic tile surfaces may also be glazed or unglazed, depending on the intended final end-use application.[22]

Ceramic tile encompasses a variety of products and can be used in a wide array of applications, including as floor and wall coverings in kitchens and bathrooms, countertops,

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[18] *Ceramic Tile From the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value, and Final Partial Affirmative Critical Circumstances Determination*, 85 Fed. Reg. 19425, 19434 (April 7, 2020) ("Commerce Final AD Determination"); *Ceramic Tile From the People's Republic of China: Final Affirmative Countervailing Duty Determination, and Final Negative Critical Circumstances Determination,* 85 Fed. Reg. 19440, 19442 (April 7, 2020) ("Commerce Final CVD Determination").

[19] CR/PR at I-9 to I-10.

[20] CR/PR at I-10.

[21] CR/PR at I-9 to I-13.

[22] CR/PR at I-14.

backsplashes, and in swimming pools.[23] The products may be distinguished based on their strength and/or porosity, they may be glazed or unglazed, and they include both mosaic and non-mosaic styles. American National Standards Institute ("ANSI") specifications provide physical and performance criteria to distinguish floor tile from wall tile. Certain product-performance standards are specifically applicable to floor tile or may be more rigorous for floor tile than for wall tile, such as higher breaking strength, quality and thickness, slip resistance, and abrasion resistance.[24] As a result, wall tile would generally not meet relevant standards to be used as floor tile but conversely floor tile may be used as wall tile. Porcelain ceramic tile is distinguished from other ("non-porcelain") types of ceramic tile by lower porosity (water absorption) and other physical characteristics and the use of more expensive raw materials in its manufacture. Porcelain tile is common for end uses requiring superior breaking strength, freeze-thaw cycle resistance, and resistance to water absorption. Sometimes referred to as "impervious tile," porcelain tile is considered suitable for all interior and exterior applications. Non-porcelain tiles are usually glazed for enhanced surface durability. Glazing renders porcelain tile surfaces both more durable and easier to clean; unglazed porcelain tile offers greater slip resistance.[25]

C. Arguments of the Parties

Petitioner advocates that the Commission define a single domestic like product, coextensive with the scope of these investigations.[26] Respondents argue that the Commission should find two domestic like products, one comprised of non-mosaic ceramic tile and one comprised of mosaic ceramic tile.[27]

D. Domestic Like Product Analysis

Based on the record, we find a single domestic like product consisting of ceramic tile, coextensive with the scope of Commerce's investigations.

Physical Characteristics and Uses. Ceramic tile within the scope comes in several different varieties. The questionnaires provided definitions for "finishing tile," "floor tile," and "wall tile" based on the intended end-use application. Pertinent to the dispute here, the questionnaires defined "mosaic tile" as:

> Porcelain or non-porcelain ceramic tile pieces; produced by either pressing or extruding; with facial surface dimensions not larger than twelve inches by twelve inches; and prearranged, either with or without pieces of non-ceramic materials

[23] CR/PR at I-10.

[24] CR/PR at I-10 to I-11.

[25] CR/PR at I-14.

[26] *See* Petitioner Prehearing Brief at 4-11 and Petitioner Posthearing Brief at 15.

[27] *See* Respondents Prehearing Brief at 4-17 and Respondents Posthearing Brief at 12-14.

(stone, glass, metal, etc.), to form a decorative pattern on a mesh backing as either sheets or strips.[28]

The questionnaire definition differs from the ANSI specification for ceramic tile, which indicates that mosaic tiles have a facial area of less than 9 square inches.[29] In their comments on the draft questionnaires, the parties could not agree on the appropriate definition of mosaic tiles.[30]

Mosaic tiles are a combination of different ceramic tiles, and may also incorporate other materials such as stone or glass, usually set in a small format and usually set on a mesh sheet. Individual mosaic tiles can be produced either as individually pressed pieces or by cutting larger tiles into smaller pieces.[31]

The record in the final phase investigations indicates that the domestic producers market both mosaic and non-mosaic tiles in a variety of designs.[32] Questionnaire responses predominantly categorized both domestically produced mosaic and non-mosaic tiles as floor tiles as opposed to a wall tile or tile for use in other applications.[33]

Common Manufacturing Facilities, Production Processes, and Employees. The manufacturing process for all ceramic tile consists of eight successive basic stages, which includes the crushing of raw materials, mixing and milling, spray drying, shaping, drying, glazing and/or digital printing, firing, and post-firing operations. Mosaic tiles can be produced either as individually pressed pieces or by cutting larger tile into smaller pieces. Mosaic tiles are typically mounted in sheets or strips with other mosaic tiles.[34] All ceramic tile is generally produced, using the same basic raw materials and production equipment, with some technological variations within each of the stages.[35] Respondents assert that the production processes and facilities for mosaic tile are distinct and require more labor-intensive manufacturing operations due to the more intricate designs associated with mosaic tile.[36] The record shows, however, that U.S. producers maintain operations capable of manufacturing all varieties of ceramic tile,

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[28] Blank Producers Questionnaire, EDIS Doc. 697812. There are several additional types of ceramic tile not defined in the questionnaire. For example, as discussed above, ceramic tiles may be porcelain or non-porcelain, or glazed or unglazed. CR/PR at I-12 to I-14.

[29] CR/PR at I-12 and n.51.

[30] *Compare* Petitioner Comments, EDIS Doc. 683505 at 2 (advocating use of ANSI definition) *with* Home Depot Comments, EDIS Doc. 683509 at 2 (advocating use of size limitation ultimately adopted in questionnaires) *and* Respondents Comments, EDIS Doc. 683510 at 2 (acknowledging that there is no "standard or perfect definition of mosaic tiles").

[31] CR/PR at I-12.

[32] Petitioner Response to First Set of Hearing Questions, Exhibits 1 to 3.

[33] CR/PR at Table III-7. Questionnaire respondents were instructed to report dual-use tile as floor tile. *See* CR/PR at III-13 n.13 and IV-20 n.12.

[34] CR/PR at 1-12.

[35] CR/PR at I-14; Petitioner Hearing Testimony, Exhibit 1 at 6-12.

[36] Respondents Prehearing Brief at 11-12, 14; and Exhibit 1-C at 2 to 3 (Shah). Respondents acknowledge that this is not necessarily the case with U.S. mosaic tile production operations. *Id.* at 11 n.20 and Exhibit 1-C at 2 to 3 (Shah).

including mosaic tile, at the same facilities, using the same equipment, and with the same employees.[37]

Channels of Distribution. During the period of investigation, domestically produced ceramic tile was predominantly sold to big-box/home center retailers, followed by distributors, other retailers and contractors, and a small remainder sold to other end users.[38] Petitioner asserts that the channels of distribution for mosaic tile are the same as those for ceramic tile generally.[39] Respondents did not provide and the record does not contain information contrary to this proposition.

Interchangeability. Petitioner asserts that within customer requirements for specific applications, ceramic tile is generally interchangeable.[40] Some applications require distinct performance requirements that may limit interchangeability of certain types of ceramic tile; in particular, porcelain and non-porcelain ceramic tile may not be interchangeable in some applications due to the particular characteristics required for the particular end use.[41] Petitioner testified that mosaic ceramic tile is also interchangeable with other types of tile for particular applications, such as a kitchen backsplash where an end user could choose a mosaic pattern, a rectangular wall tile, or another ceramic tile product that fits the desired aesthetic.[42] Moreover, at least with respect to the domestically produced product, the record does not corroborate Respondents' theory that mosaic tiles are not typically used as flooring; to the contrary, floor tile is the predominant type of both mosaic and non-mosaic tiles.[43]

Producer and Customer Perceptions. Petitioner submitted materials indicating that domestic producers market mosaic and non-mosaic tiles in the same brochures for the same end-use applications.[44] The parties agree that design considerations play a large role in customer purchasing decisions.[45] The information in the record, however, does not indicate that mosaic and non-mosaic ceramic tiles are marketed differently in this respect or that customers perceive them to be different products; domestically produced products of both types are marketed on the basis of design.[46]

Price. Prices for ceramic tile may vary depending on size, thickness, design and a variety of other factors.[47] The reported pricing data indicate substantially higher prices for

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[37] *See, e.g.,* Petitioner Posthearing Brief at 15 and Exhibit 2 and Petitioner Responses to First Set of Hearing Questions at 3 and Exhibit 3.

[38] CR/PR at Table II-2.

[39] Petitioner Response to First Set of Hearing Questions at 2.

[40] Petitioner Prehearing Brief at 9.

[41] CR/PR at I-9 to I-14 (discussing different physical performance requirements for varieties of ceramic tile, such as floor tile, wall tile, and porcelain ceramic tile).

[42] Petitioner Prehearing Brief at 9 and Petitioner Response to First Set of Hearing Questions at 3 and Exhibit 3; *see also* Conference Transcript at 42 (Haynes).

[43] CR/PR at Table III-7.

[44] Petitioner Response to First Set of Hearing Questions, Exhibit 3.

[45] Petitioner Prehearing Brief at 15-16, 36; Respondent Prehearing Brief at 52-54 and Exhibit 1-A at 2 (Hassman); *see also* CR/PR at II-13 to II-14.

[46] *See* Petitioner Response to First Set of Hearing Questions, Exhibits 1 to 3.

[47] Petitioner Prehearing Brief at 11.

domestically produced mosaic tile (pricing product 5) than for the other domestically produced products.[48] Available average unit value ("AUV") data indicate that the domestic industry's AUVs for mosaic tile are higher than its AUVs for non-mosaic tile used in the same application. The data do not show, however, that the mosaic tile AUVs were higher than the AUVs for all types of non-mosaic tiles, as the AUVs of mosaic tile used as floor covering were consistently below the AUVs of non-mosaic tile for use in "other" applications.[49]

Conclusion. Based on the foregoing, we define a single domestic like product that is coextensive with the scope of investigations, consisting of all ceramic tile. As discussed above, the parties could not agree during the course of the investigations on how to define mosaic tile and even Respondents concede that there is no standard definition for the product. This, by itself, undermines Respondents' argument that a clear dividing line could be drawn between mosaic and non-mosaic ceramic tile. Moreover, the record does not indicate any clear distinction between domestically produced mosaic tile and non-mosaic tile in end uses, production facilities, or producer perceptions. To the contrary, while there may be some differences in physical characteristics and price, the available data indicate that both types of domestically produced tile are made from the same inputs using largely the same processes at overlapping facilities, are used in the same types of applications, are marketed the same way, and sold through the same channels of distribution. Indeed, Respondents' like product arguments appear substantially to be predicated on differences between mosaic tiles produced in China and non-mosaic tiles produced in the United States.[50] As we indicated in the preliminary determinations, this is not an appropriate basis for finding separate domestic like products.[51] Accordingly, we find that there are no clear dividing lines between domestically produced mosaic tile and non-mosaic tile, and consequently define a single domestic like product that is coextensive with the scope.

III. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[52] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the

[48] *Compare* CR at Table V-8 *with id.* at Tables V-4 to V-7.

[49] CR/PR at Table III-7.

[50] *See*, *e.g.*, Respondent Prehearing Brief at 8-9, 14, Exhibit 1, Declaration of Scott Hassman at para. 6 (***).

[51] *Ceramic Tile from China*, Inv. Nos. 701-TA-621 and 731-TA-1447 (Preliminary), USITC Pub. 4898 at 7 n.23 (June 2019).

[52] 19 U.S.C. § 1677(4)(A).

domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[53] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[54]

The record shows that three domestic producers are covered under the related parties provision as they imported subject merchandise during the January 2016-September 2019 period of investigation ("POI"): ***.[55] *** is also covered under the related party provision because its parent company is an exporter of subject merchandise.[56] Petitioner argues that appropriate circumstances do not exist to exclude any of these producers from the domestic industry.[57] Respondents did not brief the issue. [58]

We discuss below whether appropriate circumstances exist to exclude any producer from the domestic industry under the related parties provision.

***. *** and accounted for *** percent of U.S. production in 2018.[59] It ***; its U.S. production *** each year of the POI and was *** in January-September ("interim") 2019 than in interim 2018.[60] While it imported subject merchandise each year of the POI, these volumes

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[53] *See Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem*., 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[54] The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

(1) the percentage of domestic production attributable to the importing producer;

(2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);

(3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;

(4) the ratio of import shipments to U.S. production for the imported product; and

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); see *also Torrington Co. v. United States*, 790 F. Supp. at 1168.

[55] CR at I-1 and III-2.

[56] CR/PR at Table III-2. ***'s parent company is ***. *Id*.

[57] Petitioner Prehearing Brief at 12-14.

[58] In its preliminary determinations, the Commission did not find appropriate circumstances to exclude any related party from the domestic industry and defined the U.S. industry to encompass all domestic producers of ceramic tiles. *Ceramic Tile from China*, Inv. Nos. 701-TA-621 and 731-TA-1447 (Preliminary), USITC Pub. 4898 (June 2019), at 10-12.

[59] CR /PR at Table III-1. In the preliminary phase of these investigations, *** expressed *** on these petitions, although ***. CR/PR at Table III-1 note. In the final phase of the investigations, *** reported that it *** the petitions. *Id*. Petitioner submitted an affidavit from *** was the result of ***. *See* Petitioner Posthearing Brief at Exhibit 1 (***).

[60] CR/PR at Table III-4; *see also* CR/PR at Table III-5. The firm reported that ***. CR/PR at Table III-10.

*** in 2018 as its domestic production ***.[61] Its ratio of subject imports to U.S. production peaked in 2017 at *** percent and was *** percent in 2018, *** percent in interim 2018, and *** percent in interim 2019.[62] It experienced the *** operating income ratio among the domestic producers once it was in operation,[63] and reported the *** level of capital expenditures for the domestic industry in 2017.[64]

Once *** started operating its U.S. production facility, its domestic production exceeded its volume of subject imports in each year and the interim periods, and it decreased its volume of subject import as it ramped up its U.S. production. Thus, *** primary interest appears to lie in domestic production rather than importation. Accordingly, we find that appropriate circumstances do not exist to exclude it from the domestic industry.

****.* *** is the *** U.S. producer and *** the petition.[65] Imports of subject merchandise by it and its *** during the POI, and were lower in interim 2019 than in interim 2018.[66] The ratio of *** subject imports to *** U.S. production was *** percent in 2016, and was lower in subsequent years and during the interim periods.[67] The firm ***.[68] Its operating income ratio was *** for all reporting U.S. producers throughout the POI,[69] and it had the *** level of capital expenditures in 2016 and 2018 and the *** in 2017, amongst the domestic producers.[70]

*** is *** and its domestic production far surpassed its imports of subject merchandise. It increased *** during the POI,[71] and there is no indication that its domestic operations benefitted from its importation of subject merchandise. These factors indicate that its primary interest lies in domestic production rather than importation. Thus, we find that appropriate circumstances do not exist to exclude it from the domestic industry.

****.* *** accounted for *** percent of U.S. production in 2018 and *** the petition.[72] As a ratio to its U.S. production, its subject imports were *** percent in 2016, *** percent in 2017, *** percent in 2018, *** percent in interim 2018 and *** percent in interim 2019.[73] Its

[61] CR/PR at Table III-10. ***'s imports of subject merchandise totaled *** square feet in 2016, *** square feet in 2017, *** square feet in 2018, *** square feet in interim 2018, and *** square feet in interim 2019. *Id*.

[62] CR/PR at Table III-10.

[63] CR/PR at Table F-1.

[64] CR/PR at Table VI-4.

[65] CR/PR at Table III-1.

[66] CR/PR at Table III-10.

[67] CR/PR at Table III-10.

[68] CR/PR at Table III-4.

[69] CR/PR at Table F-1.

[70] CR/PR at Table VI-4.

[71] CR/PR at Table III-5.

[72] CR/PR at Table III-1.

[73] CR/PR at Table III-10.

operating income ratio was *** for all reporting U.S. producers throughout the POI.[74] In explaining its reasons for importing subject merchandise, *** reported that ***.[75]

While *** imports of subject merchandise increased over the POI, its domestic production nonetheless exceeded its imports of subject merchandise throughout the period. Further, its importation appears to ***, which supports the view that its primary interest lies in domestic production. Accordingly, we find that appropriate circumstances do not exist to exclude it from the domestic industry.

Consequently, we define the domestic industry to include all domestic producers of ceramic tile.

IV. Material Injury by Reason of Subject Imports[76]

Based on the record in the final phase of these investigations, we find that an industry in the United States is materially injured by reason of dumped and subsidized imports of ceramic tile from China.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[77] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[78] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[79] In assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United

[74] CR/PR at Table F-1.

[75] CR/PR at Table III-10.

[76] Pursuant to section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall generally be deemed negligible. 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), and 1677(24)(B). The exceptions to this general provision are not pertinent here.

In the most recent 12-month period preceding the filing of the petition, April 2018 through March 2019, the volume of subject imports from China accounted for 29.5 percent of total U.S. imports of ceramic tile by quantity. CR/PR at Table IV-5. Consequently, we find that subject imports of ceramic tile from China are not negligible.

[77] 19 U.S.C. §§ 1671d(b), 1673d(b).

[78] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[79] 19 U.S.C. § 1677(7)(A).

States.[80] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[81]

Although the statute requires the Commission to determine whether the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[82] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[83] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[84]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[85] In performing its examination, however, the Commission need not isolate

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[80] 19 U.S.C. § 1677(7)(C)(iii).

[81] 19 U.S.C. § 1677(7)(C)(iii).

[82] 19 U.S.C. §§ 1671d(b), 1673d(b).

[83] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[84] The Federal Circuit, in addressing the causation standard of the statute, observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

[85] Uruguay Round Agreements Act Statement of Administrative Action (SAA), H.R. Rep. 103-316, vol. I at 851-52 (1994) ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized

the injury caused by other factors from injury caused by unfairly traded imports.[86] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[87] It is clear that the existence of injury caused by other factors does not compel a negative determination.[88]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports."[89] The Commission ensures that it has "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and that it is "not attributing injury from other

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imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

[86] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n,* 266 F.3d at 1345 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[87] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[88] *See Nippon Steel Corp*., 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

[89] *Mittal Steel*, 542 F.3d at 876 &78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

sources to the subject imports." [90] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[91]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[92] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[93]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.

1. Demand Considerations

Demand for ceramic tile is driven by demand for both new residential and commercial construction, as well as remodeling and replacement in existing structures.[94] Most U.S. producers, importers, and purchasers reported that the U.S. market was subject to business cycles. These companies reported that demand for ceramic tile follows the seasonal trends in the construction industry, with weaker demand in the winter months and stronger demand in spring and fall.[95]

There are a variety of substitutes for ceramic tile, particularly for certain applications, such as flooring. Substitutes include carpet, hardwood, laminates, vinyl tile, natural stone, and luxury vinyl tile ("LVT").[96] LVT is a vinyl-based flooring material that can be manufactured to mimic closely tile, hardwood, stone, and other materials that are popular in the U.S. market. The popularity of LVT has reportedly increased substantially since its introduction in 2012.[97]

Market participants' perceptions of recent demand trends for ceramic tile varied. A large majority of domestic producers reported that demand for ceramic tile had increased. A

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[90] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 877-79. We note that one relevant "other factor" may involve the presence of significant volumes of price-competitive nonsubject imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

[91] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[92] We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[93] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[94] CR/PR at II-1.

[95] CR/PR at II-8.

[96] CR/PR at II-11 to II-12.

[97] CR/PR at II-9, II-11 to II-12; *see also* Respondent Prehearing Brief at 33-34.

plurality of responding importers reported an increase, although a substantial portion reported a decrease in demand, and slightly more responding purchasers reported decreases than increases.[98]

During the POI, apparent U.S. consumption of ceramic tile increased from 2.86 billion square feet in 2016 to 3.03 billion square feet in 2017 and 3.08 billion square feet in 2018. Apparent U.S. consumption was 2.35 billion square feet in interim 2018 and 2.28 billion square feet in interim 2019.[99]

2. Supply Considerations

The domestic industry accounted for the second largest share of the U.S. market, by quantity. Its share of apparent U.S. consumption declined steadily over the POI, from 30.9 percent in 2016 to 30.8 percent in 2017 and 28.9 percent in 2018.[100] The industry started production operations at several new ceramic tile facilities in 2016 and 2017.[101] Thus, its production capacity was 15.6 percent higher in 2018 than in 2016, increasing from 1.0 billion square feet in 2016, to 1.1 billion square feet in 2017 and 1.2 billion square feet in 2018.[102] The domestic industry produced floor, wall, mosaic, porcelain and non-porcelain ceramic tile during the POI,[103] although its reported production of mosaic tile was fairly modest.[104]

Subject imports represented the smallest share of apparent U.S. consumption during the POI. China was the largest individual country source of imports, however, throughout the POI. Subject imports' share of apparent U.S. consumption rose steadily from 2016 to 2018, increasing from 20.2 percent in 2016 to 21.7 percent in 2017 and 22.4 percent in 2018.[105] Subject imports' share of apparent U.S. consumption increased from 2016 to 2018 in each of the particular categories of floor, wall, mosaic, non-mosaic, porcelain, and non-porcelain tile.[106]

Nonsubject imports collectively were the largest supplier to the U.S. market during the POI. Their share of apparent U.S. consumption declined modestly from 2016 to 2018, from

[98] CR/PR at Table II-5.

[99] CR/PR at Table IV-6.

[100] CR/PR at Table IV-7. The domestic industry's share of apparent U.S. consumption was 29.0 percent in interim 2018 and 28.0 percent in interim 2019. *Id.*

[101] CR/PR at Tables III-4 (listing new plant openings by *** in 2016 and by *** in August 2017, and capacity expansion at existing facilities of five producers) and III-5.

[102] CR/PR at C-1. Domestic industry's production capacity was 889.5 million square feet in interim 2018 and 862.7 million square feet in interim 2019. *Id*.

[103] CR/PR at Tables IV-8 to IV-14.

[104] *See* CR/PR at Table IV-8.

[105] CR/PR at Table IV-7. Subject imports' share of apparent U.S. consumption was *** percent in interim 2018 and *** percent in interim 2019. *Id.*

[106] CR/PR at Tables IV-8 to IV-14.

48.9 percent in 2016 to 47.5 percent in 2017 and 48.7 percent in 2018.[107] The largest sources for these imports were Italy, Mexico, and Spain.[108]

3. Substitutability and Other Conditions

We find that there is a high degree of substitutability between the domestic like product and subject imports.[109] Majorities of U.S. producers, importers, and purchasers reported that domestically produced ceramic tile, subject imports, and nonsubject imports of ceramic tile are "always" or "frequently" interchangeable.[110] Majorities or pluralities of purchasers reported that the subject imports and the domestic like product were comparable in 12 of 18 purchasing factors.[111]

Purchasers most frequently cited price as one of their top three purchasing factors,[112] and all responding purchasers also reported that price is very important in purchasing decisions.[113] In light of this, we find that the record indicates that price is an important factor in purchasing decisions, although purchasers also reported that design, quality, and availability are important factors.[114]

U.S. producers and importers reported shipments through similar channels of distribution, including to big-box/home center retailers (the predominant channel), distributors, other retailers, contractors/builders, and other end users.[115] Producers reported a majority of its sales through spot sales and annual contracts, with the remainder through long and short term contracts. Importers reported sales predominantly through spot sales, with the remainder through annual and other contracts.[116]

The primary raw material used to produce ceramic tile is clay, although the types and amounts of clay used for different types of ceramic tile can vary widely. Silica, feldspar, and other minerals are additives frequently used in ceramic tile production.[117] Raw material costs were the second largest component of U.S. producers' total cost of goods sold ("COGS") during the POI.[118] Raw materials as a share of the total cost of ceramic tile remained stable over the

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[107] CR/PR at Table IV-7. Nonsubject imports' share of apparent U.S. consumption was 49.0 percent in interim 2018 and 53.4 percent in interim 2019. *Id.*

[108] CR/PR at Table IV-2.

[109] CR/PR at II-12.

[110] CR/PR at Table II-11.

[111] CR/PR at Table II-10. The domestic like product was reported as superior compared to subject imports by a majority of purchasers with respect to all of the remaining purchasing factors except price, for which a majority of purchasers reported that the domestic product was inferior (*i.e.*, higher priced). *Id.*

[112] CR/PR at Table II-7.

[113] CR/PR at Table II-8.

[114] *See* CR/PR at Table II-7.

[115] CR/PR at Table II-2.

[116] CR/PR at Table V-2.

[117] CR/PR at V-1.

[118] CR/PR at Table VI-1.

period, ranging between 30.7 and 31.5 percent of total COGS.[119] Raw material costs reported for the production of porcelain tile as compared to non-porcelain tiles were significantly higher due to the higher purity grade of the clays required in its manufacture.[120] [121]

Pursuant to section 301 of the Trade Act of 1974,[122] the Office of the U.S. Trade Representative ("USTR") imposed a 10 percent *ad valorem* duty on a series of products originating in China, including ceramic tile, effective September 24, 2018 ("section 301 duties").[123] These section 301 duties were subsequently increased to 25 percent *ad valorem*, on May 10, 2019.[124]

C. Volume of Subject Imports[125]

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[126]

The volume and market penetration of subject imports rose steadily from 2016 to 2018. The quantity of subject imports increased from 579.5 million square feet in 2016 to 657.1 million square feet in 2017 and 690.3 million square feet in 2018, an increase of 19.1 percent.[127] The market share of subject imports increased from 20.2 percent in 2016 to 21.7 percent in 2017 and 22.4 percent in 2018.[128] The increase of subject imports' market share during this period came almost entirely at the expense of the domestic industry. As subject imports gained 2.2 percentage points of market share from 2016 to 2018, the domestic industry lost 2.0 percentage points and nonsubject imports lost 0.2 percentage points of market share.[129] The ratio of subject imports to U.S. production increased from 64.7 percent in 2016 to

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[119] CR/PR at V-1 and VI-8.

[120] CR/PR at I-12 to I-14 and n.54, VI-9 n.17.

[121] Petitioner argues that sales of mislabeled porcelain tile are discouraging demand for genuine porcelain tile. It asserts that this public confusion is not limited to subject imports, but to "ceramic tile" generally. *See, e.g.*, Petitioner Prehearing Brief at 21-22. These allegations of mislabeling, which Respondents' contest, are not substantiated by record evidence. Moreover, Petitioner has failed to explain how these allegations relate to the Commission's material injury analysis in antidumping and countervailing duty investigations. Thus, the Commission does not consider the alleged mislabeling to be a relevant condition of competition in these investigations.

[122] 19 U.S.C. § 2411.

[123] CR/PR at I-5; 83 Fed. Reg. 47974 (September 21, 2018)

[124] CR/PR at I-8 to I-9; 84 Fed. Reg. 20459 (May 9, 2019). Shipments of covered merchandise exported from China prior to May 10, 2019 were not subject to the duties, provided such goods entered the United States prior to June 1, 2019. 84 Fed. Reg. 21892 (May 15, 2019).

[125] Chairman David S. Johanson has made negative determinations and does not join the remainder of this opinion. *See* Chairman David S. Johanson Dissenting Views.

[126] 19 U.S.C. § 1677(7)(C)(i).

[127] CR/PR at Tables IV-6 and C-1.

[128] CR/PR at Table IV-7.

[129] CR/PR at Table C-1.

65.7 percent in 2017 and 76.0 percent in 2018.[130] We also observe that, for each of the ceramic tile product categories examined in these investigations (mosaic, non-mosaic, floor, wall, porcelain, and non-porcelain), subject imports gained market share in each category (except "other" ceramic tile) and did so at the expense of the domestic industry.[131]

The volume and market penetration of subject imports were lower in interim 2019 than in interim 2018.[132] We find the lower subject import volume and market share in interim 2019 was due at least in part to the pendency of these investigations.[133]

Focusing on the data from 2016 to 2018, we conclude that subject import volume and the increase in subject import volume is significant in absolute terms and relative to consumption and production.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of the subject imports, the Commission shall consider whether

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[130] CR/PR at Table IV-2.

[131] *See* CR/PR at Tables IV-8 to IV-14. From 2016 to 2018, the domestic industry's market share decreased in each of the product categories while subject imports' market share increased, except the "other" ceramic tile category in which the domestic producers' share of U.S. shipments ***. *Id.* We find these data provide further support for our finding that subject imports' increase in market share during this period was at the expense of the domestic industry.

[132] Subject import volume and market share were 516.8 million square feet and 22.0 percent in interim 2018 and 423.2 million square feet and 18.6 percent in interim 2019. CR/PR at Tables IV-2, IV-7.

[133] The parties dispute the reason for the reduced quantity of subject imports in interim 2019. Petitioner argues that it is the result of the high provisional duties Commerce imposed related to these antidumping and countervailing duty investigations. Petitioner Prehearing Brief 25, 30-31, and 55; Petitioner Responses to First Set of Hearing Questions at 8-9, and Petitioner Responses to Second Set of Hearing Questions at 15. Respondents argue that subject import volume began declining prior to the filing of the petition in the second half of 2019 for a reason unrelated to the filing of the petition, namely the imposition of section 301 duties. Respondents Prehearing Brief at 80-81 and 105-106.

We acknowledge that section 301 duties likely had some effect on subject import volume. U.S. producers, importers, and purchasers all reported that these duties led to a decline in the supply of subject imports. CR/PR at Table II-1. Nevertheless, monthly import data show that the subject import volume in 2019 was below the subject import volume for the comparable month in 2018 for five of the six months between April 2019 (the month the petition was filed) and September 2019 (the final month of the Interim period). The drop in subject import volume was particularly noticeable in September 2019, which was also the month when Commerce issued its preliminary determination in the countervailing duty investigation. CR/PR at Table IV-3. By contrast, monthly subject import quantities rose in the three months immediately following the initial imposition of section 301 duties. *Id.* In light of the foregoing, we find that the pendency of the investigations has had an effect on interim 2019 data. Consequently, we have reduced the weight we accord that data in our analysis. *See* 19 U.S.C. § 1677(7)(I).

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[134]

As addressed in section IV.B.3. above, the record indicates there is a high degree of substitutability between subject imports and the domestic like product and that price is an important consideration for purchasers choosing among competing ceramic tile suppliers.[135]

In the final phase of these investigations, the Commission collected pricing data for five ceramic tile products.[136] Eight domestic producers and 10 importers provided usable quarterly net U.S. f.o.b. selling price data for these products.[137] Pricing data from these firms accounted for approximately 24.8 percent of U.S. producers' commercial shipments of ceramic tile and 14.5 percent of imports of subject ceramic tile from China in 2018.[138]

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[134] 19 U.S.C. § 1677(7)(C)(ii).

[135] While we acknowledge that most purchasers evaluated the domestic like product to be superior to the subject imports in factors such as availability and delivery time that purchasers considered to be very important in purchasing decisions, *see* CR/PR at Tables II-8, II-10, there is no indication in the record that these considerations entitled the domestic industry to a price premium. To the contrary, to the extent that Respondents emphasized non-price factors as important to purchasing decisions, these were design and style. *See* Respondents Prehearing Brief at 53-54; Respondents Posthearing Brief at 10. By the same token, several market participants that cited non-price considerations as important to purchasing decisions noted style and design and asserted that the subject imports had advantages in this respect. CR/PR at II-20. We note, however, that the vast majority (13 out of 16) purchasers reported that domestic product and subject imports were comparable with respect to "design and style." CR/PR at Table II-10.

[136] The pricing products are as follows: **Product 1** – Porcelain tile, rectangular, 6"-8" in width by 24"-36" in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to home center retailers; **Product 2** -- Porcelain tile, square or rectangular, 12" in width by 24" in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to distributors; **Product 3** – Non-porcelain ceramic tile, square or rectangular, 12" in width by 24" in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to home center retailers; **Product 4** – Non-porcelain tile, square or rectangular, 3"-6" in width by 6"-12" in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to other retailers; and **Product 5** – Mosaic ceramic tile, 12" by 12" square or interlocking, on a mesh sheet. Sales to home center retailers. *See* CR/PR at V-6-7.

[137] CR/PR at V-7 and Tables V-4 to V-8.

[138] CR/PR at V-7. The Commission also requested home center retailers to provide import purchase cost data for their imports from China. CR/PR at V-8. Purchase cost data reported by several importers were not included in the data compilation because their data were reported incorrectly. *See* CR at V-8 n.13; *see also* CR/PR at Tables V-4, V-6, and V-8. One importer, *** reported usable import purchase cost data for products 1, 3, and 5 imported from China. Purchase cost data reported by this firm accounted for *** percent of subject imports from China in 2018. CR/PR at V-8.

The pricing data indicate that subject imports pervasively undersold the domestic like product throughout the POI. Specifically, subject imports undersold the domestic like product in 51 of 75 quarterly comparisons, at an average margin of 23.6 percent.[139] The quantity of subject imports in underselling comparisons was *** square feet, while the quantity of subject imports that oversold the domestic like product was *** square feet.[140] [141] Moreover, six of the seven purchasers that reported they purchased subject imports rather than the domestic like product indicated that the subject imports were lower priced.[142] We consequently find that there has been significant underselling of the domestic like product by the subject imports. In light of the importance of price in purchasing decisions and the high substitutability of the subject imports and the domestic like product, we find that this underselling led to the market share increases obtained by the subject imports at the expense of the domestic industry from 2016 to 2018.[143]

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[139] CR/PR at V-22 and CR/PR at Table V-10. Subject imports oversold the domestic product in the remaining 24 quarterly comparisons, at an average margin of 19.3 percent. *Id.* We note that seven of the 24 instances of overselling occurred during interim 2019, when we have found that subject imports reduced their presence in the U.S. market due at least in part to the pendency of these investigations.

[140] CR/PR at V-22 and CR/PR at Table V-10. The direct purchase cost data collected by the Commission corroborate the pervasive underselling reflected in the pricing data. The direct purchase data indicate that landed duty-paid costs for subject imports were below the sales prices for U.S. produced ceramic tile in all 45 quarterly comparisons involving *** square feet, with price-cost differences ranging from *** to *** percent, and averaging *** percent. CR/PR at Table V-11. We recognize that the import purchase cost data may not reflect the total cost of importing and therefore requested that direct importers provide additional information regarding the costs and benefits of directly importing ceramic tile. Importer *** reported additional costs associated with importing ceramic tile, ranging from *** percent compared to landed duty-paid value. Importer *** reported *** estimated savings through importing directly rather than purchasing from a U.S. producer. ***. CR/PR at V-19.

[141] Respondents argue that the Commission should disregard much of the pricing data collected due to product mix or excessively broad product definitions. *See, e.g.*, Respondents Response to First Set of Hearing Questions at 22, Respondents Posthearing Brief at 11 and Response to Second Set of Hearing Questions at 25. In its views during the preliminary phase of these investigations, the Commission invited parties "to suggest pricing products with more specificity and less product variation to improve pricing comparisons." Preliminary Views at 33-34. However, Respondents did not seek narrower product definitions in their comments on draft questionnaires. *See* Respondents Comments on Draft Questionnaires, EDIS Doc. 683501 at 2 (acknowledging no existing standard definition of mosaic tile) and 3 (recommending a broader definition of floor tile). Further, even if we disregarded the data for Product 5 – a product that was included in light of respondents' argument that mosaic tile should be treated as a separate like product – the record still shows predominant underselling of the domestic product by subject imports on both an instance and quantity basis. *See* CR/PR at Table V-10.

[142] CR/PR at Table V-13; *see also* CR/PR at II-10 (13 of 17 purchasers reporting that the domestic product was inferior to subject imports on price).

[143] Two of the responding seven purchasers that reported purchasing subject imports instead of the domestic like product also reported that price was the primary reason. CR/PR at Table V-13.

We also find that subject imports depressed prices for the domestic like product to a significant degree. The domestic industry's prices declined for three of the pricing products (products 1-3) during the POI. These products show declines regardless of whether you compare the first quarter of 2016 to the third quarter of 2019 or the fourth quarter of 2018, which takes into account the filing of the petitions.[144] These products represented *** percent of the domestic producers' pricing product volume during the POI.[145] Sales prices for two of the subject import pricing products (products 1 and 4) were lower in the fourth quarter of 2018 and the third quarter of 2019 than the first quarter of 2016 and prices of three of these pricing products (products 1, 2, and 4) were lower in the fourth quarter of 2018 than in the first quarter of 2016.[146] These price declines occurred notwithstanding the increase in apparent U.S. consumption for ceramic tile and slightly increasing unit COGS for the domestic industry from 2016 to 2018.[147] We attribute these declines to the significant and increasing volume of subject imports that were pervasively underselling the domestic like product.[148] We therefore conclude that subject imports depressed prices for the domestic like product to a significant degree.

Nonsubject imports, particularly from Brazil and Mexico, were also present in the U.S. market during the POI at prices that were frequently below those for either the domestic like product or the subject imports.[149] Respondents argue that nonsubject imports, rather than subject imports, are responsible for any price depression experienced by the domestic industry.[150] This argument ignores important distinctions between the subject and nonsubject import sources. In 2018, nonsubject imports from Mexico accounted for 17.3 percent of total imports, and Brazil, only the fourth largest source of nonsubject imports, accounted for 7.2 percent, while subject imports from China accounted for 31.5 percent of total imports. Put

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[144] *See* CR/PR at Tables V-4-9. Domestic producers' prices for products 4 and 5 increased over the same period by relatively smaller percentages. *Id.* Petitioner argues that the *** percent growth in subject importers' inventory between 2016 and 2018 created an inventory "overhang" that had depressing and/or suppressing impacts on domestic prices well into 2019, even as the subject import volume declined. Petitioner Response to First Set of Hearing Questions at 19, 26-27.

[145] CR/PR at V-7, n.12.

[146] CR/PR at Tables V-4 to V-8. Respondents argue that the pricing patterns of the subject imports and the domestic like product are not correlated. *See* Respondents Prehearing Brief at 64-65 and Posthearing Brief, Answers to Hearing Questions at 22-23. We do not find this argument to be persuasive because the subject imports were consistently underselling the three domestic products that showed price declines during the periods that the prices were declining. *See* CR/PR at Tables V-4 to V-7.

[147] *See* CR/PR at Tables IV-8, VI-1. Unit COGS increased 2.5 percent from 2016 to 2018. CR/PR at Table C-1.

[148] CR/PR at Tables V-4 to V-6, and V-9.

[149] CR/PR at E-3. We acknowledge that the pricing data for nonsubject imports on this record are limited. Five importers provided usable price data for Brazil and Mexico, accounting for 4.5 percent of U.S. commercial shipments from Brazil and 3.8 percent of U.S. commercial shipments from Mexico in 2018. *Id*.

[150] Respondents Prehearing Brief at 41-43 and Posthearing Brief, Answers to Hearing Questions at 3-5.

differently, in 2018 subject imports from China had nearly five times greater volume than nonsubject imports from Brazil and 82.5 percent greater volume than subject imports from Mexico. In light of their pervasive underselling and much larger volumes compared to any of the nonsubject sources that offered low-priced ceramic tile during the POI, we conclude that subject imports from China were an independent cause of the price depression experienced by the domestic industry. Indeed, four responding purchasers reported that U.S. producers had reduced prices to compete with lower priced imports from China, with reported price reductions ranging from 10 to 20 percent.[151] Additionally, notwithstanding their pricing, the volume and market share of nonsubject imports from Mexico declined appreciably from 2016 to 2018 while the volume of subject imports increased.[152] Given the large and increasing volumes of subject imports from China, the presence of appreciably smaller volumes of imports from individual nonsubject sources, such as Brazil and Mexico, cannot fully explain the observed price depression experienced by the domestic industry.[153]

In conclusion, given the high degree of substitutability between the subject imports and the domestic like product and the importance of price in purchasing decisions, we find that subject imports undersold the domestic like product to a significant degree, which enabled those imports to capture market share at the expense of the domestic industry from 2016 to 2018. Moreover, we find that the competitive pressure from low-priced subject imports depressed the domestic industry's prices during this period to a significant degree. We therefore conclude that the subject imports had significant adverse price effects on domestically produced ceramic tile.

E. Impact of the Subject Imports[154]

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on

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[151] CR/PR at Table V-14; *see also* Petitioner Response to Second Set of Hearing Questions, Exhibit 9 at 18-19 (examples of contemporaneous internal company emails illustrating pricing pressure from subject imports that would require below-cost pricing for domestic product, including, ***).

[152] CR/PR at C-1. The volume of nonsubject imports from Mexico declined 18.5 percent from 2016 to 2018. The market share of nonsubject imports from Mexico declined 3.9 percentage points from 2016 to 2018. The volume of nonsubject imports from Brazil increased 60.7 percent over the POI, however, imports from Brazil started out at and remained at much lower levels than nonsubject imports from Mexico or subject imports from China. For example, in 2016 nonsubject imports volumes from Brazil totaled only 98.9 million square feet. *Id.*

[153] Moreover, for pricing product 1, the product for which the domestic industry had its highest volume of shipments, there were essentially no pricing observations from nonsubject imports from Brazil or Mexico. CR/PR at Table E-1.

[154] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determination, Commerce found dumping margins of 229.04 percent for imports of ceramic tile from China for the companies listed with separate rates and 356.02 percent for the China-wide entity. Commerce Final AD Determination, 85 Fed. Reg. at 19434. We have considered in our analysis the fact that Commerce has made final findings that all subject producers in China are

the state of the industry."[155] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[156]

We find that the domestic industry's performance was impaired from 2016 to 2018 as it lost market share to lower-priced subject imports that significantly undersold the domestic like product and depressed the domestic producers' prices. The industry increased capacity to meet growing demand, but could not fully benefit from improvements in apparent U.S. consumption due to the presence of low-priced subject imports. Any growth in output-related indicators over the period was not commensurate with the growth in apparent U.S consumption, which increased by 7.5 percent from 2016 to 2018.

The domestic industry's capacity increased from 2016 to 2018.[157] The capacity increases reflected several plant openings and expansions.[158] Production increased overall from 2016 to 2018 by 1.5 percent, but at a lower rate than apparent consumption.[159] Capacity utilization fell.[160] The domestic industry's commercial U.S. shipments showed a similar trend to

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selling subject imports in the United States at less than fair value. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the significant underselling and price effects of subject imports, described in both the price effects discussion and below, is particularly probative to an assessment of the impact of the subject imports.

[155] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

[156] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[157] The domestic industry's production capacity was 1.0 billion square feet in 2016, 1.1 billion square feet in 2017, 1.2 billion square feet in 2018, 889.5 million square feet in interim 2018, and 862.7 million square feet in 2019. CR/PR at Table III-5.

[158] CR/PR at Tables III-4 (noting new plant openings by *** in 2016 and by *** in August 2017, and capacity expansions at existing facilities of five producers) and III-5.

[159] CR/PR at Tables III-5 and C-1. The domestic industry's production was 895.6 million square feet in 2016, 999.5 million square feet in 2017, 908.8 million square feet in 2018, 709.1 million square feet in interim 2018, and 643.3 million square feet in interim 2019. CR/PR at Table III-5. The increase in production from 2016 to 2018 was 1.5 percent, while during that period apparent U.S. consumption increased 7.5 percent. *Id*.

[160] The domestic industry's capacity utilization was 88.9 percent in 2016, 88.6 percent in 2017, 78.0 percent in 2018, 79.7 percent interim 2018, and 74.6 percent in interim 2019. CR/PR at Table III-5. The record does not indicate that the declines in capacity utilization from 2016 to 2018 were simply the result of producers opening new facilities for which production operations had to be ramped up gradually. Of the 12 domestic producers operating in 2016, ten had lower capacity utilization in 2018

production.[161] The domestic industry's share of apparent U.S. consumption steadily declined over the period from 30.9 percent in 2016 to 30.8 percent in 2017 and 28.9 percent in 2018.[162] The industry's end-of-period inventories substantially increased from 2016 to 2018.[163]

The domestic industry's employment indicators generally improved between 2016 and 2018.[164] The average number of production-related workers ("PRWs") increased modestly from 2016 to 2018.[165] The industry's productivity increased irregularly over the POI,[166] while its unit labor costs fluctuated but were higher in 2018 than in 2016.[167] The domestic industry's total hours worked and hours worked per PRW declined, while wages paid and hourly wages increased.[168]

Although the domestic industry's sales revenues increased overall, most measures of profitability were lower in 2018 than in 2016. Sales revenues were 3.2 percent higher in 2018 than in 2016.[169] By contrast, operating income was 9.7 percent lower and net income was 15.9

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than 2016. CR/PR at Table III-5. This includes four of the five producers whose capacity did not increase from 2016 to 2018. *See id*.

[161] The domestic industry's commercial U.S. shipments increased from 850.2 million square feet in 2016 to 900.7 million square feet in 2017, and then declined to 867.7 million square feet in 2018, an increase of 2.0 percent from 2016 to 2018. CR/PR at Table III-6. Commercial U.S. shipments were 661.4 million square feet in interim 2018 and 620.7 million square feet in interim 2019. *Id*.

[162] CR/PR at Table IV-7. The domestic industry's share of apparent U.S. consumption was 29.0 percent in interim 2018 and 28.0 percent in interim 2019.

[163] CR/PR at Table III-9. The domestic industry's end-of-period inventories were 258.1 million square feet in 2016, 313.8 million square feet in 2017, 322.3 million square feet in 2018, 333.4 million square feet in interim 2018, and 319.8 million square feet in interim 2019. *Id*.

[164] Employment indicators were generally lower in interim 2019 than interim 2018. *See* CR/PR at Table III-11.

[165] CR/PR at Table III-11. The domestic industry's average number of PRWs was 3,378 in 2016, 3,533 in 2017, and 3,399 in 2018. The average number of PRWs was 3,423 in interim 2018 and 3,322 in interim 2019. *Id*.

[166] CR/PR at Table III-11. The domestic industry's productivity (square feet per hour) was 125.8 in 2016, 135.1 in 2017, 130.0 in 2018, 130.6 in interim 2018, and 123.7 in interim 2019. *Id*.

[167] CR/PR at Table III-11. The domestic industry's unit labor costs (per square foot) were $0.19 in 2016, $0.18 in 2017, and $0.20 in 2018. Unit labor costs (per square foot) were $0.19 in interim 2018 and $0.21 in interim 2019. *Id*.

[168] CR/PR at Table III-11. The domestic industry's total hours worked (1,000 hours) were 7.1 million in 2016, 7.4 million in 2017, 7.0 million in 2018, 5.4 million in interim 2018, and 5.2 million in interim 2019. Hours worked per PRW were 2,108 in 2016, 2,093 in 2017, 2,056 in 2018, 1.586 in interim 2018, and 1,566 in interim 2019. Wages paid were $170.7 million in 2016, $183.7 million in 2017, $179.5 million in 2018, $136.5 million in interim 2018, and $134.5 million in interim 2019. Hourly wages (dollars per hour) paid were $23.97 in 2016, $24.84 in 2017, $25.68 in 2018, $25.14 in interim 2018, and $25.86 in interim 2019. *Id*.

[169] CR/PR at Table VI-1. The domestic industry's total net sales values were $1.23 billion in 2016, $1.31 billion in 2017, $1.27 billion in 2018, $965.8 million in interim 2018, and $923.5 million in interim 2019. *Id*.

percent lower.[170] Similarly, the domestic industry's reported operating income margins declined from 2016 to 2018.[171] The domestic industry's capital expenditures and research and development ("R&D") expenditures declined from 2016 to 2018.[172] The domestic industry's total net assets increased, as it increased production capacity during the period, but its operating return on assets declined from 2016 to 2018.[173] Finally, domestic producers reported a number of negative effects on investment and on growth and development due to subject imports during the POI, including cancelled or postponed expansion plans and the idling of capacity and labor force.[174]

The domestic industry was limited in its ability to benefit from increasing demand from 2016 to 2018 because of the increasing volume of subject imports. In light of its capacity expansion, the domestic industry was well-positioned to gain market share from 2016 to 2018. Instead, due to competition from lower-priced subject imports, it could not even maintain its market share, losing 2.0 percentage points of market share to subject imports during this period.[175] Consequently, its output during this period was less than it would otherwise have been but for subject import competition. Because of the combination of these effects on its output and the price depression caused by the subject imports, its revenues were also lower than they would have been otherwise. As previously discussed, operating income and net

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[170] CR/PR at Tables VI-1 and C-1. The domestic industry's operating income was $240.2 million in 2016, $265.7 million in 2017, $216.9 million in 2018, $169.1 million in interim 2018, and $122.0 million in interim 2019. Its net income was $222.5 million in 2016, $239.7 million in 2017, $187.2 million in 2018, $146.9 million in interim 2018, and $96.9 million in interim 2019. *Id*.

Respondents argue that large and increasing selling, general, and administrative ("SG&A") expenses and aggregated interest expenses were responsible, not subject imports, for the domestic industry's financial decline from 2017 to 2018. *See, e.g.*, Respondents Prehearing Brief at 72. We observe that, even if increased expenses might have contributed to the domestic industry's reduced operating and net income from 2017 to 2018, this does not negate the adverse effects on the industry's financial performance that occurred as a result of low-priced subject imports taking sales and market share from the domestic industry and depressing the domestic producers' prices.

By contrast, the domestic industry's gross profit was $515.5 million in 2016, $566.2 million in 2017, $532.5 million in 2018, $411.1 million in interim 2018, and $369.2 million in interim 2019. *Id*.

[171] CR/PR at Table VI-1. The industry's ratio of operating income to net sales was 19.5 percent in 2016, 20.3 percent in 2017, 17.1 percent in 2018, 17.5 percent in interim 2018, and 13.2 percent in interim 2019. *Id*.

[172] CR/PR at Table VI-4. The industry's capital expenditures were $304.4 million in 2018, $147.1 million in 2017, $64.1 million in 2018, $45.6 million in interim 2018, and $84.2 million in interim 2019. The industry's R&D expenses were $*** in 2016, $*** in 2017, $*** in 2018, $*** in interim 2018, and $*** in interim 2019. *Id*.

[173] CR/PR at Table VI-6. The domestic industry's total net assets were $1.8 billion in 2016, $2.0 billion in 2017, and $1.9 billion in 2018. Its average operating return on assets was 14.5 percent in 2016, 14.7 percent in 2017, and 13.6 percent in 2018. *Id*.

[174] *See* CR/PR at Table VI-8.

[175] CR/PR at Table IV-7.

profit were both lower in 2018 than 2016. We therefore find that the subject imports had a significant adverse impact on the domestic industry.[176]

We have considered whether other factors may have had an impact on the domestic industry, so as not to attribute any injury caused by these factors to the subject imports. As indicated above, nonsubject imports maintained a significant presence in the U.S. market over the POI.[177] The volume of nonsubject imports increased over the POI, although as a share of apparent U.S. consumption, they essentially remained flat during the full years of the POI.[178] Thus, on an aggregate basis, nonsubject imports cannot explain the domestic industry's decline in market share from 2016 to 2018. Moreover, as described in detail above, subject imports were a cause of price depression and adverse price effects independent from nonsubject imports, including nonsubject imports from Brazil and Mexico. Consequently, the presence of nonsubject imports in the U.S. market during the POI cannot explain the domestic industry's loss of market share and revenues from 2016 to 2018.

Because we have found that the decline in subject imports during interim 2019 was related to the pendency of these investigations, and as a result have focused on the impact of subject imports during the period from 2016 to 2018, we have afforded reduced weight to the domestic industry declines in indicators in interim 2019. We find that the Respondents' argument that the domestic industry's decline occurred predominantly during interim 2019 when the presence of subject imports declined but that of nonsubject imports increased,[179] neither detracts from nor is responsive to our analysis above.[180] As previously stated, subject imports caused the domestic industry's performance from 2016 to 2018 to be materially worse than it would have been otherwise. In any event, subject imports remained the largest single country import source for ceramic tile even during interim 2019.[181] Moreover, there is

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[176] Respondents have argued that an affirmative determination is unwarranted because the domestic industry was highly profitable throughout the POI. *See, e.g.,* Respondents Prehearing Brief at 22-24; Respondents Posthearing Brief at 4-5. This argument is inconsistent with the statutory provision stating that the existence of a profitable industry, or one whose performance has improved, does not foreclose an affirmative material injury determination. *See* 19 U.S.C. § 1677(7)(J); *see also Certain Hot-Rolled Steel Flat Products from Australia, Brazil, Japan, Korea, the Netherlands, Turkey, and the United Kingdom,* Inv. Nos. 701-TA-545-547 and 731-TA-1291-1297 (Final), USITC Pub. 4638 at 44 n.219 (Sept. 2016); *Cold-Rolled Steel Flat Products from Brazil, India, Korea, Russia, and the United Kingdom,* Inv. Nos. 701-TA-540, 542-544 and 731-TA-1283, 1285, 1287, and 1289-1290 (Final), USITC Pub. 4637 at 35 n.182 (Sept. 2016).

[177] CR/PR at Table IV-7.

[178] CR/PR at Tables IV-6 and IV-7. Nonsubject imports' share of apparent U.S. consumption was 49.0 percent in interim 2018 and 53.4 percent in interim 2019. CR/PR at Table IV-7.

[179] *See* Respondents Prehearing Brief at 80-81; Respondents Posthearing Brief at 6, 9-10.

[180] We acknowledge that the 1.2 billion square feet and 34.3 percent market share of nonsubject imports in interim 2019 exceeded the 1.1 billion square feet and 31.6 percent market share of nonsubject imports in interim 2018. CR/PR at Tables IV-6 to IV-7.

[181] *See* CR/PR at Tables IV-2 and IV-3.

evidence suggesting that the reduced presence of subject imports in interim 2019 after imposition of preliminary duties led to additional ceramic tile sales for the domestic industry.[182]

Respondents also argue that the domestic industry's focus on floor tile caused it to be unable to benefit from increased demand for wall tile during the POI.[183] First, as noted above floor tile often is multipurpose and could be used either as floor or wall tile. However, even if we just focus on tile only suitable for walls, the record shows that, although U.S. shipments of wall tile for both subject imports and the domestic industry were less than their shipments of floor tile,[184] wall tile was not a minor or incidental product category for the domestic industry.[185] To the contrary, U.S. shipments of domestically produced wall tile exceeded those of subject imports of wall tile in 2016. This was no longer the case by 2018 because, from 2016 to 2018, the domestic industry lost *** percentage points of the share of total U.S. wall tile shipments to subject imports while the market share of nonsubject imports remained essentially stable.[186] Moreover, the domestic industry was able to obtain additional sales of wall tile after provisional duties were imposed on subject imports, which contradicts Respondents' contention that domestic producers were restricted in their ability to increase shipments of wall tile.[187] Consequently, subject imports increased their share of wall tile shipments at the expense of the domestic industry in a product category in which they competed directly.

Respondents further argue that the rising popularity of LVT as a substitute for ceramic floor tile, rather than subject imports, is the cause of the domestic industry's difficulties. Respondents observe that the domestic producers' share of U.S. shipments of floor tile declined by *** percentage points from 2016 to 2018 at same time LVT was growing in popularity.[188] The record shows that LVT is a substitute for many flooring products, including carpet,

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[182] *See* Petitioner Response to Second Set of Hearing Questions at 26-28 and Exhibit 17 (showing ***).

[183] *See* Respondents Prehearing Brief at 29-32. We observe that mosaic tile accounted for only a very small proportion of the U.S. shipments and increase in U.S. shipments of subject imports from 2016 to 2018. *Compare* CR/PR at Table IV-8 with *id*. at Table IV-9. Consequently, Respondents' claim that domestic producers offer only limited mosaic tile offerings that do not compete meaningfully with subject mosaic tiles cannot explain subject imports' capture of market share from the domestic industry in the ceramic tile market overall. *See* Respondent Prehearing Brief at 19-21 and Respondents Response to First Set of Hearing Questions at 26.

[184] *Compare* CR/PR at Table IV-10 *with* Table IV-11. For example, U.S. importers' U.S. shipments of subject floor tile were *** square feet and shipments of wall tile were *** square feet in 2018. CR/PR at Tables IV-10 and IV-11.

[185] *See* CR/PR at Tables IV-10 and IV-11.

[186] *See* CR/PR at IV-11.

[187] *See* CR/PR at Table IV-11 and Petitioner Response to Second Set of Hearing Questions at 26-28 and Exhibit 17; Respondents Response to First Set of Hearing Questions at 9-13.

[188] *See, e.g.*, Respondents Prehearing Brief at 31-40, 50-51, 57-58, 83-91, 97-98; Respondents Posthearing Brief at 2, 6-8 and Response to First Set of Hearing Questions at 1-8; Response to Second Set of Hearing Questions at 6-12; and Final Comments at 6-10.

hardwood, laminate, vinyl tile, natural stone, in addition to ceramic tile.[189] Industry publications indicate that ceramic floor tile comprised 14.4 percent of U.S. floor covering sales in 2018, compared to 43.1 percent for carpet and rugs, 13.0 percent for hardwood, and 12.6 percent for LVT.[190] The record shows that LVT appears to have gained sales largely at the expense of other laminates and hardwood flooring from 2017 to 2018.[191] It also indicates that ceramic tile was the only flooring sector product, other than LVT, to increase market share in 2018, with total ceramic tile U.S. sales growing from 2017 to 2018.[192] Therefore, while we do not dispute data indicating LVT's increasing popularity in the overall U.S. flooring market during the POI, the record does not indicate that increased LVT shipments led directly to declines in U.S. shipments for ceramic floor tile. Indeed, regardless of any growth in demand for LVT, apparent U.S. consumption of ceramic tile increased during the full years of the POI.[193]

Respondents also contend that any increase in demand for LVT disproportionately affected domestic producers because they are more focused in floor tile shipments, which compete directly with LVT, while subject import shipments were less concentrated in this segment.[194] The record shows that the *** majority of both domestic producers' U.S.

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[189] CR/PR at II-8, II-11 to II-12; *see also* Petitioner Prehearing Brief at 23 (table) and Exhibit 3 at 8; and Respondents Prehearing brief at Exhibit 1-E at 2.

[190] Petitioner Prehearing Brief at 23 and table, and Exhibit 3 at 8; Petitioner Response to First Set of Hearing Questions at Exhibit 6.

[191] Petitioner Response to First Set of Hearing Questions at 6-7, and Exhibit 6.

[192] CR/PR at II-11 to II-12; *see also* Petitioner Prehearing Brief at 23 and table, and Exhibit 3 at 8, and Petitioner Posthearing Brief at 7 (table); Petitioner Response to Second Set of Hearing Questions at Exhibit 2. These data treat all ceramic floor tile, regardless of country of origin, as a single product category. The questionnaire data collected by the Commission similarly show that U.S. shipments of ceramic floor tile from all sources were higher in 2018 than in 2017. CR/PR at Table IV-10.

[193] Respondents also claim that cost advantages of LVT, particularly with respect to installation costs, have been the cause of declining sales of domestically produced ceramic floor tile. Because installation of ceramic floor tile from any source would incur installation costs, this type of competitive pressure should also have affected shipments of floor tile generally, including shipments from subject sources. They did not do so. U.S. shipments of subject floor tile increased from 2016 to 2018. CR/PR at Table IV-10; *see generally*, Petitioner Response to First Set of Hearing Questions at 7 and Exhibits 3 and 6. While Respondents argued only that competition from LVT affected the domestic industry's shipment levels, we also find that competition from LVT cannot explain the observed price depression for the domestic like product. The record indicates that demand for ceramic tile increased over the POI and that any competition between LVT and the domestic like product would affect only flooring applications, while subject imports competed with the domestic like product in all applications. As indicated above, we are not persuaded by Respondents' assertions regarding the alleged competitive pressures faced by domestic tile producers from LVT. Moreover, the record does not support the conclusion that competition from LVT – and not subject imports – were the cause of the apparent price depression as subject imports undersold the domestic product and took market share.

[194] Respondents Prehearing Brief at 82-83; Respondents Response to First Set of Hearing Questions at 6. Respondents further argue that the domestic producers would be disproportionately affected because they focus more on wood-look ceramic tile, which competes directly with LVT, whereas subject producers are more diversified. Respondents Response to First Set of Hearing

shipments and importers' U.S. shipments of subject imports consisted of floor tile.[195] We are unpersuaded by Respondents' contention that any difference in concentration of these floor tile shipments explains why importers were able to increase their shipments of subject imports in the floor tile segment in each of the full years of the POI while domestic producers' shipments of floor tile declined from 2017 to 2018.[196] Additionally, Respondents' focus on increased demand for LVT, which is used for flooring, cannot explain the domestic industry's share of U.S. wall tile shipments lost to subject imports, as discussed above.

We therefore find that the subject imports had a significant adverse impact on the domestic Industry. Accordingly, we determine that the domestic industry is materially injured by reason of dumped and subsidized imports of ceramic tile from China.

V. Critical Circumstances

A. Legal Standards

In its final antidumping duty determination concerning ceramic tile from China, Commerce found that critical circumstances exist with respect to certain subject producers/exporters. Because we have determined that the domestic industry is materially injured by reason of subject imports from China, we must further determine "whether the imports subject to the affirmative {Commerce critical circumstances} determination ... are likely to undermine seriously the remedial effect of the antidumping {and/or countervailing duty} order{s} to be issued."[197] The SAA indicates that the Commission is to determine "whether, by massively increasing imports prior to the effective date of relief, the importers have seriously undermined the remedial effect of the order" and specifically "whether the surge in imports prior to the suspension of liquidation, rather than the failure to provide retroactive relief, is likely to seriously undermine the remedial effect of the order."[198] The legislative history for the critical circumstances provision indicates that the provision was designed "to deter exporters whose merchandise is subject to an investigation from circumventing the intent of the law by increasing their exports to the United States during the period between initiation of an

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Questions at 5, 8. The support for this statement consists of informal reviews of three domestic producers' websites and does not provide any information showing that the domestic industry relied on sales of these wood-look products to a greater extent than the subject imports. *See* Respondents Response to Second Set of Hearing Questions at 12 and Exhibit 6. Moreover, Petitioner reported that domestic producers manufacture thousands of varieties of surface styles on a single production line every year and can easily switch design styles based on customer demand, and they are not somehow "locked in" to producing wood-look tiles. Petitioner Response to Second Set of Hearing Questions at 26-27.

[195] CR/PR at Tables III-7 and G-1 (showing that between *** and *** percent of the domestic industry's U.S. shipments consisted of floor tile during 2017-2019, and between *** and *** percent of importers' U.S. shipments of subject imports consisted of floor tile during the same period).

[196] CR/PR at Tables II-7 and G-1.

[197] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

[198] SAA at 877.

investigation and a preliminary determination by {Commerce}."[199] An affirmative critical circumstances determination by the Commission, in conjunction with an affirmative determination of material injury by reason of subject imports, would normally result in the retroactive imposition of duties for those imports subject to the affirmative Commerce critical circumstances determination for a period 90 days prior to the suspension of liquidation.

The statute provides that, in making this determination, the Commission shall consider, among other factors it considers relevant,

> (I) the timing and the volume of the imports,
>
> (II) a rapid increase in inventories of the imports, and
>
> (III) any other circumstances indicating that the remedial effect of the {order} will be seriously undermined.[200]

In considering the timing and volume of subject imports, the Commission's practice is to consider import quantities prior to the filing of the petition with those subsequent to the filing of the petition using monthly statistics on the record regarding those firms for which Commerce has made an affirmative critical circumstances determination.[201]

B. Analysis

On April 10, 2020, Commerce published its final determination in its antidumping duty investigation, finding that critical circumstances exist with respect to certain imports of ceramic tile from China.[202] In its investigation, Commerce found that critical circumstances exist for the PRC-wide entity and do not exist for the exporters that received firm-specific dumping margins.[203]

We first consider the appropriate period for comparison of pre-petition and post-petition levels of the imports subject to the affirmative critical circumstances finding. [204] While the Commission typically considers six-month periods, it has relied on a shorter comparison period when Commerce's initial preliminary determination fell within six months after the

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[199] *ICC Industries, Inc. v United States,* 812 F.2d 694, 700 (Fed. Cir. 1987), *quoting* H.R. Rep. No. 96-317 at 63 (1979), *aff'g* 632 F. Supp. 36 (Ct. Int'l Trade 1986). *See* 19 U.S.C. §§ 1671b(e)(2), 1673b(e)(2).

[200] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

[201] *See Lined Paper School Supplies from China, India, and Indonesia,* Inv. Nos. 701-TA-442-43, 731-TA-1095-97**,** USITC Pub. 3884 at 46-48 (Sept. 2006); *Carbazole Violet Pigment from China and India,* Inv. Nos. 701-TA-437 and 731-TA-1060-61 (Final), USITC Pub. 3744 at 26 (Dec. 2004); *Certain Frozen Fish Fillets from Vietnam,* Inv. No. 731-TA-1012 (Final), USITC Pub. 3617 at 20-22 (Aug. 2003).

[202] Commerce Final AD Determination, 85 Fed. Reg. at 19426.

[203] Commerce Final AD Determination, 85 Fed. Reg. at 19426.

[204] The parties did not provide any substantive arguments on the issue of critical circumstances in the final phase of these investigations. *Cf.* Respondents Posthearing Brief at 2 n.5 (noting Commerce's final critical circumstances determinations and lack of petitioner comment).

petition was filed.[205] Commerce's initial preliminary determination here came during the sixth month of the post-petition period. We have consequently used six-month comparison periods: an October 2018-March 2019 pre-petition period and an April-September 2019 post-petition period.[206]

Subject imports, for which Commerce made affirmative critical circumstances findings, were *** percent lower in the post-petition period than in the pre-petition period.[207] Available data indicate that U.S. importers' end-of-period inventories of subject ceramic tile were lower in September 2019 (*** square feet) than in December 2018 (*** square feet).[208] Consequently, the record indicates that both subject import volume and inventory levels fell in the post-petition period.

Given the decline in import volumes in the post-petition period and the lower inventories in September 2019, we find that imports from China subject to Commerce's affirmative critical circumstances determinations would not seriously undermine the remedial effect of the antidumping duty order to be issued on ceramic tile from China. Consequently, and in the absence of any other circumstances indicating that the remedial effects of the antidumping order would seriously be undermined, we make a negative critical circumstances determination with regard to subject imports in the antidumping duty investigation of ceramic tile from China.

VI. Conclusion

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of subject imports of ceramic tile from China that are sold in the United States at less than fair value and subsidized by the government of China. We have also made a negative critical circumstances determination in the antidumping duty investigation.

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[205] In particular, the Commission has used five-month periods in recent investigations where the timing of the first preliminary Commerce determination authorizing the imposition of provisional duties would have served to reduce subject import volume in the sixth month of the post-petition period. *See, e.g., Cold-Rolled Steel Flat Products from China and Japan,* Inv. Nos. 701-TA-541 and 731-TA-1284 and 1286 (Final), USITC Pub. 4619 (July 2016); *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman,* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Pub. 4604 at 31-32 (Apr. 2016); *Carbon and Certain Steel Wire Rod from China*, Inv. Nos. 701-TA-512, 731-TA-1248 (Final), USITC Pub. 4509 at 25-26 (Jan. 2015) (using five-month periods because preliminary Commerce countervailing duty determination caused reduction of subject import volume in sixth month).

[206] Use of five-month pre- and post-petition periods would not have changed our analysis or conclusions.

[207] CR/PR at Table IV-4. The quantities were *** square feet in the pre-petition period and *** square feet in the post-petition period. *Id.*

[208] CR/PR at Table VII-6. We note that the information available on inventories does not align with the 6-month comparison periods and concerns all subject merchandise.

Dissenting Views of Chairman David S. Johanson

Based on the record in the final phase of this investigation, I find that an industry in the United States is not materially injured or threatened with material injury by reason of imports of ceramic tile from China found by the U.S. Department of Commerce ("Commerce") to be subsidized and sold in the United States at less than fair value. I join sections I-III and IV.A and IV.B of the Views of the Commission, relating to background, domestic like product, domestic industry, legal standards, and conditions of competition.

My separate negative determination is based fundamentally on three facts. First, from 2016 to 2018, the domestic industry's performance was strong, improving in most ways and with high profits. This occurred even though the market share of ceramic tile from China increased moderately, rising from 20.2 percent in 2016 to 22.4 percent in 2018.[209] Second, the industry's performance did deteriorate in 2019 – but that occurred even though imports from China were falling: subject imports' market share in the first three quarters of 2019 ("interim 2019") was down to 18.6 percent.[210] Third, I find that the reduction in subject import volume in the interim 2019 period did not result from the filing of the Petitions, so I do not discount the decline in subject imports in 2019 as merely a consequence of the domestic industry's decision to seek trade relief.

Taken together, these facts undercut Petitioner's claim that imports from China caused the domestic industry material injury. The fact that the domestic industry's performance generally improved as subject imports increased, then deteriorated as imports from China were leaving the U.S. market in interim 2019, indicates that subject imports do not explain any performance declines the U.S. producers experienced – a conclusion confirmed by the lack of correlation between prices for domestically produced tile and tile imported from China. The record reveals several other likely causes of any declines. First, the U.S. ceramic tile market was confronted by increased competition from a substitute product, luxury vinyl tile (LVT), which mimics the appearance of ceramic, stone, and wood tile. Competition from LVT and other substitute products slowed and then reversed previously robust growth in ceramic tile consumption and led U.S. producers to lower prices for some products. In addition, U.S. ceramic tile producers had expanded in anticipation of demand growth that did not materialize. The 2019 influx of nonsubject imports more than made up for the reduction of subject imports and was led by low-priced imports from Brazil.

I also find that the contraction in subject import quantities in interim 2019 would have continued if the Petitions had not been filed, as Section 301 duties, which increased just after the Petitions were filed, would have continued to render imports from China uncompetitive compared to products imported from other countries.

Accordingly, I do not find that an industry in the United States is materially injured or threatened with material injury by reason of imports of ceramic tile from China.

[209] CR/PR at C-3, Table C-1.

[210] CR/PR at C-3, Table C-1.

I. No Material Injury by Reason of Subject Imports

A. Conditions of Competition

I concur in the discussion of conditions of competition above but write separately to emphasize important features of the ceramic tile market that I find help explain the lack of injury by reason of subject imports. These include the role played by LVT in reducing demand during the POI, the rapid buildup of domestic capacity, disadvantages of subject imports in factors other than price that explain their lower prices, and the timing of the Section 301 duties that partly explain the reduction in subject imports in 2019.

1. Demand Considerations

I find that demand for ceramic tile was weakening over the POI and declining by the end of it, as a result of increasing competition from substitute products. This also informs my pricing analysis because it explains why domestic producers cut prices for certain products.

Normally, demand for ceramic tile is driven by demand in the construction sector for new buildings and for restoration and remodeling (R&R).[211] The construction sector was strong during the POI: from 2016 through 2019, new home construction gradually increased, peaking in December 2019.[212] The remodeling index increased 7.7 percent overall, and despite fluctuations remained at all times above 50, indicating most builders viewed conditions as good.[213]

Growth in the construction market should have resulted in equally robust increases in apparent tile consumption, but it did not. Domestic producers asserted that ceramic tile demand increased, but purchasers disagreed.[214] The record better supports purchasers' view. Apparent consumption of ceramic tile increased 5.9 percent by volume from 2016 to 2017, but from 2017 to 2018, it increased just 1.6 percent, and in interim 2019 it was 3.0 percent lower than in interim 2018.[215]

Petitioner attributes the deceleration in apparent consumption of ceramic tile to "some softening" or "somewhat of a slowdown or flattening" in the housing market in 2018 and 2019.[216] New home construction and existing home sales were particularly strong in 2019, however, increasing 40.8 percent and 10.6 percent respectively between December 2018 to December 2019.[217] In any case, softening growth in construction would not explain the decline in ceramic tile apparent consumption in interim 2019 as construction activity was still increasing.

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[211] CR/PR at II-8 to II-9.

[212] CR/PR at II-9.

[213] CR/PR at II-9 & II-10, Figure II-1.

[214] Nearly all U.S. producers asserted demand increased, but most purchasers reported it decreased; importers were divided. CR/PR at Table II-5.

[215] CR/PR at C-3, Table C-1.

[216] Petitioner's Prehearing Brief 19.

[217] CR/PR at II-9.

The record offers a more plausible explanation for the deceleration and then decline in ceramic tile demand: increasing shipments of substitute products, particularly LVT.[218] LVT is a type of vinyl tile that can be made to mimic the appearance of ceramic, stone, wood, or other popular floorings. Importers and purchasers report it has a significantly lower installation cost than ceramic tile.[219]

Petitioner asserts that LVT does not compete with ceramic tile but primarily competes with other types of flooring such as laminates and wood.[220] The record, however, establishes that LVT does compete with ceramic tile. As stated in the Staff Report, "Four of 13 responding U.S. producers, 21 of 36 responding importers, and 13 of 17 responding purchasers reported that LVT is considered a substitute for ceramic tile in the same end uses. Retailer *** stated that LVT can be used as a substitute for ceramic tile in any room in the home including kitchens and bathrooms, and that it has seen average growth of over 50 percent per year for LVT, although not all having replaced ceramic tile."[221] According to the Staff Report, the firms reporting a decrease in demand "generally cited the availability of less expensive alternatives such as LVT and manufactured wood."[222]

Respondents cite public statements by U.S. firms describing increased competition from LVT. For example, the President of Mohawk Industries, parent company of Dal-Tile, stated, "LVT and other forms of multi-layer flooring are growing fast and impacting all other flooring categories. The impact on ceramic tile is mostly in residential remodel applications in the U.S."[223]

Thus, I conclude that demand for ceramic tile was weakening and ultimately declining during the POI as a result of increased sales of LVT and other substitute products.

2. Supply Considerations

An important supply consideration in this investigation is that many new ceramic tile producers and expanded facilities entered the U.S. market during the POI, attracted by high profits and what seemed – at first – to be fast-growing demand. As demand was much softer than expected when the capacity was added, the result was overexpansion and downward pressure on prices.[224] Newly added capacity in the ceramic tile industry also takes some time to ramp up to full production, so the rapidly expanded capacity led to lower capacity utilization.

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[218] CR/PR at II-1.

[219] CR/PR at II-12.

[220] Petitioner's Prehearing Br. at 23; Petitioner's Posthearing Br. at 2.

[221] CR/PR at II-11 to II-12.

[222] CR/PR at II-11.

[223] Respondent's Posthearing Br. at 2.

[224] I do not imply that domestic producers' expansion policies were misguided. Rather, a degree of overexpansion is a normal part of the business cycle. Individual firms cannot coordinate expansion plans, so during periods of rising demand, they each make expansion plans based on their best forecasts of demand in the future. In the ceramic tile industry, it typically takes at least two years from site selection to plant construction, so companies made expansion decisions in the POI based on the market outlook as much as four years previously. CR/PR at VI-13 n.28. Sooner or later, for one reason or

U.S. industry capacity increased by 11.9 percent from 2016 to 2017, by 3.3 percent from 2017 to 2018, and then was 3.0 percent lower in interim 2019 than in interim 2018.[225] Much of the reported increase occurred because three companies opened new facilities in 2016 and 2017, including two startup companies that provided questionnaire responses.[226] Additional increases likely resulted from two other startup companies, both affiliated with foreign producers, but the record contains no information about their operations.[227]

U.S. capacity increases also resulted from upgrades and expansions at existing facilities. For example, ***[228] ***[229]

The ramping up of new ceramic tile facilities takes some time. Respondents point out that new manufacturing facilities in general require that workers be trained and that managers must learn to successfully employ new equipment.[230] The situation for the ceramic tile industry is illustrated by ***[231] ***[232] ***[233] ***[234]

3. Section 301 Duties

Finally, the timing of Section 301 duties in this case affects my determination regarding the weight to accord interim 2019 data.

On September 21, 2018, USTR included ceramic tile among products from China subject to Section 301 tariffs at a 10 percent *ad valorem* rate, effective September 24, 2018, with an escalation to 25 percent originally scheduled for January 1, 2019.[235] On December 19, 2018,

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another, demand growth inevitably falls short of forecasts. This leads the industry to have more capacity relative to consumption than expected, so that profits fall short of projections and additional expansion plans are curtailed. If demand then declines, shakeout is inevitable. In this case, domestic producers' production declined, as discussed below – but so did subject imports. It was nonsubject imports that behaved countercyclically, increasing in quantity even as consumption fell.

[225] CR/PR at C-3, Table C-1.

[226] CR/PR at III-8. Dal-Tile opened a new plant in Dickson, Tennessee, in March 2016; Landmark, a startup company, commenced production in Mount Pleasant, Tennessee, in June 2016; and American Wonder, another startup, commenced production in Lebanon, Tennessee, in April 2017. CR/PR at III-4, Table III-3.

[227] These were Atlas Concorde USA, which opened a production facility in Franklin, Tennessee, in June 2016; and Wedi North America, which opened a production facility in Batavia, Illinois, in June 2018. CR/PR at III-4 to III-5, Table III-3. In December 2018, an affiliate of Brazilian producer Portobello Group also announced it would build a new facility in Baxter, Tennessee, with production then expected to commence in 2021. CR/PR at III-4, Table III-3 & VII-18. *** CR/PR at III-6 n.17.

[228] CR/PR at VI-15, Table VI-5.

[229] CR/PR at VI-15, Table VI-5.

[230] Respondents' Prehearing Br. 71.

[231] CR/PR at Table III-4.

[232] ***

[233] ***

[234] CR/PR at V-7 n.11. *** CR/PR at Tables III-4 & III-5. *** *Id.*

[235] 83 FR 47,974 (Sept. 21, 2018) (Annexes A-C).

however, USTR postponed the escalation to 25 percent until March 2, 2019,[236] and on March 5, 2020, USTR again postponed the escalation, this time until further notice.[237] The escalation was ultimately implemented on May 9, 2019, effective May 10, 2019.[238]

B. Weight to Accord to Interim 2019 Data

The post-petition effects provision of the statute, 19 U.S.C. 1677(7)(I), provides, "the Commission shall consider whether any changes in the volume, price effects, or impact of imports of the subject merchandise since the filing of the petition in an investigation is related to the pendency of the investigation and, if so, the Commission may reduce the weight accorded to the data for the period after the filing of the petition."

Petitioner requests that we discount the weight accorded to interim 2019 data pursuant to this provision. For the reasons that follow, however, the filing of the petitions did not effect a net reduction in subject import volumes in the interim 2019 period. Rather, reductions in import volume in this period resulted from other factors, such as the Section 301 duties. Accordingly, I find it inappropriate to reduce the weight I apply to interim 2019 data. This has several important implications, *e.g.*, indicating that subject import volumes declined over the POI, and confirming that they played no role in declines in industry performance.

1. Impact of the Section 301 Duties

The Section 301 duties took effect on September 24, 2018, at a rate of 10 percent, scheduled (at first) to increase to 25 percent on January 1, 2019.[239]

The immediate effect of the Section 301 duties was to increase subject imports.[240] According to *Floor Covering Weekly,* an industry publication, the announced plan to increase duties to 25 percent effective January 1 led importers to increase their subject imports in the fourth quarter of 2018 to beat the imposition of the tariff hike.[241]

After the initially scheduled date for the increase to 25 percent, however, subject imports declined markedly, even though the increase did not occur as planned and the duties remained at the lower 10 percent rate. From January through March 2019, tile imports from

[236] 83 FR 65918, December 19, 2018.

[237] 84 FR 7966, Mar. 5, 2019.

[238] 84 FR 20459, May 9, 2019. Under terms of a notice issued May 15, 2019, the 25 percent escalation was not imposed on merchandise that had already been exported from China prior to May 10, 2019, provided it entered the United States before June 1, 2019. 84 FR 21892, May 15, 2019.

[239] CR/PR at I-8 to I-9.

[240] CR/PR at Table IV-3. Subject imports' U.S. market share in the first three quarters of 2018 was 22.0 percent but for the year as a whole it was 22.4 percent. CR/PR C-3, Table C-1. Market share and month-to-month comparisons help avoid seasonal effects linked to the construction market. *See* CR/PR at II-1.

[241] Respondents' Prehearing Br. at 61 & Exh. 4-E.

China were lower than the same months in any previous year, and they declined to their lowest monthly level in the POI.[242]

Much evidence confirms that the timing of the Section 301 duties caused this decline in subject imports. Virtually all U.S. producers, importers, and purchasers agree that Section 301 duties reduced supply from China.[243] Petitioner asserts that "various factors" caused the decline in subject imports in interim 2019 but identifies only two: the Section 301 duties and the petitions.[244] The petitions were not filed until April 10, 2019, and so would not have resulted in declines before that date or for some time after due to shipping times.

From April onward, subject imports increased, but remained below levels seen in the same months in all previous years.[245] Petitioner attributes that cutback primarily to the suppressive effects of the petitions.[246] Yet, the Section 301 duties had already been suppressing subject imports, and to an even greater degree.[247] The petitions, therefore, do not explain the lower volume. Furthermore, the previously postponed escalation of Section 301 duties finally took effect on May 10.[248] That increase should have had a greater impact than had the 10 percent duties.[249]

I find the likely explanation for this pattern is that in the short term the filing of the petitions led exporters to increase shipments to avoid even higher countervailing duty rates expected in the imminent future. This was similar to how importers behaved in the fourth quarter of 2018 (when escalating Section 301 duties were announced in advance), and even Petitioner acknowledges that was how importers behaved in August 2019 when subject imports were above levels seen in August 2018.[250]

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[242] CR/PR at Table IV-3; *see also* Petitioner's Prehearing Br. Exh. 9 (providing data for 2016 and 2017).

[243] CR/PR at II-2, Table II-1 (4 of 4 U.S. producers, 23 of 24 importers, and 11 of 12 purchasers).

[244] Petitioner's Posthearing Br. 8 & n.20.

[245] CR/PR at Table IV-3; *see also* Petitioner's Prehearing Br. Exh. 9 (providing data for 2016 and 2017.

[246] Petitioner's Prehearing Br. 30-31.

[247] Based on monthly ceramic tile import data, imports from China in January through April 2019 were 12,000 to 20,000 tons below the corresponding month in 2018. CR/PR at Table IV-3. Imports from China in May through August 2019 were 4,000 to 14,000 tons below the corresponding month in 2018. CR/PR at Table IV-3.

[248] 84 FR 20459, May 9, 2019. As noted above, exports that had already left China by May 10 were permitted to pay at the 10 percent rate, provided they arrived by June 1. 84 FR 21892, May 15, 2019.

[249] Fear of this increase was what motivated exporters to step up their exports in late 2018, despite the duties. Respondents' Prehearing Br. at 61 & Exh. 4-E. Figure IV-2 of the Staff Report depicts monthly ceramic tile imports. It not only shows the increase in the fourth quarter of 2018 but also shows that shows monthly imports declined before the Petitions were filed, then increased afterward until September, the month of the preliminary countervailing duties.

[250] Petitioner's Pre-Hrg. Br. 31. Petitioner did make critical circumstances allegations to Commerce. *See* CR/PR at IV-8. Yet Petitioner acknowledges they did not deter importers overall in August. Petitioner's Pre-Hrg. Br. 31. I do not conclude based on this record that they had a greater deterrent effect in previous months.

Subject import quantities finally declined in September, the month that preliminary countervailing duties took effect at rates above 100 percent[251] and have dwindled to low levels since then.[252]

In sum, subject import volumes in every month of interim 2019 were below subject imports in the corresponding month of interim 2018 except August. Petitioner attributes this volume reduction primarily to the petitions, but the reduction was most pronounced before the petitions were filed. Moreover, the increase in Section 301 duties the month after the petitions were filed should have accelerated the decline but did not.

Based on this unique fact pattern, I find the net effect of the filing of the petitions on subject imports in the interim 2019 period was most likely to have increased them above the levels that would have resulted from the 10 percent and then 25 percent Section 301 duties alone, which nearly all market participants agree depressed supply from China. This indicates that the entire observed month-over-month decrease in subject imports in interim 2019 likely resulted from factors other than the petitions, including the Section 301 duties and increased competition from larger quantities of nonsubject imports.

2. Weight to Accord Post-Petition Data

I find as discussed above that the filing of the petitions did not depress subject import volume on net during the interim 2019 period. I also consider that interim 2019 data, which only partly encompasses the period after the petition, shed significant light on these duties' impact on subject import volumes and prices and the condition of the domestic industry. Thus, under the circumstances of this investigation, I find the interim 2019 data relevant and do not exercise my discretion to discount it in my analysis.[253]

C. Significance of Subject Import Volume

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."

The quantity of subject imports increased from 579,525 thousand square feet in 2016 to 657,077 thousand square feet in 2017 and 690,322 thousand square feet in 2018.[254] Subject import quantity was lower in interim 2019 at 423,237 thousand square feet than in interim 2018 at 516,841 thousand square feet.[255] As a share of apparent consumption by quantity, subject imports increased from 20.2 percent of the U.S. market in 2016 to 21.7 percent in 2017

[251] 84 FR 48125, 48126 (Sept. 12, 2019).

[252] CR/PR at Table IV-3.

[253] I do find that the imposition of provisional duties in September 2019 had a strong effect but this occurred at the end of the interim period. I thus reduce the weight I accord to the very limited amount of data on the record from any time after interim 2019 but find the interim data itself probative.

[254] CR/PR at IV-4, Table IV-2.

[255] CR/PR at IV-4, Table IV-2.

and 22.4 percent in 2018.[256] Subject imports' share of apparent consumption by quantity was lower in interim 2019 at 18.6 percent than in interim 2018, at 22.0 percent.[257]

I find that the volume of subject imports was significant, in absolute terms and relative to U.S. consumption. I do not find that any increase in volume of subject imports was significant, however, because subject import quantities were lower in interim 2019 than in interim 2018, and their market share was lower than in any previous part of the POI. For the reasons discussed below, I also do not find that subject imports had significant price effects or a significant impact on the domestic industry.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of subject imports, the Commission shall consider whether –

(I) there has been significant price underselling by the imported merchandise compared with price of domestic like products of the United States, and

(II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[258]

As discussed below, I find that while underselling did occur, it did not have significant price effects. While domestic producers did lower prices for some products over the POI, both pricing product data and reports by market participants establish that subject imports were not the reason. Rather, domestic producers were responding to declining demand and intensified competition, resulting from LVT and other substitutes, new entrants in the U.S. market, or increased quantities of nonsubject imports.

1. Significance of Price and Comparability

Only two of 18 purchasers considered price the most important purchasing factor, but all rated it "very important."[259] Most purchasers stated that subject imports were superior (cheaper) in terms of price – but that was the *only* factor in which most purchasers rated subject imports superior.[260] Majorities of purchasers stated that subject imports were inferior in terms of five other non-price factors: availability, delivery terms, delivery time, reliability of supply, and technical support/service.[261] Furthermore, majorities of purchasers reported that

[256] CR/PR at IV-14, Table IV-7.
[257] CR/PR at IV-14, Table IV-7.
[258] 19 U.S.C. § 1677(7)(C)(iii).
[259] CR/PR at Tables II-7 and II-8.
[260] CR/PR Table II-10.
[261] CR/PR at Table II-10.

three of these factors were very important: availability, delivery time, and reliability of supply, while majorities considered the other two at least somewhat important.[262]

Thus, I conclude that domestic products enjoy an advantage over subject imports in a wide range of non-price factors.[263] I also find that differences other than price between subject imports and domestic products are at least frequently significant in sales, as reported by majorities of both importers and purchasers.[264]

2. Underselling

I find that significant underselling occurred. Prices for ceramic tile imported from China were below those for U.S.-produced product in 51 of 75 instances (68 percent), involving *** million square feet of subject imports, while prices for ceramic tile imported from China were above those for U.S.-produced product in the remaining 24 instances (32 percent), involving *** million square feet of subject imports.[265] The average margin of underselling was 23.6 percent while the average margin of overselling was 19.3 percent.[266] Yet, while I find that underselling was significant in strictly numerical terms, I do not find that underselling by subject imports caused price depression or suppression, as discussed below.

3. Price Depression

The domestic industry's AUVs increased steadily, indicating that most prices were increasing or that domestic producers shifted their sales to higher-priced products. Domestic producers' prices for pricing products 4 and 5 increased.[267] However, prices for some products

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[262] CR/PR at Table II-8. Importers reported that 76 percent of their commercial shipments were sold from U.S. inventory with a lead time of just five days. CR/PR at II-13. However, 15 percent of shipments came from foreign inventories with an average lead time of 58 days and 10 percent was made to order with an average lead time of 74 days. *Id.* Where a purchaser needs multiple items the slowest delivery can dictate the timing of when they can be used.

[263] I recognize that tiles produced in the United States and tiles imported from China are similar in physical characteristics, and that, given prices that reflect their other non-price differences, they are highly substitutable. CR/PR at II-12. That does not mean, however, that certain differences other than price are unimportant to purchasing and pricing decisions.

[264] CR/PR Table II-13. U.S. producers' responses were almost evenly divided between always (3 firms), frequently (3 firms), sometimes (4 firms), and never significant (3 firms). *Id.*

[265] CR/PR at V-22. The Commission also gathered purchase cost data for direct imports. CR/PR at V-8; *see also* CR/PR at V-19 (additional costs associated with direct importing) LDP costs for ceramic tile imported from China were below the sales price for U.S.-produced product in all 45 instances, involving *** million square feet of subject imports. CR/PR at V-24.

[266] CR/PR at V-23, Table V-10. I note, however, that underselling diminished at the end of the POI. In interim 2019, ceramic tile imported from China undersold U.S.-produced product in 8 of 15 observations (53 percent), and oversold U.S.-produced product in 7 of 15 observations (47 percent). CR/PR at V-23, Table V-10. The average margin of underselling was *** percent, compared to an average margin of overselling of *** percent. *Id.*

[267] CR/PR at V-19.

declined. Domestic prices for products 2, 3, and, to a much lesser extent, product 1 declined from January 2016 through December 2018, and in 2019.[268]

These declines were not, however, due to subject imports. Pricing product data for subject imports shows that subject import prices were not correlated with prices for domestic products. To the contrary, for products 2, 3, and 4, prices of Chinese products moved in the opposite direction from prices of U.S. products.[269] Prices for product 1 imported from China decreased but the cost of purchasing product 1 in China increased, along with purchasing costs for both of the other products for which such costs were reported (products 3 and 5).[270]

Overall, prices for subject imports were far more stable over the POI than domestic pricing products. This is best illustrated by the indexed pricing series in Figure V-8 of the staff report, which show that subject import prices all ended the POI at close to their original price levels (other than mosaic tile, which increased sharply), even as domestic producers visibly cut prices for products 2 and 3. This lack of correlation indicates that factors other than subject imports were leading to domestic producers' price declines.

The data on lost sales and revenue allegations confirm that subject imports did not depress U.S. prices. More purchasers (seven) reported that domestic producers had not reduced prices to compete with subject imports than said they had (four).[271] Those that reported domestic producers had not lowered their prices purchased more than *** times as many domestically produced tiles as those who claimed they had,[272] indicating that the former group was much more familiar with the actual pricing practices of domestic producers. If firms reporting price reductions by domestic producers had encountered significant price reductions by U.S. producers, one would have expected them to buy more domestic product, not less.[273]

Furthermore, only two out of 18 firms reported that they bought subject imports because they were lower priced,[274] and one of these provided no volume estimate,[275] while the other was extremely small.[276] This indicates that it was a rare occurrence for purchasers to

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[268] CR/PR at V-19 and V-20, Table V-9.

[269] CR/PR at Table V-9.

[270] CR/PR at Table V-9.

[271] CR/PR at V-25, Table V-14.

[272] Calculated from CR/PR at Tables V-12 and V-13. The seven firms reporting no price decreases bought *** thousand square feet of domestic product over the POI, compared with *** square feet purchased by the four firms that asserted such price reductions had taken place. *Id.*

[273] Furthermore, one of the four firms reporting that domestic producers had lowered prices (***) reported that the domestic product it was offered was lower quality.[273] Thus, this was an unusual situation that did not result from low subject import prices. Another of these firms (***) noted that it had also observed some importers to lower their prices – again, not an indication that imports were dragging down domestic pricing. CR/PR at V-25.

[274] CR/PR at Table V-13.

[275] CR/PR at Table V-13 (***. *** CR/PR at Table V-12.

[276] *** reported it bought *** thousand square feet of subject merchandise because it was lower priced, CR/PR at Table V-13, which is only *** percent of the *** thousand square feet of subject merchandise that purchasers responding to the lost sale/revenue questionnaires reported having purchased and imported over the POI. CR/PR at Table V-12.

switch to subject imports for price reasons, so domestic producers would have had little incentive to lower prices to compete with them.

The record indicates three other likely alternative explanations for any price declines.

First, the record contains extensive evidence that LVT caused domestic producers to lower prices. Although U.S. producers deny that increased competition from LVT caused prices to decline, purchasers and importers agree that it did. According to the Staff Report:

> No U.S. producers, but 12 importers and 8 purchasers reported that changes in the price of LVT have affected ceramic tile prices, and 5 importers and 5 purchasers reported that changes in the prices of other substitutes have affected ceramic tile prices. These firms generally noted that the material and installation costs of LVT, vinyl, and laminate flooring is significantly less than ceramic tile. Some firms added that the lower price of LVT has increased its market share and forced ceramic tile suppliers to maintain or reduce prices in order to retain market share. Six purchasers reported that they increased their purchases of LVT in place of ceramic tile. *** stated that lower-priced LVT has driven down some tile prices.[277]

As discussed above, I find credible that LVT was an increasingly important substitute for ceramic tile, so I credit the reports by purchasers and importers that ceramic tile suppliers lowered prices for some products to compete with it.[278]

A second involves price decreases and underselling by nonsubject imports. The record does not permit evaluation of the full extent of the effects on prices of nonsubject imports because there is no reported pricing data for most nonsubject sources, but there is some import pricing data for Mexico and Brazil.[279] As noted above, prices for imports from Mexico were close to and often above prices for products from China and the United States,[280] and imports from Mexico lost market share to subject imports up until 2019.[281] Nonsubject imports from Brazil, however, rapidly gained market share,[282] and nonsubject imports from Brazil were much more likely to depress prices than subject imports from China: tile imported from Brazil not only undersold tile produced in the United States, but also undersold tile imported from

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[277] CR/PR at II-12.

[278] As noted above, the record does not indicate that importers of tile from China lowered prices significantly, but domestic producers did lower prices of certain products.

[279] CR/PR at E-3.

[280] CR/PR at E-3. Prices for product imported from Mexico were lower than prices for U.S.-produced product in 30 instances and higher in 30 instances and were lower than prices for product imported from China in 32 instances and higher in 28 instances. *Id.*

[281] CR/PR at C-3, Table C-1.

[282] The U.S. market share of tile imported from Brazil increased by 1.7 percentage point from 3.5 percent in 2016 to 5.2 percent in 2018, and was 1.8 percentage points higher at 6.7 percent in interim 2019 than in interim 2018 at 4.9 percent. CR/PR at C-3 Table C-1.

China in *** reported instance.[283] Moreover, in contrast to subject imports, for which prices were stable, prices for imports from Brazil of pricing products 2 and 3 (the two products for which domestic producers markedly lowered their prices) declined significantly starting in mid-2018.[284] Thus, nonsubject imports, unlike subject imports, participated in price reductions and likely contributed to them.

Finally, new and recently expanded U.S. producers, as discussed above, may also have contributed to price decreases.[285]

In sum, domestic producers' prices during the POI displayed mixed trends. Domestic producers did cut prices for some of their products, but that resulted from increased competition from substitute products, notably LVT, as importers and purchasers observed, and likely from other factors as well. It did not, however, result from subject imports. Subject imports' pricing was not correlated with movements in domestic industry prices, and most purchasers with knowledge denied that domestic producers had lowered their prices in response to subject imports.[286] Accordingly, I do not find that subject imports depressed the domestic industry's prices to a significant degree.

4. Price Suppression

From 2016 to 2018, the domestic industry's COGS/net sales ratio began and ended at 58.1 percent, improving to 56.7 percent in 2017.[287] Thus, the domestic industry was able to raise prices sufficiently at least to cover changes in costs, even during a period of weakening if not falling demand.[288] The domestic industry's COGS ratio was higher in interim 2019 at 60.0

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[283] CR/PR at Appx. E.

[284] CR/PR at Table E-2 to Table E-3 and Fig. E-2 to Fig. E-3. *** was reported involving pricing product 1 from Brazil so it is not possible to identify trends in that product. CR/PR at Table E-1.

[285] *See supra* at Section I.A.2 of my Views. Production by new producers was small but became increasingly significant. *** CR/PR at VI-6 n.9.

[286] The record does contain statements by domestic producers and anecdotal evidence attributing price declines to subject imports. For example, *** CR/PR at Table VI-8. I do not, however, place heavy weight on these assertions. First, as discussed above, in this investigation domestic producers have denied the significant role of substitute products in the market for ceramic tile, which I do not find reflects the record. Second, prices of competing domestic products are less publicly visible than prices of imports, which are reported regularly and in detail. Third, *** CR/PR at VI-7 n.12. That said, in an industry with numerous price negotiations taking place on a daily or weekly basis, I find it plausible that in some transactions over the three year and nine-month POI subject imports played a role. Based on the totality of the evidence, however, I do not find that subject imports can be said to have caused significant price depression as defined in the statute.

[287] CR/PR at C-4, Table C-1. The domestic industry's ratio between cost of goods sold (COGS) and sales declined from 58.1 percent in 2016 to 56.7 percent in 2017, then increased again to 58.1 percent in 2018.

[288] *See supra* Section I.A.1 of my Views. I note that while apparent consumption was still increasing slightly in 2018, apparent consumption reflects both supply and demand. As I discuss above, during the POI suppliers were lowering some prices to compete with LVT, which would have had the effect of increasing consumption of ceramic tile.

percent than in interim 2018 at 57.4 percent;[289] the deterioration in interim 2019 cannot be attributed to subject imports, which then were lower in volume[290] and higher in price[291] relative to domestic products than in previous periods.[292] Thus, I do not find that subject imports prevented price increases for the domestic industry that otherwise would have occurred to a significant degree.

For all of these reasons, I do not find that subject imports caused significant price effects.

E. Impact of the Subject Imports[293]

Section 771(7)(C)(iii) of the Tariff Act provides that in examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on the state of the industry."[294] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[295]

The statute directs us to consider whether an industry "is" materially injured,[296] so I consider the most recent period most probative. I have, however, also considered trends in U.S. producers' shipments and nonsubject imports prior to interim 2019.

In this case, I do not find that subject imports are having any significant impact on the domestic industry.

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[289] CR/PR at C-3, Table C-1.

[290] *See supra* Section I.C of my Views.

[291] *See supra* Section I.D.3 of my Views.

[292] The financial data also support that the domestic industry was able to pass on any increases in raw material costs to their customers during the POI, from 2016 to 2018, and in comparing interim data. CR/PR at Table VI-2.

[293] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determination, Commerce found dumping margins of 229.04 percent for imports of ceramic tile from China for the companies listed with separate rates and 356.02 percent for the China-wide entity. Commerce Final AD Determination, 85 Fed. Reg. at 19434. I take into account in my analysis the fact that Commerce has made final findings that all subject producers in China are selling subject imports in the United States at less than fair value. In addition to this consideration, my impact analysis has considered other factors affecting domestic prices. My analysis of the lack of significant price effects of subject imports, described in both the price effects discussion and below, is particularly probative to an assessment of the impact of the subject imports.

[294] 19 U.S.C. § 1677(7)(C)(iii).

[295] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[296] 19 U.S.C. §§ 1671d(b)(1)(a)(i) & 1673d(b)(1)(a)(i).

1. Market Share

First, I find that the decline in the domestic industry's market share over the POI cannot be attributed to subject imports, but instead resulted from increased volumes of nonsubject imports.

Subject imports' share of the U.S. market initially did rise, increasing 2.2 points from 20.2 percent in 2016 to 22.4 percent in 2018, while the domestic industry's market share declined by 2.0 points, from 30.9 percent in 2016 to 28.9 percent in 2018.[297] The increases in subject imports came almost entirely at the expense of nonsubject imports, however, in particular from Mexico.[298] From 2016 to 2017, subject imports' market share increased by 1.4 percentage points, while nonsubject imports from Mexico lost 3.1 percentage points of market share; domestic producers' market share changed little, declining only 0.1 percentage points.[299] In 2018, subject imports gained 0.7 percentage points of market share, while nonsubject imports from Mexico again declined by 0.8 percentage points.[300] Domestic producers lost 1.9 points of market share, but the difference was that this time, nonsubject imports from Brazil escalated, gaining 1.5 points of market share, more than double the gain from subject imports.[301]

The lack of significance of subject imports to domestic producers' market share was confirmed in interim 2019. In that period, subject imports' market share, at 18.6 percent, was lower than in interim 2018, at 22.0 percent, or at any other period on record.[302] Yet, instead of recovering market share, domestic producers' market share was lower, at 28.0 percent, than it had been in interim 2018 or any other period on record.[303] This resulted as the market share of nonsubject imports from Brazil and all other nonsubject sources was higher.[304] Thus, the domestic industry's failure to benefit from the lower market share of subject imports demonstrates that subject imports were not the cause of the domestic industry's market share losses.

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[297] CR/PR at C-3, Table C-1.

[298] Subject imports could compete primarily with nonsubject imports, rather than domestic products, because they were more comparable. As discussed above, most purchasers rated subject imports inferior to domestic products in terms of five important non-price factors. CR/PR at Table II-10. In contrast, majorities of purchasers did not rate subject imports inferior to nonsubject imports in any respect. CR/PR at Table II-2. Underselling data also indicate that prices of subject imports were close to prices from imports from Mexico for many products, other than mosaic tile. CR/PR at Tables E-1 to E-5.

[299] CR/PR at C-3, Table C-1.

[300] Ibid.

[301] Ibid. Imports from Brazil were particularly low priced, underselling both domestic like product and subject imports in *** observation. CR/PR at Tables E-1 to E-5.

[302] CR/PR at C-3, Table C-1.

[303] Ibid.

[304] Nonsubject imports' market share in interim 2019, at 53.4 percent, was 4.4 points higher than in interim 2018, at 49.0 percent. Ibid. Within that total, the market share of imports from Brazil, at 6.7 percent, was 1.8 points higher than in interim 2018, at 4.9 percent. Ibid.

2. Other Performance Indicators

The behavior of other domestic industry performance indicators over the POI also shows that the domestic industry is not suffering injury by reason of subject imports, but instead is experiencing the impact of increased nonsubject imports and falling demand for ceramic tile.

Most performance indicators for the ceramic tile industry evinced a consistent pattern, which is unrelated to subject imports: improving from 2016 to 2018, as subject imports increased, then deteriorating in interim 2019, when subject imports were lower. From 2016 to 2018, the domestic industry's capacity increased 15.6 percent, but then was 3.0 percent lower in interim 2019 than in interim 2018.[305] The U.S. industry's production increased 1.5 percent from 2016 to 2018, then was 9.3 percent lower in interim 2019 than in interim 2018.[306] The U.S. industry's U.S. shipments increased 0.6 percent by quantity and 3.1 percent by value from 2016 to 2018, then were 6.4 percent and 4.3 percent lower, respectively, in interim 2019 than in interim 2018.[307] The number of workers in the industry and wages paid increased 0.6 percent and 5.2 percent, respectively, from 2016 to 2018, and then were 3.0 percent and 1.4 percent lower in interim 2019 than in interim 2018.[308] Productivity increased 3.4 percent from 2016 to 2018, then was 5.3 percent lower in interim 2019 than in interim 2018.[309] Net sales increased 0.6 percent by quantity and 3.2 percent by value from 2016 to 2018, then were 6.3 percent and 4.4 percent lower, respectively, in interim 2019 than interim 2018.[310] The domestic industry's COGS/net sales ratio did not change from 2016 to 2018, but was 2.6 points higher (worse) in interim 2019 than it had been in interim 2018.[311]

Petitioner suggests that domestic producers were well-equipped with their new capacity to increase their production and shipments, along with market share, and would have done so but for subject imports. Domestic producers' inability to achieve improvements in interim 2019, however, refutes this. Moreover, as described above, due to ramp-up effects not all of the domestic industry's capacity could be fully exploited.[312]

The domestic producers' performance did decline from 2016 to 2018 in some respects, but again, subject imports were not the cause. The domestic industry's capacity utilization rate declined from 2016 to 2018, from 88.9 percent to 78.0 percent, and was lower at 74.6 percent in interim 2019 than in interim 2018 at 79.7 percent.[313] Reduced capacity utilization was likely anyway, not only due to ramp-up effects, but also due to the fact that the domestic industry's

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[305] CR/PR at C-4 Table C-1.

[306] Ibid.

[307] Ibid.

[308] Ibid. Hours worked deviated slightly from this pattern, declining 1.9 percent from 2016 to 2018, and 4.2 percent lower in 2019 than in interim 2018. Ibid.

[309] Ibid.

[310] Ibid.

[311] Ibid.

[312] *See supra* section I.A.2 of my Views.

[313] CR/PR at C-3, Table C-1.

capacity increases occurred at a greater rate than the growth of apparent consumption.[314] The fact that domestic producers' capacity utilization was lower in interim 2019 than in interim 2018 despite lower levels of subject imports also indicates that subject imports were not the cause.

Similarly, the domestic industry's capital expenditures declined by 79.0 percent from 2016 to 2018.[315] A decrease in capital expenditures was inevitable, however, when demand fell after a period of *** expansion.[316] The record contains statements by domestic producers attributing the cessation of capital improvement plans to subject imports,[317] but it is likely investment would have declined anyway due to this decelerating and then declining demand. Since decisions to expand capacity are based on forecasts, market data would have indicated that demand was weakening and so producers would have cut capital spending back to normal levels for that reason – which, given the decline in apparent consumption about to hit, was probably prudent.

The domestic industry's end-of-period inventories increased by 24.9 percent from 2016 to 2018, and were 4.1 percent lower in interim 2019 than in interim 2018.[318] As a percentage of total shipments, inventories increased from 28.8 percent in 2016 to 35.8 percent in 2018, and in interim 2019 were higher, at 37.2 percent, than in interim 2018, at 36.3 percent.[319] As I discussed above, however, subject imports did not affect the domestic industry's shipments, and the continued increase in inventories as a percentage of net sales as subject imports withdrew from the market indicates that subject imports were not the cause of increasing inventories.[320]

The domestic industry's operating and net profits did fall somewhat from 2016 to 2018: the domestic industry operating income was $240 million in 2016, with an operating margin of 19.5 percent; $266 million in 2017, with an operating margin of 20.3 percent; and $217 million in 2018, with an operating margin of 17.1 percent.[321] I find, however, that this decrease was

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[314] U.S. producers' capacity increased 15.6 percent from 2016 to 2018, while apparent consumption increased 7.5 percent. CR/PR at C-3 to C-4, Table C-1.

[315] The domestic industry's capital expenditures declined 79.0 percent from $304,372,000 in 2016 to $64,051,000 in 2018, and were 84.8 percent higher in interim 2019 at $84,201,000 than in interim 2018 at $45,560,000. CR/PR at C-4, Table C-1.

[316] CR/PR at VI-15, Table VI-6 (***).

[317] *E.g.,* CR/PR at VI-19 to VI-20 and Tables VI-7 and VI-8.

[318] CR/PR at C-3 Table C-1.

[319] CR/PR at C-3 Table C-1.

[320] Petitioner also argues that an overhang of importers' inventories at the end of 2018 impaired the domestic industry's pricing in interim 2019. Inventories of subject merchandise increased *** percent from the end of 2016 to the end of 2018. CR/PR at C-3, Table C-1. However, U.S. importers' U.S. shipments of subject imports were lower in interim 2019, at *** thousand square feet, than in interim 2018, at *** thousand square feet. CR/PR at Table G-1. Thus, regardless of inventories, importers were shipping less tile from China in interim 2019 than in interim 2018, which would have tended to reduce supply and if anything increase prices, not decrease them.

[321] CR/PR at C-4 Table C-1. Net profits followed a similar pattern, increasing from $222million in 2016 to $239 million in 2017 and declining to $187 million in 2018. *Id.* The domestic industry's gross

neither significant, nor caused by subject imports. The industry sustained a widespread and even excessive capacity-building campaign,[322] especially in 2016 and 2017, yet at the end of 2018 industry prospects were still sufficiently enticing that new plants and expansions were still being commenced.[323] *** U.S. producer reported rejection of bank loans, lowering of credit rating, or ability to service debt.[324] The decline in profitability that occurred in 2018 did not impede domestic producers' ability to undertake normal capital investment.[325] In any event, as discussed above, subject imports did not depress or suppress prices during the POI, nor did they reduce domestic producers' shipment quantities.

The domestic industry's profitability was lower in interim 2019 than in interim 2018, but it remained profitable with a 13.2 percentage point operating margin and a 10.5 percent net margin.[326] The diminution in industry profits in interim 2019 cannot be attributed to subject imports, which were imported and shipped in smaller quantities and for relatively higher prices than before.

Even though subject imports were withdrawing from the market in interim 2019, Petitioner argues that some effects of low subject import prices in previous years could have lingered in interim 2019, because some of the U.S. industry sales are made through annual or long-term contracts,[327] and some buyers will not quickly change suppliers.[328] As I discuss above, however, subject imports' prices did not have significant price effects on the domestic industry, so there were no effects to linger.

In view of the foregoing, I do not find that subject imports from China are having a significant impact on the domestic industry. Accordingly, I find that the domestic industry is not materially injured by reason of imports of ceramic tile from China that are subsidized and sold in the United States at less than fair value.

II. No Threat of Material Injury by Reason of Subject Imports

A. Legal Standards

Section 771(7)(F) of the Tariff Act directs the Commission to determine whether the domestic industry is threatened with material injury by reason of the subject imports by analyzing whether "further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is

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profit increased 3.3 percent from 2016 to 2018, then was 10.2 percent lower in interim 2019 than in interim 2018. *Id.*

[322] As noted above, the domestic industry's capital expenditures declined 79.0 percent from $304 million in 2016 to $64 million in 2018, and were 84.8 percent higher in interim 2019 at $84 million than in interim 2018 at $46 million. CR/PR at C-4, Table C-1.

[323] CR/PR at III-4 to III-6, Table III-3.

[324] CR/PR at Table VI-7.

[325] For example, *** CR/PR at VI-15 Table VI-5.

[326] CR/PR at C-4, Table C-1.

[327] CR/PR at V-5, Table V-2.

[328] Petitioner's response to Commission questions, April 9, 2020, at 21-23.

accepted."[329] The Commission may not make such a determination "on the basis of mere conjecture or supposition," and considers the threat factors "as a whole" in making its determination whether dumped or subsidized imports are imminent and whether material injury by reason of subject imports would occur unless an order is issued."[330] In making my determination, I have considered all statutory threat factors that are relevant to these investigations.[331]

B. Likely Effects of Subject Imports

3. Likely Subject Import Volume

The Commission sent questionnaires to 50 firms believed to produce and/or export tile to the United States and received responses from 43, accounting for approximately 50.7 percent of U.S. imports of ceramic tile from China in 2018 and an estimated 8.9 percent of China's total production.[332]

As discussed above, ceramic tile imported into the United States from China was lower in both quantity and value terms in interim 2019 than in interim 2018, and subject imports'

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[329] 19 U.S.C. § 1677(7)(F)(ii).

[330] 19 U.S.C. § 1677(7)(F)(ii).

[331] The statutory threat factors are (I) such information as the administrative authority has presented as to the nature of the subsidies involved (particularly as to whether any are a subsidy described in Articles 3 or 6.1 of the WTO Subsidies and Countervailing Measures Agreement and whether imports of the subject merchandise are likely to increase); (II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other markets to absorb any additional exports; (III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports; (IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices and are likely to increase demand for further imports; (V) inventories of the subject merchandise; (VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products; (VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product; and (IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time). 19 U.S.C. § 1677(7)(F)(i). I have considered the applicable statutory threat factors using the same volume/price/impact framework that applies to the material injury analysis. Statutory threat factors (I), (II), (III), (V), and (VI) are discussed in the analysis of likely subject import volume. Statutory threat factor (IV) is discussed in the analysis of likely subject import price effects. Statutory factors (VIII) and (IX) are discussed in the analysis of likely impact. Statutory factor (VII) concerning agricultural products is inapplicable to these investigations.

[332] CR/PR at VII-5.

share of the U.S. market reached a four-year low in interim 2019 as well. I do not see any indication in record evidence regarding the Chinese industry that these trends will reverse in the imminent future. Rather, Chinese producers seem likely to continue to emphasize shipments to their home market.

Responding Chinese producers reported that their capacity increased from 4.6 billion square feet in 2016 to 5.3 billion square feet in 2018 and projected that it would increase slightly more to 5.4 billion square feet in 2019, then level off in 2020.[333] They also projected their capacity utilization rate would decline slightly from 87.3 percent in 2016 to 86.4 percent in 2019.[334] I note, however, that despite these increases in the Chinese industry's capacity, subject imports' share of the U.S. market was lower in interim 2019 than it had been in 2016. Thus, increases in Chinese capacity have not been directed to increasing exports to the United States.

Instead, the Chinese industry's home market shipments have been increasing as a share of their output, from 79.6 percent of their home market shipments to 83.9 percent in 2018 and a projected 87.6 percent in 2019, with more growth expected in 2020.[335] Export shipments to the United States have declined from 4.9 percent shipments in 2016 to 4.4 percent in 2018 and a projected 2.1 percent in 2019.[336]

Inventories of ceramic tile held by subject producers in China decreased steadily from 2016 to 2018 and were projected to decline further in 2019 and 2020.[337] U.S. importers' inventories of subject ceramic tile increased steadily over the period and were higher in interim 2019 than in interim 2018.[338] Importers' inventories of subject merchandise were 7.1 percent higher at the end of interim 2019 than they had been at the end of interim 2018, but I attribute this increase to the effect of the Petitions, as they induced importers to speed shipments at the end of interim 2019 in anticipation of the preliminary duties, as discussed above. I find that due to the increased Section 301 duties, inventories otherwise would have declined. Thus, this

[333] CR/PR at Table VII-4.

[334] CR/PR at Table VII-4.

[335] CR/PR at Table VII-4.

[336] CR/PR at Table VII-4.

[337] End-of-period inventories held by subject producers in China were 1.86 billion sq. feet in 2016, 1.61 billion sq. feet in 2017, and 1.56 billion sq. feet in 2018. Chinese subject producers' end-of-period inventories were projected to be 1.51 billion sq. feet in 2019 and 1.45 billion sq. feet in 2020. The ratio of Chinese producers' end-of-period inventories to production also declined steadily, falling from 46.8 percent in 2016, to 37.8 percent in 2017, and to 34.4 percent in 2018. The Chinese subject producers' ratio of inventories to production was projected to be 32.4 percent in 2019 and 31.1 percent in 2020. CR/PR at Table VII-4.

[338] Inventories held by U.S. importers of subject ceramic tile increased from *** sq. feet in 2016 to *** sq. feet in 2018. U.S. importers' inventories were *** sq. feet in interim 2018 and *** sq. feet in interim 2019. As a ratio to U.S. shipments of subject imports, U.S. importers' inventories also increased steadily, from *** percent in 2016 to *** percent in 2018. The ratio was *** percent in interim 2018 and *** percent in interim 2019. CR/PR at Table VII-6.

increase does not indicate that "further dumped or subsidized imports are imminent" or that "material injury by reason of subject imports would occur unless an order is issued."[339] [340]

The existing record contains limited evidence regarding the likely effects of the COVID-19 pandemic. Thus, while it will likely impair ceramic tile production and consumption in China, as well as the ability of Chinese manufacturers to export products, there is no clear indication which of these effects will predominate. Thus, I do not see a basis to expect a reversal of the downward trend in subject imports observed in interim 2019 in the imminent future. Accordingly, I do not find a likelihood of substantially increased subject imports in the imminent future.

4. Likely Price Effects

For similar reasons, I conclude that the record does not contain information indicating that the reductions in underselling reflected in interim 2019 data will be reversed in the imminent future. I note also that majorities of U.S. producers rate tile imported from China as

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[339] 19 U.S.C. § 1677(7)(F)(ii).

[340] Information available on the record indicates that product shifting is not an issue. *** Chinese producer stated that they were not able to switch production to any other product using the same equipment. CR/PR at VII-11.

With respect to antidumping and countervailing duty orders in third-country markets, the record does not indicate that these are likely to result in a significant increase in subject imports in the imminent future. Import relief measures were imposed in Argentina (Feb. 2018), Brazil (Dec. 2014), the EU (Sept. 2011), the Gulf Cooperation Council (Nov. 2018), Korea (reviewed in July 2018), India (Oct. 2009, Mar. 2016, and Apr. 2017), Mexico (Oct. 2016), and Pakistan (Apr. 2014 and Oct. 2017). CR/PR at Table VII-8. Most of these orders were imposed prior to our period of investigation and those that were imposed during this period of investigation did not result in a significant increase in subject imports to the U.S. market. Therefore, I do not consider it likely that these third-country trade remedies would imminently lead to a significantly increased volume of subject imports.

I also considered the "nature of the subsidy" in the countervailing duty investigation in my threat analysis. See 19 U.S.C. 1677(7)(F)(i)(I). In its final affirmative countervailing duty determination, Commerce found subsidization at rates of 358.81 percent for Temgoo International Trading Ltd., Sanfi Imp & Exp Co., Ltd., and for all others. Commerce Final CVD Determination, 85 Fed. Reg. at 19440. Commerce also found 13 programs to be countervailable: (1) Policy Loans to the Ceramic Tile Industry; (2) Export Buyer's Credit; (3) VAT and Tariff Exemptions for FIEs and Certain Domestic Enterprises Using Imported Equipment in Encouraged Industries; (4) VAT Refunds for FIEs on Purchases of Chinese-Made Equipment; (5) Government Provision of Electricity for LTAR; (6) Provision of Land for LTAR to Encouraged Industries; (7) Provision of Water for LTAR; (8) Government Provision of Clay for LTAR; (9) Government Provision of Feldspar for LTAR; (10) Government Provision of Sand for LTAR; (11) Small and Medium Sized Enterprises (SME) International Market Exploration/Development Fund; (12) Grants for Antidumping Investigations/Fund for Promoting Fair Trade of Imports and Exports; (13) "Other Subsidies." Issues and Decision Memorandum, Appendix X, as adopted by Commerce Final CVD Determination, 85 Fed. Reg. at 19440. I acknowledge Commerce's findings that there were several countervailable subsidy programs benefitting ceramic tile producers in China. I have considered the nature of these programs in conjunction with the other factors pertaining to likely subject import volume and price effects in ascertaining whether imports of the subject merchandise are likely to increase, and any effects likely to be caused by the countervailable subsidies.

inferior to domestically produced tile in terms of availability, delivery time, and reliability of supply,[341] and that these were very important purchasing factors.[342] To the extent the COVID-19 pandemic increases risk and uncertainty, it will not diminish any reported concerns about availability, delivery time, and reliability of supply.[343] Accordingly, I find that subject imports are unlikely to enter at prices that are likely to have a significant depressing or suppressing effect on domestic prices, or are likely to increase demand for such imports.

5. Likely Impact

I do not find the domestic industry vulnerable. The domestic industry performed well in interim 2019. Although apparent consumption was 3.0 percent lower than it had been in interim 2018, U.S. producers still earned operating income of $122 million, an operating margin of 13.2 percent; and net income of $96.9 million in interim 2019, a net margin of 10.5 percent.[344] They had also recently completed a wave of modernization so their capital equipment was up-to-date. Capacity was 3.0 percent lower than in interim 2018, but this was a modest rationalization compared to recent expansion.[345] The COVID-19 pandemic has adversely affected U.S. demand and production, but its course and duration are not predictable based on this record. Given the previously healthy condition of the domestic industry, the record does not establish that the domestic industry is currently vulnerable. Even if the industry is in a vulnerable condition at this time given the pandemic, I find no evidence that subject imports are likely to have a significant impact on the domestic industry in the imminent future. As discussed above, I do not find it likely that there will be a significant increase of subject imports in the imminent future, nor do I find that such imports would have significant adverse price effects. In these circumstances, subject imports would not have a significant impact on the domestic industry in the imminent future.

In short, I see no reason to find that subject imports will have a significant impact on the domestic industry in the imminent future. The main challenges facing the domestic industry during the POI included LVT and nonsubject imports. In contrast, subject imports were a declining factor, largely due to the Section 301 duties, and the full impact of those duties had not been fully felt.

In view of the foregoing, I conclude that an industry in the United States is not threatened with material injury by reason of subject imports.

III. Conclusion

For the reasons stated above, I find that an industry in the United States is not materially injured or threatened with material injury by reason of subject imports of ceramic tile from China that are subsidized and sold in the United States at less than fair value.

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[341] CR/PR at Table II-10.

[342] CR/PR at Table II-8.

[343] I note that USTR has proposed increasing the Section 301 duty applicable to ceramic tile to 30 percent, although this has not been carried out. CR/PR at I-9 n.34; 84 FR 46212 (Sept. 3, 2019).

[344] CR/PR at C-4, Table C-1.

[345] Ibid.

Part I: Introduction

Background

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by the Coalition for Fair Trade in Ceramic Tile,[1] on April 10, 2019, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value ("LTFV") imports of ceramic tile products ("ceramic tile")[2] from China. The following tabulation provides information relating to the background of these investigations.[3] [4]

Effective date	Action
April 10, 2019	Petitions filed with Commerce and the Commission; institution of Commission investigations (84 FR 15637, April 16, 2019)
April 30	Commerce's notice of initiation (AD: 84 FR 20093; CVD: 84 FR 20101, May 8, 2019)
May 29, 2019	Commission's preliminary determinations (84 FR 25561, June 3, 2019)
September 12, 2019	Commerce's preliminary CVD determination (84 FR 48125, September 12, 2019)
November 14, 2019	Commerce's preliminary AD determination (84 FR 61877, November 14, 2019); scheduling of final phase of Commission investigations (84 FR 66010, December 12, 2019)
April 2, 2020	Commission's hearing
April 7, 2020	Commerce's final AD determination (85 FR 19425); Commerce's final CVD determination (85 FR 19440)

[1] The Coalition for Fair Trade in Ceramic Tile consists of the following companies: American Wonder Porcelain ("Wonder Porcelain"), Crossville, Inc. ("Crossville"), Dal-Tile Corp. ("Dal-Tile"), Del Conca USA, Inc. ("Del Conca"), Florida Tile, Inc. ("Florida Tile"), Florim USA ("Florim"), Landmark Ceramics ("Landmark"), and StonePeak Ceramics ("Stonepeak"). Petition, exhibit I-1A.

[2] See the section entitled "The subject merchandise" in Part I of this report for a complete description of the merchandise subject in this proceeding.

[3] Pertinent *Federal Register* notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[4] The Commission conducted its hearing through a series of written questions, submissions of written testimony, written responses to questions, and posthearing briefs, and oral arguments. Appendix B contains a list of witnesses that participated in the Commission's hearing.

Effective date	Action
April 30, 2020	Commission's vote
May 21, 2020	Commission's views

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

> *shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[5]

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more*

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[6]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, subsidy/dumping margins, and domestic like product. Part II of this report presents information on conditions of competition and other relevant economic factors. Part III presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. Parts IV and V present the volume of subject imports and pricing of domestic and imported products, respectively. Part VI presents information on the financial experience of U.S. producers. Part VII presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

Market summary

Ceramic tile generally is used to cover floors, walkways, counter- and table-tops, walls, and shower stalls. The leading U.S. producers of ceramic tile are Dal-Tile (subsidiary of Mohawk Industries ("Mohawk")), Florim, and Stonepeak, while leading producers of ceramic tile outside the United States include Mohawk (facilities in Mexico, Italy, Spain, Poland, Bulgaria, and Russia), SCG Group (facilities in Thailand, Vietnam, Indonesia, and the Philippines), and Groupo Lamosa (facilities in Mexico, Argentina, Colombia, and Peru).[7] The leading U.S. importers of ceramic tile from both China and from nonsubject sources are ***, ***,[8] ***,

[6] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

[7] *Ceramic World Review 128/2018*, Tile Edizioni, p. 76, found at https://www.ceramicworldweb.it/cww-en/magazines/ceramic-world-review-1282018/, retrieved on April 22, 2019.

[8] ***.

and ***. U.S. purchasers of ceramic tile include retailers, contractors in the construction industry, and distributors. Leading purchasers include ***.

Apparent U.S. consumption of ceramic tile totaled approximately 3.1 billion square feet ($3.5 billion) in 2018. Currently, at least thirteen firms are known to produce ceramic tile in the United States. [9] U.S. producers' U.S. shipments of ceramic tile totaled 890.0 million square feet ($1.3 billion) in 2018 and accounted for 28.9 percent of apparent U.S. consumption by quantity and 35.3 percent by value. U.S. imports from China totaled 690.3 million square feet ($624.4 million) in 2018 and accounted for 22.4 percent of apparent U.S. consumption by quantity and 17.6 percent by value. U.S. imports from nonsubject sources totaled 1.5 billion square feet ($1.7 billion) in 2018 and accounted for 48.7 percent of apparent U.S. consumption by quantity and 47.1 percent by value.

Summary data and data sources

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on the questionnaire responses of thirteen firms that accounted for the vast majority of U.S. production of ceramic tile during 2018.[10] U.S. imports are based on official Commerce statistics[11] and the questionnaire responses of 38 firms, representing approximately *** percent of U.S. imports from China, by quantity, and approximately *** percent of imports from nonsubject sources, by quantity, in 2018.[12] Foreign industry data and related information are based on the questionnaire responses of 43 producers and/or exporters of ceramic tile in China whose exports to the United States accounted for approximately 50.7 percent of U.S. imports of ceramic tile from China in 2018.

[9] Petitioners estimate that there are also 70 "studio" domestic producers of ceramic tile. Petitioner's Response to Commissioners' Hearing Questions, p. 1; Ibid at exh. 1.

[10] Petitioner estimates that its coalition member firms account for more than 90 percent of U.S. ceramic tile production. Petition, p. 3. Additionally, the Commission received questionnaire responses from five U.S. producers not belonging to the petitioning coalition which together comprised *** percent of reported production in 2018.

[11] U.S. imports under Harmonized Tariff Schedule of the United States ("HTS") headings 6907 and, prior to 2017, 6908.

[12] Coverage calculated by dividing total quantity of subject and nonsubject imports as reported in questionnaires into official Commerce import statistics under HTS heading 6907.

Previous and related investigations

Commission Investigations

Ceramic tile has been subject to two trade remedy investigations (described below), a competitive assessment investigation of ceramic floor and wall tile industry,[13] four investigations under section 301(c)(2) of the Trade Expansion Act of 1962,[14] and one escape-clause investigation under provisions of Section 7 of the Trade Agreements Extension Act of 1951.[15]

In April 1971, the United States Tariff Commission (predecessor to the Commission) determined that an industry in the United States was being injured by the importation of ceramic wall tile from the United Kingdom.[16] In August 1973, the United States Tariff Commission determined that an industry in the United States was not being or was not likely to be injured by the importation of ceramic glazed wall tile from the Philippines.[17]

Section 301 proceeding

Section 301 of the Trade Act of 1974, as amended ("Trade Act"),[18] authorizes the Office of the U.S. Trade Representative ("USTR"), at the direction of the President, to take appropriate action to respond to a foreign country's unfair trade practices. Following investigations by USTR into "China's acts, policies, and practices related to technology transfer, intellectual property, and innovation," ceramic tile was included among the USTR's third enumeration of products of China that became subject to additional duties beginning in September 2018.[19] See the section

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[13] Competitive Assessment of the U.S. Ceramic Floor and Wall Tile Industry, No. 332-156, USITC Publication 1442, October 1993.

[14] Ceramic Mosaic Tile Workers' Petition For Adjustment Assistance, Inv. No. TEA-W-5, TC Publication 115, November 25, 1963; Tariff Commission Reports To The President On Petition For Adjustment Assistance By The National Tile & Manufacturing Co., Inv. No. TEA-F-5, TC Publication 145, December 21, 1964; Ceramic Floor and Wall Tile: Certain Workers of The Cambridge Tile Mfg. Co., Inv. No. TEA-W-11, TC Publication 318, March 1970; Ceramic Wall Tile: Workers of The Cambridge Tile Mfg. Co., Inv. No. TEA-W-134, TC Publication 481, May 1972.

[15] Ceramic Mosaic Tile, Inv. No. 7-100, TC Publication 16, May 1961.

[16] Ceramic Wall Tile from the United Kingdom, Inv. No. AA1921-68, TC Publication 381, April 1971, p. 2.

[17] Ceramic Glazed Wall Tile from the Philippines, Inv. No. AA1921-120, TC Publication 599, August 1973, p. 2.

[18] 19 U.S.C. § 2411.

[19] 83 FR 47974, September 21, 2018.

in this reported entitled “Tariff treatment” for further information on duties related to 301 proceedings.

Nature and extent of subsidies and sales at LTFV

Subsidies

On April 7, 2020, Commerce published a notice in the *Federal Register* of its final determination of countervailable subsidies for producers and exporters of ceramic tile from China.[20] Table I-1 presents Commerce’s findings of subsidization of ceramic tile in China.

Table I-1
Ceramic tile: Commerce’s final subsidy determination with respect to imports from China

Entity	Countervailable subsidy margin (percent)
Temgoo International Trading Limited	358.81
Sanfi Imp & Exp Co., Ltd	358.81
All others	358.81

Source: 85 FR 19440, April 7, 2020.

Sales at LTFV

On April 7, 2020, Commerce published a notice in the *Federal Register* of its final determination of sales at LTFV with respect to imports of ceramic tile from China.[21] Individual dumping margins ranged from 229.04 percent assigned to all individual producer/exporters to 356.02 percent assigned to China-Wide Entity. *See* Appendix D for a complete list of Commerce’s final LTFV margins by firm.

The subject merchandise

Commerce’s scope

In the current proceeding, Commerce has defined the scope as follows:[22]

> *ceramic flooring tile, wall tile, paving tile, hearth tile, porcelain tile, mosaic tile, flags, finishing tile, and the like (hereinafter ceramic tile). Ceramic tiles are articles containing a mixture of minerals including clay (generally hydrous silicates of alumina or magnesium) that are fired so*

[20] 85 FR 19440, April 7, 2020.
[21] 85 FR 19425, April 7, 2020.
[22] Ibid.

the raw materials are fused to produce a finished good that is less than 3.2 cm in actual thickness. All ceramic tile is subject to the scope regardless of end use, surface area, and weight, regardless of whether the tile is glazed or unglazed, regardless of the water absorption coefficient by weight, regardless of the extent of vitrification, and regardless of whether or not the tile is on a backing. Subject merchandise includes ceramic tile with decorative features that may in spots exceed 3.2 cm in thickness and includes ceramic tile "slabs" or "panels" (tiles that are larger than 1 meter2 (11 ft.2)).

Subject merchandise includes ceramic tile that undergoes minor processing in a third country prior to importation into the United States. Similarly, subject merchandise includes ceramic tile produced that undergoes minor processing after importation into the United States. Such minor processing includes, but is not limited to, one or more of the following: Beveling, cutting, trimming, staining, painting, polishing, finishing, additional firing, or any other processing that would otherwise not remove the merchandise from the scope of the investigation if performed in the country of manufacture of the in-scope product.

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations are provided for in the Harmonized Tariff Schedule of the United States ("HTS" or "*HTSUS*") under the following statistical reporting numbers of heading 6907:[23] 6907.21.1005, 6907.21.1011, 6907.21.1051,

[23] Prior to 2017, ceramic tile was provided for in HTS subheadings 6907.10.00 and 6907.90.00 for unglazed ceramic tile, and 6908.10.10, 6908.10.20, 6908.10.50, and 6908.90.00 for glazed ceramic tile. The general rate of duty was 10 percent ad valorem for all subheadings but 6908.10.50 and 6908.90.00, which were 8.5 percent ad valorem. *HTSUS (2017) Basic Edition*, USITC Publication 4660, February 2017, Change Record, pp. 60 to 62; *HTSUS (2016) Basic Edition*, USITC Publication 4588, March 2016, pp. 69-5 to 69-6.

Effective in January 2017, the ceramic-tile HTS subheadings were reorganized and expanded into five new primary groups of HTS 6907.21.10 to 6907.21.90 for ceramic tile with a water absorption coefficient not exceeding 5 percent by weight; HTS 6097.22.10 to 6907.22.90 for ceramic tile with a water absorption coefficient exceeding 5 percent but not 10 percent by weight; HTS 6097.23.10 to 6907.23.90 for ceramic tile with a water absorption coefficient exceeding 10 percent by weight; HTS 6097.30.10 to 6907.30.90 for ceramic mosaic cubes; and HTS 6097.40.10 to 6907.40.90 for finishing (e.g., edge, corner, etc.) ceramic tiles. Within each of these five primary groups are further secondary groups to distinguish unglazed versus glazed ceramic tiles. Finally, within each secondary group, there are numerous HTS subheading breakouts for surface-area size ranges. HTSUS (2020) Revision 7, March 2020, pp. 69-4 to 69-11.

6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, and 6907.40.9051. The 2020 general rate of duty is 10 percent ad valorem for HTS subheadings 6907.21.10, 6907.21.20, 6907.21.30, 6907.22.10, 6907.22.20, 6907.22.30, 6907.23.10, 6907.23.20, 6907.23.30, 6907.30.10, 6907.30.20, 6907.30.30, 6907.40.10, 6907.40.20, 6907.40.30 and 8.5 percent ad valorem for HTS subheadings 6907.21.40, 6907.21.90, 6907.22.40, 6907.22.90, 6907.23.40, 6907.23.90, 6907.30.40, 6907.30.90, 6907.40.40, and 6907.40.90.[24]

The subject merchandise may also be imported under the following HTS provisions: 6914.10.80, 6914.90.80, 6905.10.00, and 6905.90.00. The 2019 column 1-general rate of duty is 9.0 percent ad valorem for HTS subheading 6914.10.80 and 5.6 percent ad valorem for HTS 6914.90.80;[25] [26] and 13.5 percent ad valorem for HTS 6905.10.00 and 3.2 percent ad valorem for HTS 6905.90.00.[27] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Section 301 tariff treatment

The HTS subheadings for ceramic tile under headings 6907, 6905, and 6914 were included in the USTR's third enumeration ("Tranche 3" or "List 3") of products imported from China that became subject to the additional 10 percent *ad valorem* duties (annexes A and C of 83 FR 47974, on or after September 24, 2018) under Section 301 of the Trade Act of 1974.[28] Escalation of this duty to 25 percent ad valorem was rescheduled from January 1, 2019 (annex B of 83 FR 47974)[29] to March 2, 2019 (83 FR 65198),[30] but was subsequently postponed until

[24] *HTSUS (2020) Revision 7*, USITC Publication 5040, March 2020, pp. 69-4 to 69-11.

[25] The temporary column-1 general rate of duty is 4.7 percent ad valorem (provided for in subheading HTS 9902.14.74) for certain stoneware ceramic slabs provided for in HTS 6914.90.80 that are imported on or before December 31, 2020. *HTSUS (2020) Revision 7*, March 2020, pp. 69-19, 99-II-130.

[26] Large-size slab tile or panel tile may be imported under HTS statistical reporting numbers 6914.10.8000 and 6914.90.8000. Petition, p. 11. *HTSUS (2020) Revision 7*, March 2020, p. 69-19.

[27] *HTSUS (2020) Revision 7*, March 2020, p. 69-4.

[28] 83 FR 47974, September 21, 2018.

[29] *Ibid*.

[30] 83 FR 65918, December 19, 2018.

further notice,[31] and then was implemented effective May 10, 2019 (84 FR 20459).[32] A subsequent modification was provided for subject goods exported from China prior to May 10, 2019 not to be subject to the escalated 25 percent duty as long as such goods entered into the United States prior to June 1, 2019 (84 FR 21892).[33] [34] See also U.S. notes 20(e), 20(f), and 20(l) to subchapter III of HTS chapter 99.[35] On February 5, 2020, USTR announced its determination to grant certain exemption requests.[36] Effective March 31, 2020, no exemptions have been granted for in-scope ceramic tile products originating in China.[37]

The product

Description and applications

Ceramic tile is a masonry product containing hydrous silicates of alumina (and/or other metals) that is fired at high temperatures to bond together the constituent particles.[38] They are often flat, with beveled edges, and are available in various shapes, sizes, and colors.[39] Tiles can currently be formed as large as 5-feet by 15-feet or more (often referred to as "slabs" or "panels") and smaller than 1-inch by 1-inch. Thicknesses can exceed 3 cm (1.2 inches) or be as thin as 2 mm (0.8 inch), with some tiles even beyond these dimensions.[40] "Paving tile" or "pavers" are flat tile used for flooring or walking surfaces.[41] "Finishing tile" are available in

[31] 84 FR 7966, March 5, 2019.

[32] 84 FR 20459, May 9, 2019.

[33] 84 FR 21892, May 15, 2019.

[34] USTR proposed raising this additional duty from 25 percent to 30 percent on such products imported from China, on or after October 1, 2019 (Annex C – (List 3 - $200 Billion Action), Part 1, of 84 FR 46212). 84 FR 46212, September 3, 2019.

[35] *HTSUS (2020) Revision 7*, March 2020, pp. 99-III-23 to 99-III-24, 99-III-41, 99-III-54, 99-III-177

[36] 85 FR 6674, February 5, 2020.

[37] See U.S. notes 20(p), 20(w), 20(ll), 20(mm), 20(nn), 20(oo), 20(pp), 20(qq), 20(ss), 20(tt), and 20(vv) to subchapter III of HTS chapter 99. *HTSUS (2020) Revision 7*, March 2020, Change Record; pp. 99-III-67, 99-III-105, 99-III-118 to 99-III-119, 99-III-122 to 99-III-123, 99-III-125 to 99-III-127, 99-III-129 to 99-III-130, 99-III-133, 99-III-135, 99-III-140 to 99-III-141, 99-III-143 to 99-III-144, 99-III-147, 99-III-178 to 99-III-181. USITC, "About Harmonized Tariff Schedule."

[38] Petition, p. 8, exhibit I-23-C: "ASTM C1232−17, Standard Terminology for Masonry, April 2, 2019."

[39] Petition, p. 9.

[40] Petition, p. 11.

[41] "Flags" appears in the HTSUS article description but it is considered a synonymous but obsolete term by the ceramic tile industry for flooring and paving tile. Petition, pp. 8-9.

various shapes— including bases, caps, corners, moldings, angles, etc.— to complete the installation of ceramic tile to meet sanitary and/or architectural design requirements.[42]

The durable and hard-wearing surface renders ceramic tile suitable for covering surfaces such as interior and exterior floors, walls, counter- and table-tops, shower stalls, and swimming pools, among numerous other applications. Ceramic tile is commonly used by the residential sector, especially in kitchens, bathrooms, and entrances; as well as by the commercial sector in various floor and wall applications.[43]

Floor and wall ceramic tiles

Ceramic tile may be distinguished between "floor tile" and "wall tile" based on the different physical-performance requirements for the various end-use applications. The American National Standard Institute ("ANSI") specification A137.1 provides the physical and performance criteria to distinguish floor tile from wall tile.[44] Product-performance standards may be more rigorous for (or are specifically applicable to) floor tile than wall tile, such as higher breaking strength, quality and thickness, slip resistance, and abrasion resistance.

Under the Breaking Strength Test requirements of the American Society for Testing and Materials ("ASTM") standard C648,[45] to be suitable for flooring, ceramic tile must have an average breaking strength of ***, and an individual tile cannot have a breaking strength of ***. By contrast, to be suitable for walls, ceramic tile must have an average breaking strength of ***, and an individual tile cannot have a breaking strength of ***.[46]

Tile Grades for quality and thickness are based on ANSI standard 137.1:

- Grade 1 ("standard grade")— Highest quality and thickest (¾-inch) tile available, suitable for both floors and walls;

[42] Petition, p. 8, exhibit I-23-A: "ANSI A137.1—2017, American National Standard Specifications for Ceramic Tile, August 2017."

[43] Petition, pp. 9-10, exhibit I-4-A, exhibit I-4-B.

[44] Petition, exhibit I-23-A: "Ceramic Tile ANSI Standards," ANSI A137.1 – 2017: American National Standard Specifications for Ceramic Tile, August 2017.

[45] Petitioner's postconference brief, exhibit A-2: "ASTM Tests for Breaking Strength and Modulus of Rupture," ASTM C648 − 04 (Reapproved 2014): Standard Test Method for Breaking Strength of Ceramic Tile, December 2014.

[46] Petition, exhibit I-23-A: "Ceramic Tile ANSI Standards," ANSI A137.1 – 2017: American National Standard Specifications for Ceramic Tile, August 2017, table 8: Pressed Floor Tile, p. 12, and table 9: Glazed Wall Tile, p. 13.

- Grade 2 ("secondary grade")— Some facial imperfections and about ½-inch thick, but still suitable for both floors and walls; and
- Grade 3 ("cull grade")— Thinnest (¼-inch) tile available, but still suitable for walls.[47]

Ceramic tile for flooring applications are required to meet Dynamic Coefficient of Friction ("DCOF") test requirements for slip resistance.[48] On a scale of 0 – 1.00, the coefficient of friction ("COF") should exceed 0.50 foot-pounds for standard floor tiles and must exceed 0.60 foot-pounds for level floor tile applications and 0.8 foot-pounds for incline ramp applications to comply with Americans with Disabilities Act ("ADA") requirements.[49]

Surface abrasion-resistance (sometimes referred to as the "durability classification" or "Porcelain Enamel Institute ("PEI") rating") of glazed ceramic tile is rated in accordance with the Visible Abrasion Resistance standards of ANSI A137.1, in accordance with the testing requirements of ASTM standard C1027. There are six abrasion-resistance rating classes distinguish the suitability of ceramic tiles for various floor and wall applications:

- Class 0— Suitable only for light-duty wall applications;
- PEI Class I— Suitable only for residential and commercial wall applications;
- PEI Class II— Suitable for interior residential and commercial wall, and residential bathroom floor applications;
- PEI Class III— Suitable for all residential and light foot-traffic commercial floor applications;

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[47] Petition, exhibit I-23-A: "Ceramic Tile ANSI Standards," ANSI A137.1 – 2017: American National Standard Specifications for Ceramic Tile, August 2017, Section 8.1 Grade Marking Distinguishes Various Qualities and Attributes of Ceramic Tiles, pp. 20 to 22; Calcamuggio, Jeffrey, "Tile Flooring 101 – Considerations," Buildipedia, August 17, 2011, http://buildipedia.com/at-home/floors/tile-flooring-101-considerations?print=1&tmpl=component; Robinson, Kristy, "How to Determine the Quality of Ceramic Floor Tiles," SFGate Home Guides, no date, https://homeguides.sfgate.com/determine-quality-ceramic-floor-tiles-24866.html, retrieved June 14, 2019.

[48] According to Section 6.2.2.1.10 of ANSI A137.1, ceramic tiles suitable for walking upon as level interior surfaces when wet shall have a wet DCOF of *** when tested according to the procedure specified in Section 9.6.1. Section 9.6 of ANSI A137.1 provides the provides the DCOF testing procedure. Petition, exhibit I-23-A: "American National Standard Specifications for Ceramic Tile, ANSI A137.1—2017," August 2017, pp. 15 to 16, 24 to 29.

[49] ADA Accessibility Guidelines ("ADAAG"), Section A4.5 Ground and Floor Surfaces, Appendix A4.5.1 General, September 2002, https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/background/adaag#A4.5.1; Robinson, Kristy, "How to Determine the Quality of Ceramic Floor Tiles," SFGate Home Guides, no date, https://homeguides.sfgate.com/determine-quality-ceramic-floor-tiles-24866.html, retrieved June 14, 2019.

- PEI Class IV— Suitable for all residential, medium foot-traffic commercial, and light foot-traffic institutional floor applications; and
- PEI Class V— Suitable for all residential, commercial, institutional, and industrial floors applications.[50]

Ceramic mosaic tiles

Ceramic tile can be sold as part of a combination of different ceramic tiles or other materials (e.g., stone, glass, etc.) usually set in a small format and usually set on a mesh sheet, known as mosaic tile. ANSI defines mosaic tile as tile, usually ¼-inch (6.35 mm) to ⅜-inch thick (9.53 mm), with a facial area of less than 9 square inches (5,806 square mm), typically mounted in sheets or strips with other mosaic tiles.[51] Individual mosaic tiles can be produced either as individually pressed pieces[52] or by cutting larger tiles into smaller pieces.[53]

Porcelain and non-porcelain ceramic tiles

Porcelain ceramic tile is distinguished from other ("non-porcelain") types of ceramic tile by lower porosity (water absorption) and other physical characteristics, more expensive raw materials,[54] and higher firing temperatures and longer firing periods. Moreover, porcelain tile is

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[50] Petition, exhibit I-23-A: "Ceramic Tile ANSI Standards," ANSI A137.1 – 2017: American National Standard Specifications for Ceramic Tile, August 2017, Section 6.2.3.5 Visible Abrasion Resistance, pp. 17 to 18; Conestoga Tile, "Understanding Ceramic Tile Technical Specification Charts," Conestoga Learning Center, January 12, 2015, https://www.conestogatile.com/learning-center/understanding-ceramic-tile-technical-specification-charts/; Wallender, Lee, "Understanding Ceramic Tile PEI Ratings," The Spruce, January 30, 2020, https://www.thespruce.com/pei-ratings-help-with-tile-installation-areas-1822598.

[51] Section 3.0 of the American National Standard Specifications for Ceramic Tile, ANSI A137.1. Petition, exhibit I-23-A: "American National Standard Specifications for Ceramic Tile, ANSI A137.1—2017," August 2017, 1. See: Product Classification and Description in the Tile Council of North America ("TCNA"), "Environmental Product Declaration, Ceramic Tile, Industry-wide Report, Products Manufactured in North America," October 24, 2014, p. 4, https://www.tcnatile.com/images/pdfs/EPD-for-Ceramic-Tile-Made-in-North-America.pdf.

[52] Testimony of Hassman, p. 2.

[53] Petitioner's prehearing brief, p. 8; Testimony of Hassman, p. 2.

[54] The predominant raw material for producing porcelain tile is more highly refined (for higher purity), very fine-grained, white (kaolinite) clays, with significant amounts of quartz and feldspar as additional additives. Wallender, Lee, "Porcelain Tile vs. Ceramic Tile Comparison Guide," The Spruce, April 10, 2020, https://www.thespruce.com/porcelain-tile-vs-ceramic-tile-1822583.

An industry source mentioned the possibility of organic-rich red clays as the raw material so long as the fired tile has a low enough water absorption rating. Griese, William, "Porcelain in the Ceramic Tile Industry," *Tile Letter*, October 2007, https://www.tcnatile.com/images/pdfs/Porcelain%20in%20the%20Ceramic%20Tile%20Industry.pdf.

common for end uses requiring superior breaking strength, freeze-thaw cycle resistance, and minimum water-exposure expansion.[55] Porcelain tile is distinguished from non-porcelain tile by its low porosity of 0.5 percent or less of water absorption. Sometimes referred to as "impervious tile," porcelain tile is considered suitable for all interior and exterior applications. Various types of non-porcelain tile have higher porosities and more limited suitable applications:

- Vitreous tile (over 0.5 percent to 3 percent), suitable for outdoor and wet interior rooms (e.g., bathrooms);
- Semi-vitreous tile (over 3 percent to 7 percent), not suitable for outdoor or wet interior rooms; and
- Non-vitreous tile (over 7 percent) water absorption, not suitable for outdoor or wet interior rooms.[56]

Since November 2007, the Ceramic Tile Distributors Association ("CTDA") and the Tile Council of North America ("TCNA") have sponsored the Porcelain Tile Certification Agency ("PTCA") program to certify that a manufacturer's "porcelain tile" samples meet the water-porosity criteria of 0.5 percent or less.[57] Compared to non-porcelain tile, porcelain tile is generally harder to cut and harder to bond to the floor.[58] The raw-materials cost to produce porcelain tile can be as much as *** that for producing non-porcelain tile.[59] Porcelain tile requires higher firing temperatures in the range of *** and longer firing periods in the range of *** with longer ranges of *** for 2 cm (0.8 inch)-thick tile. By contrast, non-porcelain tile requires firing times 5 to

[55] Petitioner's prehearing brief, p. 21.

[56] Water absorption of ceramic tile is tested in accordance with the requirements of ASTM C373 – 16: Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Nontile Fired Ceramic Whiteware Products; Calcamuggio, Jeffrey, "Tile Flooring 101 – Considerations," Buildipedia, August 17, 2011, http://buildipedia.com/at-home/floors/tile-flooring-101-considerations?print=1&tmpl=component.

[57] Petitioner's prehearing brief, exhibit 7: "TCNA, Porcelain Certification Program;" Respondents' response to Commission questions, April 6, 2020, exhibit 6: "PTCA, About Us." For a list of ceramic tile manufacturers and their product lines conferred with PTCA porcelain certification, see: Petitioner's response to Commission questions, April 6, 2020, exhibit 8: "PTCA, Certified Product Lines."

[58] TCNA, "FAQs Porcelain," https://www.tcnatile.com/faqs/59-porcelain.html, retrieved May 5, 2019.

[59] According to ***, its raw-material costs for porcelain ceramic tile average $*** per square foot compared to an average of $*** per square foot for non-porcelain ceramic tile. Petitioner's postconference brief, exhibit A: "Responses to Commission staff questions," p. 20.

30 minutes shorter and firing temperatures 50°C to 100°C (90°F to 180°F) lower than those for porcelain-tile firing.[60]

Glazed and unglazed ceramic tile surfaces

Ceramic tile surfaces can be either glazed or unglazed. Non-porcelain tiles are usually glazed for enhanced surface durability. Glazed porcelain tile have filled micro-pores that would otherwise be present if the tile is left unglazed. Glazing renders porcelain tile surfaces both more durable and easier to clean, but unglazed porcelain tile offer greater slip resistance. Unglazed porcelain tile can be "through body" with the surface color extending uniformly through the thickness of the tile. Glazed surfaces can have different colors and patterns than the body of the porcelain tile but the glaze is usually sufficiently resistant enough to abrasion to not show surface wear.[61]

Manufacturing processes

The manufacturing process for all ceramic tile consists of eight successive basic stages including: (1) raw-materials crushing, (2) mixing and milling, (3) spray drying, (4) shaping, (5) drying, (6) glazing and/or digital printing, (7) firing, and (8) post-firing operations.[62] All ceramic tile is produced, regardless of where throughout the world, generally using the same basic raw materials and production equipment, despite technological variations, for each step described below.[63] The entire manufacturing process is highly capital intensive[64] and highly automated, without much manual processing. The time required from the shaping stage to the packaging stage is typically less than 24 hours.[65]

[60] Petitioner's postconference brief, exhibit A: "Responses to Commission staff questions," pp. 5-6.

[61] TCNA, "FAQs Porcelain," https://www.tcnatile.com/faqs/59-porcelain.html, retrieved May 5, 2019.

[62] Unless specified otherwise, information in this section is compiled from Petition, pp. 10-12; conference transcript, pp. 21-24 (Baran); Testimony of Baran, pp. 1-3; Petitioner's hearing testimony submission, exhibit 1, April 2, 2020, pp. 6-12.

[63] Testimony of Baran, p. 3; Curran, p. 1; Haynes, p. 1.

[64] A Petitioner's witness testified that a typical ceramic tile production facility in the United States can be built at a capital cost in the range of $0.80 to over $1.00 per square foot of production space, depending on the degree of sophistication. Testimony of Baran, p. 3.

[65] Testimony of Baran, p. 2.

Raw-materials crushing

The raw materials for ceramic tile determine its properties. While ball clay and kaolin clay are common to all types of ceramic tile,[66] the amount and type of clay varies. The color of the ceramic tile body is determined in part by the amount of the iron-containing raw materials, with a higher iron content resulting in a red ceramic body in contrast to a low (or absence) of iron content resulting in a whitish ceramic body.[67] Other minerals are added to impart specific properties, depending on the type of tile, forming process, and firing process:

- Silica (quartz) sand— added-in as a cost-effective filler material;
- Alkali-containing feldspar— lowers the melting temperature, enhances low melt viscosity, and allows for controlled sintering at high temperatures;
- Nepheline syenite— a source of alkalis;
- Talc— an "auxiliary flux" that controls size and promotes low and consistent shrinkage; and
- Biotite— an accessory mineral contained in granite, which is a source of silica and feldspar, but otherwise does not provide a specific function.[68]

The clays and other raw materials are pulverized down to suitable grain sizes for the subsequent mixing and milling operations.

Mixing and milling

The raw materials are mixed together and milled, either dry or wet, depending on the fanning process. The wet-mixing method is more common, in large mills that further reduce the particle size in preparation for spray-drying. Wet mixing can also be done for extrusion forming, wet-pressing, and slip-casting. Dry milling can be done where the subsequent forming operation does rely on spray-dried particles.

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[66] Ball clay and kaolin clays also provide material strength in the unfired state, enhances pyroplasticity (stability) while firing, and maintains a steady sintering temperature in the kiln. Petitioner's postconference brief, exh. A "Responses to Commission staff questions," p. 5.

[67] Clay composition is determined by the ratio of silica to other minerals, such as quartz, carbonates, aluminum oxides, and iron oxides. Red clays form from continued weathering which leaches out minerals containing sodium, potassium, calcium, and carbonates, but the more chemically stable iron and aluminum oxides are less likely to leach out. Red clay-rich soils are found mostly in humid temperate and tropical regions of the world. Blue, Marie-Louise, "What Is Red Clay?" Sciencing.com, April 25, 2017, https://sciencing.com/red-clay-22940.html.

[68] Petitioner's postconference brief, exh. A "Responses to Commission staff questions," p. 5.

Spray drying

To obtain consistent particles for a high degree of quality control, the wet-milled mixture (slurry) is sprayed into a vertical tower with rising warm air. The high degree of process control results in a generally homogenous powder containing just enough moisture for the subsequent pressing (shaping) process.

Shaping

Tiles can be formed by various processes, depending on whether the material being formed is either wet or dry. The most common method is dry-pressing[69] of the ground particles by compression between dies, rollers, belts, or other means. In some instances, various powders are combined to create surface effects when pressed together. Wet clay can be formed by continuous extruding and cutting to size, pressing into a die, or pouring into a mold.

Drying

After being formed, the newly formed ("green") tiles are dried, usually in large dryers or low-temperature kilns. Drying can be either continuous or batch operations, being commonly fueled by natural gas, fuel oil, or coal, although infrared, microwave, or even excess heat from other operations are sometimes used.

Glazing and/or digital printing

The surface of the green tile can be decorated before firing by applying materials that bond with the surface when fired. There are various techniques to apply glazing materials from a simple waterfall coating the surface to spray applications, and now digital printing with glaze-like compounds. Surface decoration can also be applied prior to forming by adding dry powders that impart the decorative effects to the surface upon firing. Surfaces of fired tile also can be decorated before a secondary firing operation.

Firing

Conversion from a clay-containing mixture to a ceramic material through firing creates the properties associated with ceramic tile.[70] The time and temperature for firing the green tile

[69] In dry-pressing, the particles are not actually fully dry, but rather contain just enough moisture to hold together after pressing.

[70] While the crystallinity of the clay-containing mixture changes through the firing process, crystallinity itself is not a determinant of whether a material is ceramic.

depends on the raw-material composition and determines the finished properties. Heating and cooling are controlled to allow the various physical changes to take place. In the case of porcelain tiles, firing is sufficiently hot (typically, but not exclusively, between 2,100°F to 2,200°F) to drive-down the finished porosity (water absorption) from 6 to 8 percent down to 0.5 percent or less. [71] ***.[72] Firing can be accomplished in a single operation with the green tile and surface decoration fired together (i.e., "single-fired" or "monocottura") in a roller-hearth kiln or in two or more subsequent firing operations depending on the pre-firing processes and desired decoration effects.[73] Depending on the firing process and raw materials used, the total time for firing and cooling can be under an hour or even requiring multiple days.[74]

Post-firing operations

Cooled ceramic tile undergoes various post-firing operations prior to shipment. Polished tiles are treated with abrasives in a polishing line to create a fine polish on the surface. Rectified tiles are trimmed on a cutting line to produce precisely sized tiles. Cutting may occur at the factory or offsite at another facility to produce more modular products. Very large-size tiles (referred to as "slabs" or "panels") up to 5-feet by 15-feet or even larger can be cut at the factory but are also commonly shipped as-produced in such large sizes for subsequent cutting in a separate facility or even at a job site.

[71] Testimony of Baran, pp. 1-2.

[72] Staff trip report, ***.

[73] The shaping, glazing, and single-firing steps combined can require as little as an hour to complete. Because the single-firing process results in stronger and more-durable ceramic tile with a harder glazed surface that is less prone to peeling and cracking, monocottura tiles are suitable for interior floor tiles and outdoor applications. Build.com, "Moncottura vs. Bicottura Tiles, What's the Difference?" http://www.build.com.au/monocottura-vs-bicottura-tiles-whats-difference, retrieved May 3, 2019.

[74] The older, double-firing ("bicottura") process— consisting of shaping and initial firing of unglazed tile, glazing, and second firing of glazed tile— can require several days to complete. Generally being softer than single-fired tile, double-fired tile is suitable for walls and back-splashes. Moreover, the protrusions (or "lugs") often present on the back surface render bicottura tile less suitable for covering horizontal flooring surfaces. *Ibid*.

***.[75] Ceramic tile is shipped in cartons for retail sale, e.g., at "big-box" home-improvement stores. Carton labels include symbols and rating information about the ceramic tile contained within, including its grade, PEI rating, water absorption, DCOF, frost-resistance, and shade variations.[76]

Domestic like product issues

In the preliminary phase investigations, the Commission found a single domestic like product consisting of all ceramic tile consistent with Commerce's scope definition.[77] In the final phase investigations, Petitioners have requested that the Commission continue to define the domestic like product to be coextensive with the scope of the investigations.[78] Respondents have argued that the Commission should find two separate domestic like products, one composed of non-mosaic tiles and one composed of mosaic tiles.[79]

[75] Staff trip report, ***.

[76] See, e.g.: The Home Depot, "Ceramic Tiles – Label Information," no date, https://www.homedepot.com/hdus/en_US/DTCCOM/Home_Services/Tile_Flooring/Tile_Flooring_Buying_Guide/Docs/ceramic_tile_label_info.pdf (retrieved February 29, 2020).

[77] *Ceramic Tile from China,* Inv. Nos. 701-TA-621 and 731-TA-1447 (Preliminary), USITC Publication 4898 (June 2019), pp. 7-10.

[78] Petitioner's prehearing brief, pp. 4-11 and posthearing brief, p. 15.

[79] Respondent's prehearing brief, pp. 4-17 and posthearing brief, pp. 12-13.

Part II: Conditions of competition in the U.S. market

U.S. market characteristics

Ceramic tile is used as a decorative covering on floor and walls, mostly in kitchens and bathrooms, as well as commercial spaces. U.S. demand for ceramic tile is driven primarily by demand in the construction sector, both for new homes and for remodeling/removing and replacement ("R&R"). Like in the construction industry, demand for ceramic tile is seasonal, with peaks in the spring and fall, and valleys in the winter. There are several substitutes for ceramic tile, particularly in flooring applications, including luxury vinyl tile ("LVT"), carpet, wood (typically hardwood), and stone. Some importers cited LVT as having taken market share from ceramic tile in recent years, due to its comparatively lower price and ease of installation.[1] The majority of ceramic tile is used in flooring rather than as wall tile; floor tile comprised more than three quarters of total U.S. shipments from all sources (see Parts III and IV).

Overall, apparent U.S. consumption of ceramic tile increased by 7.5 percent during 2016-18, increasing by 5.9 percent from 2016 to 2017 and by 1.6 percent from 2017 to 2018. Apparent U.S. consumption was 3.0 percent lower in January-September 2019 compared to January-September 2018.

Most U.S. producers (8 of 13) and importers (22 of 38) reported that there had not been significant changes in the product range, product mix, or marketing of ceramic tile since January 1, 2016. Of the firms reporting changes, several noted a trend toward larger size tiles, an increase in the use of LVT, and advances in digital printing technology. Some firms also reported increased differentiation between ceramic tile produced for commercial and residential markets.

Impact of section 301 tariffs

Firms were asked if section 301 tariffs on imports from China (see Part I) had impacted the ceramic tile market. Among U.S. producers, 2 of 13 responding producers reported no impact, 4 reported an impact, and 7 reported that they did not know. Among importers, 24 of 35 responding firms reported an impact, 5 reported no impact, and 6 reported that they did not know. Among purchasers, 12 reported an impact, 1 no impact, and 5 reported that they did not know.

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[1] Petitioner also stated that LVT has been taking market share from other flooring types such as laminate, wood, and carpeting, rather than ceramic tile. Petitioner's prehearing brief, pp. 22-23.

Firms were also specifically asked about the effect of section 301 tariffs on supply, demand, prices, and raw material costs for ceramic tile (table II-1). Firms generally reported no change in U.S. supply, a decrease in Chinese supply, and an increase in supply from other countries. Firms generally reported that prices increased or did not change. U.S. demand for ceramic tile and raw material costs were generally reported to be unchanged.

Table II-1
Ceramic tile: Impact of Section 301 tariffs

Factor	U.S. producers				U.S. importers				U.S. purchasers			
	I	NC	D	F	I	NC	D	F	I	NC	D	F
U.S. supply	1	2	1	---	4	16	1	1	3	8	1	---
China supply	---	---	4	---	---	1	23	---	---	1	11	---
Other country supply	4	---	---	---	19	2	---	---	10	1	---	1
Prices	2	2	---	---	7	10	3	3	4	6	1	1
U.S. demand	1	1	1	1	1	11	7	3	---	9	1	2
Raw material costs	---	3	---	1	1	16	---	2	---	8	---	3

Note: I=increased, NC=no change, D=decreased, F=fluctuated.

Source: Compiled from data submitted in response to Commission questionnaires.

Porcelain vs non-porcelain tile

Purchasers were asked several questions regarding their purchases of porcelain and non-porcelain ceramic tile. Most purchasers reported purchasing both porcelain and non-porcelain tile in 2018, although two purchasers reported that all their purchases were of porcelain tile. Among some of the largest purchasers, ***. Purchasers most often identified functional properties (including water absorption, durability, and stain resistance), design/look/style, and price/cost as the most important attributes when purchasing porcelain tile.

When asked about the frequency of interchangeability between porcelain and non-porcelain ceramic tile, nine purchasers reported that they were sometimes interchangeable, seven reported usually, one reported always, and one reported rarely or never. Purchasers generally reported that for wall tile, both porcelain and non-porcelain tile can be used, but for some floor applications and for exterior use, porcelain tile is preferred. *** stated that in most residential uses, non-porcelain ceramic tile can be used for floor tile. *** stated that porcelain tiles tend to be more expensive than non-porcelain tiles and have fewer aesthetic choices compared to “traditional wall tiles.” *** stated that some ceramic tiles are intended only for wall applications, and that for floor tile, technical tests must be performed to determine durability of the glaze and slip resistance.

U.S. purchasers

The Commission received 18 usable questionnaire responses from firms that had purchased ceramic tile since January 1, 2016.[2] [3] Ten responding purchasers are distributors, four are big box/home center retailers, six are other retailers, and one is a contractor/builder.[4] Large purchasers of ceramic tile include big box/home center retailers ***.

Ten of eighteen purchasers reported that they compete for sales with the manufacturers or importers from whom they purchase ceramic tile. Purchasers reported that they sell ceramic tile to the following types of customers: residential do-it-yourself, professional homebuilders, contractors, designers, government entities, and floor covering dealers.

Channels of distribution

The big box/home center retailer channel was the largest distribution channel for U.S. producers and importers (table II-2). U.S. producers and importers also sold ceramic tile to distributors, other retailers, contractors, and other end users. Importers reported a larger share of sales to big box/home center retailers than did U.S. producers, and U.S. producers reported a larger share to distributors than did importers. The big box/home center retailers channel generally had the lowest average unit values of the channels for U.S. producers and importers.

[2] The following firms provided purchaser questionnaire responses: ***, ***.

[3] Of the 18 responding firms, 16 purchased domestic ceramic tile, 14 purchased imports from China, and 17 purchased imports from other sources.

[4] Two purchasers indicated more than one category.

Table II-2
Ceramic tile: U.S. producers' and importers' U.S. shipments shares and unit values, by source and channel of distribution, 2016-18, January to September 2018, January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of quantity of U.S. shipments (percent)				
U.S. producers: to Distributors	23.6	22.4	21.0	21.0	20.7
to Big box / home center retailers	43.9	43.6	42.0	41.9	40.7
to Other retailers	***	***	***	***	***
to Contractors	***	***	***	***	***
to Other end users	***	***	***	***	***
U.S. importers: China to Distributors	***	***	***	***	***
to Big box / home center retailers	***	***	***	***	***
to Other retailers	***	***	***	***	***
to Contractors	***	***	***	***	***
to Other end users	***	***	***	***	***
U.S. importers: Nonsubject to Distributors	***	***	***	***	***
to Big box / home center retailers	***	***	***	***	***
to Other retailers	***	***	***	***	***
to Contractors	***	***	***	***	***
to Other end users	***	***	***	***	***
	Unit value (dollars per square foot)				
U.S. producers: to Distributors	1.54	1.53	1.53	1.53	1.57
to Big box / home center retailers	0.98	1.01	1.01	1.02	1.01
to Other retailers	***	***	***	***	***
to Contractors	***	***	***	***	***
to Other end users	***	***	***	***	***
U.S. importers: China to Distributors	***	***	***	***	***
to Big box / home center retailers	***	***	***	***	***
to Other retailers	***	***	***	***	***
to Contractors	***	***	***	***	***
to Other end users	***	***	***	***	***
U.S. importers: Nonsubject to Distributors	***	***	***	***	***
to Big box / home center retailers	***	***	***	***	***
to Other retailers	***	***	***	***	***
to Contractors	***	***	***	***	***
to Other end users	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Geographic distribution

U.S. producers and importers reported selling ceramic tile to all U.S. regions (table II-3). For U.S. producers, 6.4 percent of sales were within 100 miles of their production facilities, 54.2 percent were between 101 and 1,000 miles, and 39.4 percent were over 1,000 miles. Importers sold 24.1 percent within 100 miles of their U.S. points of shipment, 66.7 percent between 101 and 1,000 miles, and 9.1 percent over 1,000 miles.

Table II-3
Ceramic tile: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	Importers
Northeast	13	15
Midwest	13	15
Southeast	13	20
Central Southwest	13	18
Mountain	12	15
Pacific Coast	12	17
Other	8	13
All regions (except Other)	12	14
Reporting firms	13	26

Note: Other is all other U.S. markets, including AK, HI, PR, and VI.

Source: Compiled from data submitted in response to Commission questionnaires.

Supply and demand considerations

U.S. supply

Table II-4 provides a summary of the supply factors regarding ceramic tile from U.S. producers and from China. In general, producers from both sources reported high inventories, and an inability to produce alternative products.

Domestic production

Based on available information, U.S. producers of ceramic tile have the ability to respond to changes in demand with moderately large changes in the quantity of shipments of U.S.-produced ceramic tile to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of increasing amounts of unused capacity and inventories. Factors mitigating responsiveness of supply include the limited ability to shift shipments from alternate markets and no reported ability to shift production to or from alternate products.

Table II-4
Ceramic tile: Supply factors that affect the ability to increase shipments to the U.S. market

Item	2016	2018	2016	2018	2016	2018	Shipments by market in 2018 (percent)		Able to shift to alternate products
	Capacity (millions of square feet)		Capacity utilization (percent)		Inventories as a ratio to total shipments (percent)		Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
United States	1,008	1,165	88.9	78.0	28.8	35.8	98.8	1.2	0 of 13
China	***	***	***	***	***	***	***	***	1 of 43

Note: Responding U.S. producers accounted for the vast majority of U.S. production of ceramic tile in 2018. Responding foreign producer/exporter firms accounted for *** of U.S. imports of ceramic tile from China during 2018. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources."

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers' capacity utilization decreased from 2016 to 2018, as production capacity rose. U.S. producers' total production increased between 2016 and 2017, then decreased between 2017 and 2018. U.S. producers' inventories as a share of total shipments increased from 28.8 percent in 2016 to 35.8 percent in 2018. U.S. producers' export shipments accounted for a small share of total shipments, 1.2 percent in 2018.[5] None of the responding U.S. producers reported being able to shift production to or from other products.

Subject imports from China

Based on available information, producers of ceramic tile from China have the ability to respond to changes in demand with large changes in the quantity of shipments of ceramic tile to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the substantial shipments of Chinese ceramic tile to the world, the ability to shift shipments from inventories, some ability to shift shipments from other non-U.S. markets,[6] the existence of several third-country trade actions, and some unused capacity (among responding Chinese producers). Factors mitigating responsiveness of supply include the limited ability to shift production to or from alternate products.

All responding Chinese producers reported that the ceramic tile they export is subject to third-country trade actions. Firms noted that ceramic tiles from China are subject to antidumping duties in Argentina (since February 16, 2018), Pakistan (October 11, 2017), India

[5] U.S. producers' reported export markets were Canada, Italy, Japan, and Mexico.

[6] Overall Chinese exports of ceramic tile to the world are substantial and might be potentially diverted to the U.S. market (see Part VII).

(April 8, 2017), Mexico (October 25, 2016), Brazil (December 19, 2014), the European Union (November 23, 2017), and Korea (July 19, 2018); and safeguard duties in Indonesia (since October 12, 2018); and an ongoing antidumping investigation of the Gulf Cooperation Council and a safeguard investigation in Ecuador. See Part VII for more information on third-country trade actions.

Imports from nonsubject sources

Imports from nonsubject sources accounted for between 68.5 percent (2018) and 70.7 percent (2016) of total U.S. imports during 2016-18. The largest source of nonsubject imports in 2018 was Mexico, followed by Spain, Italy, and Brazil. Combined, these countries accounted for 80.3 percent of nonsubject imports in 2018.

Supply constraints

Most firms (11 of 13 U.S. producers, 27 of 34 importers, and 13 of 18 purchasers) indicated that they had not experienced any supply constraints since January 1, 2016. U.S. producer *** reported that it has occasionally had controlled order entry for its custom-made products. Several importers reported constraints related to tariffs on imports from China including difficulty finding certain designs and specifications such as wall tile, mosaics, or polished porcelain.

Among purchasers, *** reported that some of its U.S. factory partners (such as ***) have not been able to keep up with its demand as it has shifted its supply away from China or have been unable to produce the same products that it had purchased from China. *** reported limited capacity for mosaics and small wall tiles. *** reported an industry-wide shortage of ceramic and porcelain mosaics as distributors no longer import ceramic tile from China due to the tariffs and duties. *** reported that extreme shortages and delays from U.S. suppliers has caused it to lose sales. At the staff conference, Bedrosians testified that between October 2016 and January 2019 one of the petitioning firms, ***, was unable to consistently supply it with product.[7]

New suppliers

Eight of eighteen purchasers indicated that new suppliers entered the U.S. market since January 1, 2016. Purchasers stated "there are constantly new suppliers entering into the U.S. market" with examples including: Landmark Ceramics, American Wonder, Atlas Concorde, Del

[7] Conference transcript, p. 132 (Bedrosian); Respondents' postconference brief, ***.

Conca. Purchasers also cited new factories being established by existing suppliers, such as Dal-Tile in the United States.

U.S. demand

Based on available information, the overall demand for ceramic tile is likely to experience moderate changes in response to changes in price. The main contributing factor to demand responsiveness is the availability of lower-cost substitute products (including LVT), tempered by the small-to-moderate share of the final cost of a tile project accounted for by the tile itself compared to cost of installation.

End uses and cost share

The primary end uses for ceramic tile are flooring and wall covering in kitchens and bathrooms. Most responding firms reported, on average, that ceramic tile accounts for roughly one-third of the installed cost of flooring or wall covering.[8]

Business cycles

Most responding firms (11 of 13 U.S. producers, 22 of 34 importers, and 15 of 18 purchasers) reported that the ceramic tile market is subject to business cycles. Firms reported that the market follows the seasonal trends in the construction industry, with weaker demand in the winter months and stronger demand in spring and fall.

Less than half of responding firms (6 of 13 U.S. producers, 8 of 34 importers, and 4 of 18 purchasers) reported that the ceramic tile market was subject to other distinct conditions of competition. Several U.S. producers and importers reported the mislabeling of some Chinese tile that does not meet technical standards as porcelain. Other conditions noted by U.S. producers include increased Chinese exports to the United States because of tariffs in other countries, and subject import prices to distributors or retailers at or below U.S. tile manufacturing costs. Distinct conditions reported by importers include competition from substitutes (including carpet, LVT, wood, laminate, natural stone, bamboo for the floor and paint, wallpaper, paneling, mosaics for the wall); installation's large share of the total project cost (about 70 percent); and lower production costs and overproduction of ceramic tile as U.S. manufacturers have invested in the factories in the southern part of the United States and in factory automation. Purchasers reported the following conditions: tile more often used in

[8] Cost shares for floor covering ranged from 9.5-65 percent for most responding firms (for an average of 34 percent), while cost shares for wall covering ranged from 3 to 60 percent (for an average of 30 percent).

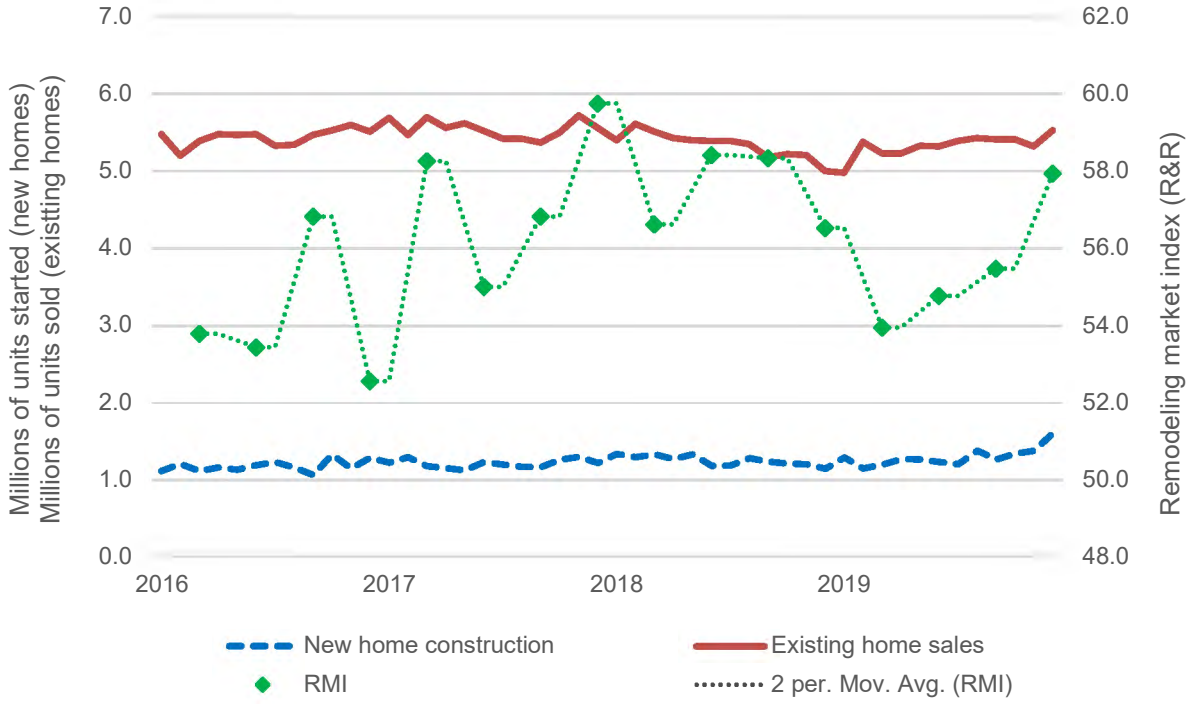
warmer climates, substitute products, excess supply and capacity in some countries due to a decreased demand for tile, and the tile industry must keep up with new styles and colors.

Changes in conditions of competition reported by U.S. producers include an increase in low-priced Chinese tiles in U.S. market, more price-conscious consumers, and a shift away from residential uses to larger commercial projects. *** reported growth in residential and commercial construction since 2016, while *** reported that the construction market, especially residential, has started to slow down. *** reported that poor quality and mislabeled Chinese porcelain tile sold at low prices has contributed to a poor image of porcelain, resulting in lost sales to other flooring or wall covering materials, as well as downward price pressure on porcelain tiles. Importers reported more competitors including aggressive marketing of imports from Brazil, Turkey and Mexico; new technology; larger sizes; increased competition from imported low priced product; increased competition with LVT (particularly because of increased costs of installation and installation labor shortages in 2017 and 2018); consolidation of retailers has also played a role in the availability, pricing and accessibility of ceramic tile; and signs of economic slowdown. Purchasers reported continued increases in construction; increased competition from flooring products such as LVT that are just as durable, water resistant, and easier to install; a reduction in skilled trades/tile installers; increased domestic supply; and increased competition from other new suppliers.

Demand trends

U.S. demand for ceramic tile is driven by demand in the construction sector, both for new homes and in the R&R sector. As shown in figure II-1, new home construction, existing home sales, and the remodeling market index ("RMI") for R&R activity have shown increases or relatively steady trends in recent years. New home construction gradually increased from 2016 to 2019 and peaked in December 2019. The RMI for R&R activity increased between the first quarter of 2016 and peaked in the last quarter of 2017 before falling through the first quarter of 2019 and rebounding to the end of the year. Existing home sales peaked in late 2017 and hit its low at the beginning of 2019 before increasing to close out the year. Overall, the number of new privately-owned housing units started increased by 44.3 percent between January 2016 and December 2019, while the RMI increased by 7.7 percent between the first quarter of 2016 and the last quarter of 2019. The number of existing home sales decreased by 8.8 percent between January 2016 and December 2018. Between December 2018 and December 2019, new home construction and existing home sales increased by 40.8 percent and 10.6 percent, respectively.

Figure II-1
Home construction, sales, and remodeling: Housing starts and existing home sales, monthly, and remodeling market index, quarterly, January 2016-December 2019



Note: The remodeling market index (RMI) is an average of two major component indices: current market conditions and future market indicators. For more on the components and methodology of RMI, see https://www.nahb.org/en/research/housing-economics/housing-indexes/remodeling-market-index.aspx. The dashed line for RMI represents the 2-period moving average.

Sources: Census Bureau; National Association of Realtors, http://www.realtor.org/topics/existing-home-sales; and National Association of Homebuilders, https://www.nahb.org/en/research/housing-economics/housing-indexes/remodeling-market-index.aspx, retrieved February 26, 2020.

A plurality of U.S. producers and importers reported that demand for ceramic tile in the United States has increased since January 1, 2016, but a plurality of purchasers reported that demand decreased (table II-5). Most firms pointed to strong housing and commercial construction markets as the reason for the demand increase. One U.S. producer and several importers also indicated that improvements in digital technology (which have improved the designs of ceramic tile) have helped increase demand for some ceramic tile products. Among the firms reporting a decrease in demand, firms generally cited the availability of less expensive alternatives such as LVT and manufactured wood, and *** cited increased labor rates and less availability of skilled labor to install tile.

Table II-5
Ceramic tile: Firms' responses regarding U.S. demand and demand outside the United States

Item	Number of firms reporting			
	Increase	No change	Decrease	Fluctuate
Demand inside the United States:				
U.S. producers	11	---	1	1
Importers	16	4	8	5
Purchasers	7	1	9	---
Demand outside the United States:				
U.S. producers	6	1	1	1
Importers	10	4	2	5
Purchasers	3	6	---	---
Demand for end use product(s):				
Purchasers	7	2	7	3

Source: Compiled from data submitted in response to Commission questionnaires.

Pluralities of U.S. producers and importers reported an increase in demand for ceramic tile outside the United States. Firms cited strong construction activity and improvements in digital technology as reasons. Importer *** stated that non-U.S. markets have "significantly higher per capita usage of ceramic tile compared to the United States." Among the firms reporting a decrease in demand outside the United States, *** cited a decline in Chinese and European housing markets.

Substitute products

The most commonly listed substitutes in flooring applications were LVT (or vinyl, laminate, or linoleum tile generally), carpet, and wood (typically hardwood). Stone was also listed as a substitute in both flooring and wall applications, and glass and fiberglass (for baths) were listed as substitutes for wall applications. Four of 13 responding U.S. producers, 21 of 36 responding importers, and 13 of 17 responding purchasers reported that LVT is considered a substitute for ceramic tile in the same end uses. Retailer *** stated that LVT can be

used as a substitute for ceramic tile in any room in the home including kitchens and bathrooms, and that it has seen average growth of over 50 percent per year for LVT, although not all having replaced ceramic tile. On the other hand, retailer *** reported that LVT is not considered to be a substitute for ceramic tile in the same end uses.

Most responding firms (9 of 13 U.S. producers, 22 of 34 importers, and 13 of 17 purchasers) reported that there are other substitutes for ceramic tile besides LVT.

No U.S. producers, but 12 importers and 8 purchasers reported that changes in the price of LVT have affected ceramic tile prices, and 5 importers and 5 purchasers reported that changes in the prices of other substitutes have affected ceramic tile prices. These firms generally noted that the material and installation costs of LVT, vinyl, and laminate flooring is significantly less than ceramic tile. Some firms added that the lower price of LVT has increased its market share and forced ceramic tile suppliers to maintain or reduce prices in order to retain market share. Six purchasers reported that they increased their purchases of LVT in place of ceramic tile. *** stated that lower-priced LVT has driven down some tile prices.

Data from Floor Covering Weekly indicate that ceramic floor and wall tile comprised 14.4 percent of U.S. floor covering sales in 2018, compared to 43.1 percent for carpet and rugs, 13.0 percent for hardwood, and 12.6 percent for LVT.[9] Total U.S. floor covering sales increased by 5.7 percent from 2017 to 2018, with LVT accounting for 75 percent of the increase. The publication noted that ceramic tile was the only other flooring sector besides LVT to increase market share in 2018, with total ceramic tile U.S. sales growing by 7.3 percent from 2017 to 2018.

Substitutability issues

The degree of substitution between domestic and imported ceramic tile depends upon such factors as relative prices, quality (e.g., grade standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, availability of certain product types from different sources, etc.). Based on available data, staff believes that there is a high degree of substitutability between domestically produced ceramic tile and ceramic tile imported from China.

[9] The 2018 Statistical Report, *Floor Covering Weekly*, July 22, 2019, shown in Petitioner's prehearing brief, exhibit 3.

Lead times

Ceramic tile is primarily sold from inventory. U.S. producers reported that 92 percent of their commercial shipments were sold from inventory, with lead times averaging 2 days.[10] The remaining 8 percent of U.S. producers' commercial shipments were produced-to-order, with lead times averaging 39 days. Importers reported that 76 percent of their commercial shipments were sold from U.S. inventories, with lead times averaging 5 days. Importers reported that 15 percent of their shipments came from foreign manufacturers' inventories, with lead times averaging 58 days, and 10 percent was produced-to-order, with an average lead time of 74 days.[11]

Knowledge of country sources

All 18 responding purchasers indicated they had marketing/pricing knowledge of domestic product, 10 of Chinese product, and 14 of product from nonsubject countries.

As shown in table II-6, a plurality of purchasers (7 of 18) usually make purchasing decisions based on the producer, and six sometimes do so. Firms less often reported purchasing based on the country of origin. Of the purchasers that reported that they always or usually make decisions based on the manufacturer, firms cited quality, service, and established relationships. *** stated that it assigns SKUs based on the best fit with its factory partners' different capabilities, strengths and capacities.

Table II-6
Ceramic tile: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	3	7	6	2
Purchaser's customers make decision based on producer	1	1	8	7
Purchaser makes decision based on country	3	4	9	2
Purchaser's customers make decision based on country	---	2	12	4

Source: Compiled from data submitted in response to Commission questionnaires.

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for ceramic tile were price (17 firms), design (11 firms), and quality (10 firms) as shown in table II-7.[12] Design was the most frequently cited first-most important factor (cited by 8 firms),

[10] Petitioners testified that changes in design trends and styles are a major factor in influencing the product they hold in inventory. Conference transcript, pp. 115-117 (Curran, Spooner).

[11] Note that shares do not add to 100 due to rounding.

[12] Design includes style, fashion, look, and aesthetics.

followed by quality (5 firms). Price was the most frequently reported second-most important factor (7 firms) as well as the most frequently reported third-most important factor (8 firms).

Table II-7
Ceramic tile: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Item	First	Second	Third	Total
	Number of firms			
Price/cost	2	7	8	17
Design	8	2	1	11
Quality	5	4	1	10
Availability/supply	1	3	2	6
Product line/options/range	1	1	1	3
Credit/payment	1	---	2	3
Delivery/lead time	---	---	2	2
All other factors	---	1	1	2

Note: Design includes style, fashion, design, look, and aesthetics. Other factors include country of origin, vendor capacity, capability, and service.

Source: Compiled from data submitted in response to Commission questionnaires.

Eleven purchasers reported that they sometimes purchase the lowest-priced product, four reported that they usually do, and two reported that they never purchase the lowest-priced product.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 18 factors in their purchasing decisions (table II-8). The factors rated as very important by more than half of responding purchasers were availability, price, and quality meets industry standards (all 18 responding firms); product consistency (17 firms); reliability of supply and design and style (16 each); porcelain quality (14); durability (13); and delivery time (10).

Table II-8
Ceramic tile: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability	18	---	---
Delivery terms	7	11	---
Delivery time	10	8	---
Design and style	16	2	---
Discounts offered	4	12	2
Durability	13	5	---
Minimum quantity requirements	5	9	5
Packaging	5	8	4
Payment terms	6	12	---
Porcelain quality	14	4	---
Price	18	---	---
Product consistency	17	1	---
Product range	8	9	1
Quality meets industry standards	18	---	---
Quality exceeds industry standards	8	9	1
Reliability of supply	16	2	---
Technical support/service	5	8	5
U.S. transportation costs	6	10	2

Source: Compiled from data submitted in response to Commission questionnaires.

Supplier certification

Seven of eighteen responding purchasers require their suppliers to become certified or qualified to sell ceramic tile to their firm. Purchasers reported that the time to qualify a new supplier ranged from 14 to 180 days.[13] Most firms (17 of 18) reported that no supplier had failed in its attempt to qualify ceramic tile or had lost its approved status since January 1, 2016.[14]

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since January 1, 2016 (table II-9). Most firms either increased or held constant their purchases from domestic sources (6 firms each). Ten firms reported decreasing their purchases of Chinese product and eight firms reported increasing their purchases from nonsubject sources.

[13] ***.

[14] ***.

Table II-9
Ceramic tile: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	---	3	6	6	2
China	3	10	2	1	1
All other sources	1	4	8	3	1
Sources unknown	4	---	---	3	---

Source: Compiled from data submitted in response to Commission questionnaires.

Reasons reported for increased domestic purchases were mostly related to increased demand and an increase in U.S. tile factories. Other reasons were favorable designs and pricing (***) and increased demand for readily available low-cost materials (***). For firms that reported decreased purchases of ceramic tile from China, the predominant reason was tariffs on Chinese products (***). Other reasons cited were "pricing and rectifying capabilities" (***) and "quality and aesthetics" (***).

A variety of reasons were reported for increased purchases of nonsubject product including: greater competition in EU and Brazil, and improved design offerings and product developments for floor tile, and innovation in other countries, and improved graphics and product quality for wall tile; design, rectifying capabilities, and pricing; increased tariffs on China tile; and an increase in business and more demand for higher quality/better aesthetics.

Importance of purchasing domestic product

All eighteen responding purchasers reported that most or all of their purchases did not require purchasing U.S.-produced product; purchases that had no domestic requirement represented 98 percent of purchasers' estimated purchases in 2018.

Seven of 18 purchasers reported having a country preference, of which, four preferred the U.S. product. *** stated that the quality of domestic tiles was generally better than that from Mexico or China.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing ceramic tile produced in the United States, China, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 18 factors (table II-10) for which they were asked to rate the importance.

Most purchasers reported that U.S. and subject ceramic tile were comparable on 12 of the 18 factors. A majority of purchasers reported that the U.S. product was superior to that from China on five factors including availability, delivery terms, delivery time, reliability of

supply and technical support/service, and that the Chinese product was superior on one factor, price, with 13 of 18 firms reporting that the Chinese product was lower-priced. When comparing ceramic tile from China with that from nonsubject countries, most purchasers reported that the Chinese product was comparable on 16 of 18 factors; was superior in terms of price;[15] and inferior in technical support/service.

Twelve of 18 purchasers reported that certain types of ceramic tile were not readily available from U.S. producers. These firms cited certain types of porcelain (including polished porcelain, rectified porcelain, thin porcelain panels and 3CM porcelain pavers, 6mm to 7mm thick porcelain floor tiles), very large formats (including 60-inch and above lengths), small formats, decorative tile, wall tile, China is the only country that supplies "crushed acrylic double loaded" tiles, soluble salt body tiles, and quarry tile (only produced by a few U.S. producers).

Several firms stated that mosaics or certain types of mosaics (small format and pressed tiles) were not available from U.S. producers or not available in commercial quantities, although one purchaser stated that mosaics were available but were cost prohibitive. Home Depot added that U.S. producers' mosaic tile style offerings were limited. Bedrosians stated that decorative wall tiles of varied shapes and dimensions were not available and that U.S. producers only make 2x2 mosaic tiles. *** stated that low costs of production in China keeps specialty products from being produced in United States.

[15] Nine purchasers reported that the Chinese product was priced lower than product from nonsubject countries and seven purchasers reported that the prices were comparable.

Table II-10
Ceramic tile: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. China			U.S. vs. nonsubject sources			China vs. nonsubject sources		
	S	C	I	S	C	I	S	C	I
Availability	11	5	1	8	6	3	---	12	4
Delivery terms	13	3	1	10	4	3	---	9	7
Delivery time	16	---	1	14	1	2	---	10	7
Design and style	3	13	1	1	10	6	2	9	5
Discounts offered	1	9	6	---	12	3	1	11	3
Durability	4	12	1	1	16	---	1	12	3
Minimum quantity requirements	3	13	---	4	11	1	1	11	3
Packaging	2	15	---	1	16	---	1	11	4
Payment terms	3	12	2	1	13	3	---	11	5
Porcelain quality	2	14	1	---	17	---	---	13	3
Price	1	3	13	3	8	6	9	7	---
Product consistency	7	9	1	1	16	---	---	12	4
Product range	3	8	6	1	8	8	1	10	5
Quality meets industry standards	4	13	---	1	16	---	---	15	1
Quality exceeds industry standards	6	11	---	2	15	---	1	12	3
Reliability of supply	9	7	1	5	9	3	---	9	7
Technical support/service	15	2	---	8	8	1	---	8	8
U.S. transportation costs	6	7	4	3	9	5	1	12	2

Note: A rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Note: S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

Eight of 18 purchasers reported that certain types of ceramic tile were only available from certain country sources. One purchaser stated that "high design" wall tile is produced mainly in Spain and Italy. Several firms stated that certain types of tile were mainly sourced from China including commodity floor and wall tiles, mosaic tiles including small mosaics and low-cost mosaics, polished porcelain, and decorative dimensional tiles of varied shapes. *** stated that polishing capabilities for porcelain are more prevalent in China and India. *** reported that China is the only country that supplies "crushed acrylic double loaded" tiles.

Comparison of U.S.-produced and imported ceramic tile

In order to determine whether U.S.-produced ceramic tile can generally be used in the same applications as imports from China and nonsubject countries, U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-11, most U.S. producers reported that ceramic

tile from the United States, China, and other countries was always or frequently interchangeable. The majority of importers reported that products from each specified source were always or frequently interchangeable although a substantial minority reported that the products were sometimes interchangeable. Purchasers most often reported that products from each source can frequently be used interchangeably.

Table II-11
Ceramic tile: Interchangeability between ceramic tile produced in the United States and in other countries, by country pair

Country pair	U.S. producers				U.S. importers				U.S. purchasers			
	A	F	S	N	A	F	S	N	A	F	S	N
United States vs. China	5	7	1	---	11	9	13	2	2	9	6	---
United States vs. Other	6	6	1	---	11	9	12	2	2	11	4	---
China vs. Other	5	4	---	---	9	7	12	2	2	12	3	---

Note: A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

Some firms noted that there are instances where a product is not available in the United States which limits interchangeability, particularly for mosaic tile. Other factors reported include quality, size, and design. U.S. producer/importer *** reported that end users often perceive that Chinese and domestic tile to be interchangeable, but some imported product is lower quality, for example, water absorption in excess of the 0.5 percent standard can cause issues with microbial growth and staining making the import tile inappropriate for some installations. *** reported that certain sizes and polishes are predominantly available from China and some mosaic tile is not produced in the United States. *** stated that interchangeability depends on the type of tile and whether the tile passes rating tests for water absorption, breaking strength, and other factors.

Most responding purchasers reported that ceramic tile from all sources always or usually met minimum quality specifications (table II-12).

Table II-12
Ceramic tile: Ability to meet minimum quality specifications, by source

Source	Always	Usually	Sometimes	Rarely or never	Don't know
United States	8	9	---	---	1
China	3	11	2	---	2
All other sources	5	11	---	---	---

Note: Purchasers were asked how often domestically produced or imported ceramic tile meets minimum quality specifications for their own or their customers' uses.

Source: Compiled from data submitted in response to Commission questionnaires.

In addition, U.S. producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of ceramic tile from the United States, subject, or nonsubject countries. As seen in table II-13, most U.S. producers reported that differences other than price were sometimes significant, most importers indicated that differences were either always or frequently significant, and most purchasers reported frequently or sometimes.

Table II-13
Ceramic tile: Significance of differences other than price between ceramic tile produced in the United States and in other countries, by country pair

	U.S. producers				U.S. importers				U.S. purchasers			
Country pair	A	F	S	N	A	F	S	N	A	F	S	N
United States vs. China	3	3	4	3	9	12	7	5	3	9	5	---
United States vs. Other	---	2	8	3	7	9	11	5	1	9	7	---
China vs. Other	---	2	2	1	7	7	9	3	2	7	8	---

Note: A = Always, F = Frequently, S = Sometimes, N = Never.

Source: Compiled from data submitted in response to Commission questionnaires.

Many firms cited quality, product availability, new styles and innovation, and technical support as significant factors other than price that differentiates domestic and imported ceramic tile. Several importers stated that mosaic tile was available from China but not from U.S. producers. Several importers stated that Chinese product offers newer styles and innovations, as well as certain sizes, varieties, styles, and matching components that domestic producers do not. One firm reported that domestic producers require large minimum order quantities. One firm also reported that lower quality and high freight rates for Chinese product limits its impact in the market. Importer *** reported that Chinese producers have advantages in the availability of the glass raw material and availability of skilled manual laborers, digital glaze printing technology, and skilled digital graphic designers to produce realistic simulated stone/wood/metal/concrete visuals, as well as high factory daily output with high quality control acceptance rates.

Elasticity estimates

This section discusses elasticity estimates. No parties provided comments on these estimates in their prehearing or posthearing briefs.

U.S. supply elasticity

The domestic supply elasticity for ceramic tile measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of ceramic tile. The elasticity of

domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced ceramic tile. Analysis of these factors above indicates that the U.S. industry has a moderately high ability to moderately increase or decrease shipments to the U.S. market; an estimate in the range of 4 to 8 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for ceramic tile measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of ceramic tile. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the ceramic tile in the production of any downstream products. Based on the available information, the aggregate demand for ceramic tile is likely to be moderately inelastic to moderately elastic; a range of -0.75 to -1.25 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[16] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/ discounts/ promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced ceramic tile and imported ceramic tile is likely to be in the range of 4 to 6.

[16] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

Part III: U.S. producers' production, shipments, and employment

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the subsidies and dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire responses of thirteen firms that accounted for the vast majority of U.S. production of ceramic tile during 2018.

U.S. producers

The Commission issued a U.S. producer questionnaire to fifteen firms based on information contained in the petition and publicly available sources. Thirteen firms provided usable data on their production operations. Staff believes that these responses represent the vast majority of U.S. production of ceramic tile in 2018.[1]

Table III-1 lists U.S. producers of ceramic tile, their production locations, positions on the petition, and shares of total production. *** accounted for *** percent of reported U.S. production in 2018.

[1] Based on data from *** and ***.

Table III-1
Ceramic tile: U.S. producers, their position on the petition, location of production, and share of reported production, 2018

Firm	Position on petition	Production location(s)	Share of production (percent)
American Wonder	Petitioner	Lebanon, TN	***
Crossville	Petitioner	Crossville, TN	***
Dal-Tile	Petitioner	Dickson, TN Sunnyvale, TX El Paso, TX Gettysburg, PA Muskogee, OK Florence, AL	***
Del Conca	Petitioner	Loudon, TN	***
Florida Tile	Petitioner	Lawrenceburg, KY	***
Florim	Petitioner	Clarksville, TN	***
Interceramic	***	Garland, TX	***
Ironrock	***	Canton, OH	***
Landmark	Petitioner	Mount Pleasant, TN	***
MPM	***	Hawthorne, CA Gardena, CA	***
Pratt	***	Portland Oregon	***
Stonepeak	Petitioner	Crossville, TN	***
Syzygy	***	Silver City, NM	***
Total			100.0

Note: ***. Petitioners' posthearing brief, exh. 1.

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-2 presents information on U.S. producers' ownership, related and/or affiliated firms. As indicated, one U.S. producer (***) is related to a manufacturer of ceramic tile in China. In addition, as discussed in greater detail below, three U.S. producers (***) directly import ceramic tile from China. Seven U.S. producers are related to manufacturers of ceramic tile in countries other than China, and eight import ceramic tile from countries other than China.

Table III-2
Ceramic tile: U.S. producers' ownership, related and/or affiliated firms

Item / Firm	Firm Name	Affiliated/Ownership
Ownership:		
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
Related importers/exporters:		
***	***	***
Related producers:		
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-3 presents a timeline of major developments in the domestic ceramic tile industry since January 1, 2016.

Table III-3
Ceramic tile: Important industry events since January 1, 2016

Date	Firm	Event description
March 2016	Dal-Tile	Opened a new facility in Dickson, Tennessee, capable of producing high-end, large-size porcelain tile, that the firm previously imported, along with applying various post-firing finishing applications.[1]
June 2016	Atlas Concord USA	Opened a new production facility in Franklin, Tennessee, which is also the location for its showroom and distribution center.[2]
June 2016	Landmark	Started production operations at its new $85-million facility in Mount Pleasant, Tennessee.[3]
November 2016	Florida Tile	Announced expansion plans for its facility in Lawrenceburg, Kentucky, with the new kiln, rectification line, and section line for packaging reportedly completed in 2016.[4]
December 2016	Del Conca	Started-up two new production lines, each with a large-scale press, and a new kiln at its facility in Loudon, Tennessee, not only expanded capability to produce wider ranges of tile sizes and styles but also doubled production capacity from 32 million square-feet per year to 65 million square-feet per year.[5] This capital investment of over $30 million that also created 40 new jobs, reportedly "...to capitalized on the growing demand in the U.S. market..."[6]
***	Del Conca	***.[7]
February 2017	Landmark	Announced plans to add a third workforce shift to fulfill an initial plan to operate 24 hours a day at its facility in Mount Pleasant, Tennessee.[8]
April 2017	American Wonder	Opened a new production facility in Lebanon, Tennessee.[9]
June 2017	Dal-Tile	Announced plans for a second facility in Dickson Tennessee, with construction scheduled to begin in summer 2017 and operations scheduled to begin in late-2018.[10]
March 2018	Florim	Sought zoning approval for constructing a new 420,000 square-foot warehouse at its Clarksville, Tennessee facility,[11] but the previously planned construction was subsequently postponed, being attributed to a recent downturn in sales.[12]
May 2018	Stonepeak	Announced its first production line in the United States dedicated to 120-inches by 60-inches large format ("gauged") porcelain panels ranging from 6 mm (0.24 inch) to 20 mm (0.79 inch) thick.[13]
June 2018	Wedi North America	Opened a new production facility in Batavia, Illinois.[14]
September 2018	Stonepeak	Started-up a new jumbo kiln that will expand production by 20 percent and production of larger-sized porcelain panels at its new facility in Crossville, Tennessee.[15]
December 2018	Portobello America	Announced a planned $150-million investment to construct a new facility in Baxter Tennessee, with production anticipated to commence in 2021.[16] [17]
2019-20	Dal-Tile	Held back on previously planned capital expenditures of $60 million at its Dickson, Tennessee facility; $40 million at its El Paso, Texas facility; and modernization of its Sunnyvale, TX facility.[18]

Notes continued on next page.

[1] Respondents' postconference brief, exhibit 4-A; Respondents' prehearing brief, exhibit 3-A-6: *The Tennessean*, "Dal-Tile Building Second Dickson Plant, Nearly 250 New Jobs Expected, June 22, 2017; Respondents' postconference brief, exhibit 5: Chevalier, Jessica, "Ceramic Tile Report, the U.S. Ceramic tile Market Continues to Reinvent Itself," *Floor Daily*, March 2017; Respondents' prehearing brief, exhibit 3-A-9: *Stone World*, "Dal-Tile Acquires Production Facility in Mexico, Begins Construction of Facility in Tennessee," July 17, 2015.
[2] Respondents' postconference brief, p. 8; *Floor Daily*, "Atlas Concorde to Open U.S. Tile Plant in Franklin, Tennessee in June," April 19, 2016, https://www.floordaily.net/flooring-news/atlas-concorde-to-open-us-tile-plant-in-franklin; Moore, Lauren, "Atlas Concorde Sets Up Production Stateside," *Floor Covering Weekly*, August 9, 2018, https://www.floorcoveringweekly.com/main/topnews/atlas-concorde-sets-up-production-stateside-24079.
[3] Bennet, James, "Tile Plant Fires Up Production in Mt. Pleasant," *The Daily Herald* (Columbia, TN), June 28, 2016, https://www.columbiadailyherald.com/news/local-news/james-bennett-column-tile-plant-fires-production-mt-pleasant.
[4] Respondents' postconference brief, exhibit 5: Chevalier, Jessica, "Ceramic Tile Report, the U.S. Ceramic tile Market Continues to Reinvent Itself," *Floor Daily*, March 2017; Area Development Newsdesk, "Florida Tile Expands Its Lawrenceburg, Kentucky, Manufacturing-Distribution Hub," November 9, 2015, https://www.areadevelopment.com/newsitems/11-9-2015/florida-tile-distribution-center-lawrenceburg-kentucky892348.shtml.
[5] Respondents' postconference brief, exhibit 4-F: "Del Conca USA, About Us"; exhibit 5: Chevalier, Jessica, "Ceramic Tile Report, the U.S. Ceramic tile Market Continues to Reinvent Itself," *Floor Daily*, March 2017; Respondents' prehearing brief, exhibit 3-F-1: *Stone World*, "Del Conca USA Doubles Capacity at Facility in Tennessee," May 4, 2016; Respondents' prehearing brief, exhibit 3-F-2: "About Us, Del Conca USA;" SACMI Group, "Del Conca USA Doubles Its Output Capacity," February 10, 2017, http://www.sacmi.com/en-US/News-Area/News-by-Business/Ceramics/Del-Conca-USA-doubles-its-output-capacity.aspx?idC=61115&idO=26458&LN=en-US.
[6] Respondents' postconference brief, p. 9; Conference transcript, p. 44 (Haynes).
[7] Petitioners' postconference brief, attachment A "Responses to Commission staff questions," p. 21.
[8] Bennett, James, "Landmark Ceramics Opens with Success, Plans to Add Third Shift for Production," *The Daily Herald* (Columbia, TN), February 27, 2017, https://www.columbiadailyherald.com/news/local-news/james-bennett-column-tile-plant-fires-production-mt-pleasant.
[9] Petitioners' postconference brief, attachment A "Responses to Commission staff questions," p. 22-23; Respondents' postconference brief, exhibit 1: "Response to staff questions," p. 21; exhibit 2: "Declaration of Marisa Bedrosian, Bedrosians Tile & Stone," attachment 2 "New State-of-the-Art Tile Manufacturing Plants Opens in Lebanon," April 13, 2017; exhibit 5: Chevalier, Jessica, "Ceramic Tile Report: The U.S. Ceramic Tile Market Continues to Reinvent Itself," *Floor Daily*, March 2017.
[10] Respondents' postconference brief, exhibit 4-A; Respondents' prehearing brief, exhibit 3-A-6: *The Tennessean*, "Dal-Tile Building Second Dickson Plant, Nearly 250 New Jobs Expected, June 22, 2017.
[11] Settle, Jimmy, "Clarksville Florim Ceramic Tile Plant Seeks Rezoning for Expansion," Leaf Chronicle, USA Today Network, March 28, 2018, https://www.theleafchronicle.com/story/news/local/clarksville/2018/03/28/clarksville-florim-ceramic-tile-plant-seeks-rezoning-expansion/467519002/.
[12] Petitioners' postconference brief, attachment A "Responses to Commission staff questions," p. 22; conference transcript, p. 43 (Haynes).
[13] Respondents' prehearing brief, exhibit 3-E-3: Stonepeak Ceramics Inc., "Stonepeak First Tile Manufacturer of Large Porcelain Slabs in the USA," no date.
[14] Respondents' postconference brief, p. 8; Goddin, Lesley, "Wedi North America Celebrates Official Factory Grand Opening in the United States," *Tile Letter*, June 12, 2018, http://tileletter.com/2018/06/wedi-north-america-celebrates-official-factory-grand-opening-in-the-united-states/.

Notes continued on next page.

[15] Goddin, Lesley, "StonePeak Ceramis Celebrates $70 Million Expansion to Crossville, Tenn. Plant," *Tile Letter*, October 10, 2018, http://tileletter.com/2018/10/stonepeak-ceramics-celebrates-expansion/; Area Development News Desk, "Stonepeak Ceramics Plans $70 Million Expansion at Crossville, Tennessee, Plant," Tennessee Department of Economic & Community Development ("TNECD"), September 14, 2018, https://www.areadevelopment.com/newsItems/9-14-2018/stonepeak-ceramics-crossville-tennessee.shtml; Respondents' prehearing brief, exhibit 3-E-2: Business Facilities, "Stonepeak Ceramics Investing $70M In Tennessee Expansion," September 13, 2018; Respondents' postconference brief, exhibit 1: "Response to staff questions," pp. 20-21; exhibit 2: "Declaration of Marisa Bedrosian, Bedrosians Tile & Stone," attachment 2 "Stonepeak Ceramics Open New Production Line in Tennessee Location."
[16] Respondents' postconference brief, exhibit 1: "Response to staff questions," pp. 21-23; exhibit 2: "Declaration of Marisa Bedrosian, Bedrosians Tile & Stone," attachment 3 "Brazil's Biggest Ceramic Tile Maker Plans $150 Million Plant Near Cookeville, Tennessee," *Times Free Press*, December 4, 2018; exhibit 7: ***; exhibit 7: "Portobello America Chooses Tennessee for First U.S. Production Facility," *Business Facilities*, December 3, 2018.
[17] Portobello stated that the new facility ***. Petitioners' postconference brief, exhibit A.8: ***.
[18] Testimony of Mattioli, p. 4.

Source: References cited: Petitioners' postconference brief, attachment A "Responses to Commission staff questions;" Respondents' postconference brief, exhibit 1: "Response to staff questions;" corporate, local news, and industry publication Internet websites.

Table III-4 presents U.S. producers' reported changes in operations since January 1, 2016.

Table III-4
Ceramic tile: U.S. producers' reported changes in operations, since January 1, 2016

Item / Firm	Reported changed in operations
Plant openings:	
***	***
***	***
***	***
Expansions:	
***	***
***	***
***	***
***	***
***	***
Acquisitions:	
***	***
Prolonged shutdowns or curtailments:	
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***

Table continued on next page.

Table III-4—Continued
Ceramic tile: U.S. producers' reported changes in operations, since January 1, 2016

Revised labor agreements:	
***	***
***	***
Other:	
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

As shown, three U.S. producers opened plants, five expanded operations, one acquired ***, ten experienced prolonged shutdowns or curtailments, two revised labor agreements, and one reported an "other" change in operations.

U.S. production, capacity, and capacity utilization

Table III-5 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. Production capacity increased each calendar year, ending 15.6 percent higher in 2018 than in 2016, with eight of thirteen firms reporting an increase in capacity and three (American Wonder, Dal-Tile, and Landmark) starting new facilities.[2] Reported capacity was 3.0 percent lower in January to September 2019 than in January to September 2018 due to two firms (***) that reported shutdowns or curtailments in 2019.[3] U.S. production was 1.5 percent higher in 2018 than in 2016, increasing 11.6 percent from 2016 to 2017 but decreasing 9.1 percent from 2017 to 2018.[4] Production was 9.3 percent lower in January to September 2019 than in January to September 2018.[5] Capacity utilization decreased by 10.9

[2] Conference transcript, p. 16 (Lewis) and "Ceramic: Suppliers ramp up domestic production, capacity," Floor Covering News, July 5, 2017, found at https://fcnews.net/2017/07/ceramic-suppliers-ramp-up-domestic-production-capacity/, accessed on May 13, 2019.

[3] ***.

[4] The increase in production was largely due to two startups. Startup *** increased production by *** percent from 2016 to 2018 while startup ***.

[5] Lower 2019 partial-year production was largely attributable to ***.

percentage points from 2016 to 2018 and was 5.1 percentage points lower in January to September 2019 than in January to September 2018.

Table III-5
Ceramic tile: U.S. producers' capacity, production, and capacity utilization, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Capacity (1,000 square feet)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total capacity	1,007,886	1,128,296	1,165,482	889,523	862,658
	Production (1,000 square feet)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total production	895,622	999,528	908,820	709,133	643,304

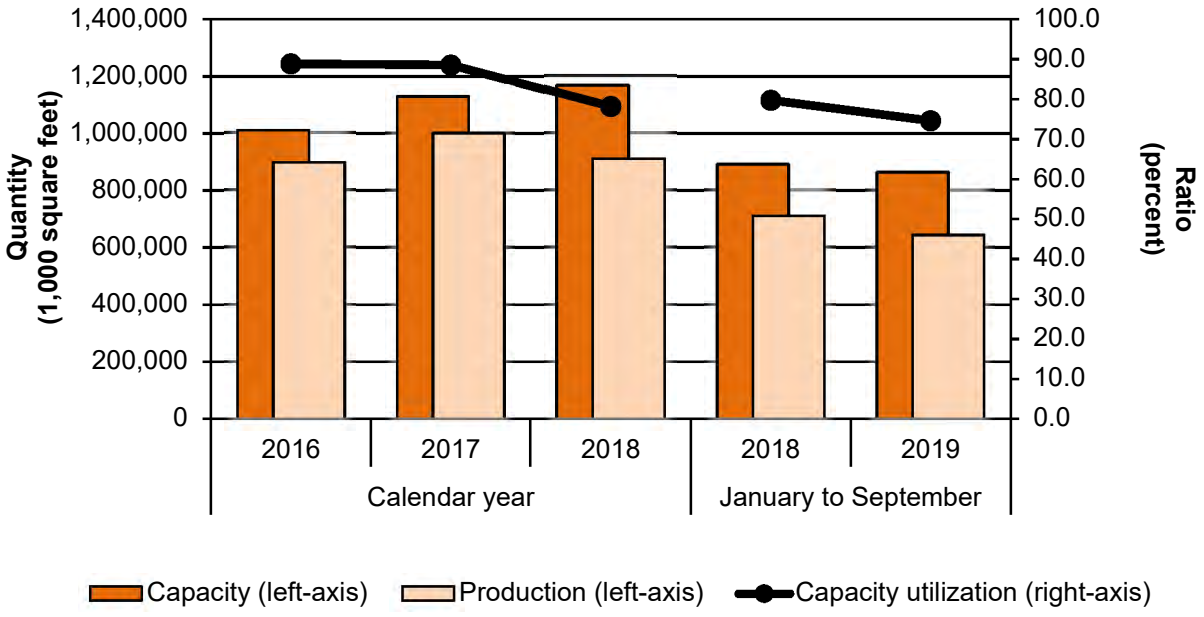
Table continued on next page.

Table III-5--Continued
Ceramic tile: U.S. producers' capacity, production, and capacity utilization, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Capacity utilization (percent)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average capacity utilization	88.9	88.6	78.0	79.7	74.6

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-1
Ceramic tile: U.S. producers' capacity, production, and capacity utilization, 2016-18, January to September 2018, and January to September 2019



Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers' U.S. shipments and exports

Table III-6 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. shipments increased from 2016 to 2017 by 5.5 percent then decreased by 4.7 percent from 2017 to 2018, ending 0.6 percent higher in 2018 than in 2016, by quantity.[6] U.S. shipments were 6.4 percent lower in January to September 2019 than in January to September 2018, by quantity.[7] By value, U.S. shipments increased from 2016 to 2017 by 6.3 percent, then decreased from 2017 to 2018 by 3.0 percent, ending 3.1 percent higher in 2018 than in 2016. By value, U.S. shipments were 4.3 lower in January to September 2019 than in January to September 2018.

Average unit values ("AUVs") for U.S. shipments increased from $1.37 per square foot in 2016 to $1.41 per square foot in 2018, and were $1.43 per square foot in 2019 compared with $1.40 per square foot in 2018. In 2018, all but three firms reported AUVs within a range from $0.75 to $2.68 per square foot.[8]

Four firms reported internal consumption and three firms reported transfers to related firms. AUVs for internal consumption and transfers to related firms were lower than unit values U.S. shipments for all periods.[9] [10]

Export shipments comprised 1.2 percent of total shipments in 2018, by quantity.[11] Export shipments decreased from 2016 to 2017 by 0.7 percent then increased by 4.1 percent from 2017 to 2018, ending 3.3 percent higher in 2018 than in 2016, by quantity. Export

[6] Five firms reported increased U.S. shipments from 2016 to 2018 while eight reported decreased shipments from 2016 to 2018. ***.

[7] Most of the difference in partial year shipment quantities was due to ***.

[8] ***.

[9] The vast majority of internal consumption was attributable to ***.

[10] Most of the transfers to related firms are attributable to ***.

[11] Nine firms reported exports in 2018, with ***.

shipments were 2.2 percent lower in January to September 2019 than in January to September 2018, by quantity.

Table III-6
Ceramic tile: U.S. producers' U.S. shipments, export shipments, and total shipments, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
Commercial U.S. shipments	850,230	900,718	867,695	661,376	620,709
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
U.S. shipments	884,741	933,827	889,973	680,155	636,950
Export shipments	10,029	9,955	10,363	7,961	7,787
Total shipments	894,770	943,782	900,336	688,116	644,737
	Value (1,000 dollars)				
Commercial U.S. shipments	1,180,192	1,259,559	1,231,188	935,487	895,532
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
U.S. shipments	1,214,136	1,290,801	1,252,033	952,443	911,026
Export shipments	15,715	16,845	17,411	13,370	12,673
Total shipments	1,229,851	1,307,646	1,269,444	965,813	923,699
	Unit value (dollars per square foot)				
Commercial U.S. shipments	1.39	1.40	1.42	1.41	1.44
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
U.S. shipments	1.37	1.38	1.41	1.40	1.43
Export shipments	1.57	1.69	1.68	1.68	1.63
Total shipments	1.37	1.39	1.41	1.40	1.43
	Share of quantity (percent)				
Commercial U.S. shipments	95.0	95.4	96.4	96.1	96.3
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
U.S. shipments	98.9	98.9	98.8	98.8	98.8
Export shipments	1.1	1.1	1.2	1.2	1.2
Total shipments	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
Commercial U.S. shipments	96.0	96.3	97.0	96.9	97.0
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
U.S. shipments	98.7	98.7	98.6	98.6	98.6
Export shipments	1.3	1.3	1.4	1.4	1.4
Total shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-7 and figures III-2 and III-3 present information on U.S. producers' U.S. shipments by product type. In 2018, non-mosaic tile comprised *** percent of U.S. shipments, by quantity, and *** percent, by value. Mosaic tiles comprised the remaining *** percent of U.S. shipments, by quantity, and *** percent, by value.12 U.S. shipments of mosaic ceramic tile decreased from *** square feet in 2016 to *** square feet in 2018 (a decrease of *** percent), and were *** square feet in January to September 2019 compared with *** square feet in January to September 2018 (a difference of *** percent).

Of mosaic and non-mosaic tile ceramic combined, floor tile comprised *** percent of U.S. shipments, by quantity, in 2018.[13] [14] Wall tile comprised *** percent of U.S. shipments of mosaic and non-mosaic tile combined, by quantity, in 2018. "Other" tile comprised *** percent of U.S. shipments of mosaic and non-mosaic tile combined, by quantity, in 2018.[15] Of mosaic tile, the vast majority of U.S. shipments were floor tile.[16] [17]

The unit value of non-mosaic tile was $*** per square foot compared with $*** per square foot for mosaic tile in 2018. Of mosaic and non-mosaic tile shipments combined, unit values were $*** per square foot for floor tile, $*** per square foot for wall tile, and $*** per square foot for "other" tile, in 2018.[18]

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[12] Eight out of thirteen U.S. producers reported shipments of mosaic tiles. ***.

[13] Responding producers were instructed that any tile meeting the questionnaire's definitions of both floor ceramic tile and wall ceramic tile should be classified as floor ceramic tile.

[14] Petitioners stated that products that are called "floor" tile are actually marketed as "floor and wall" tile. The label of "floor" tile only means that the tile is suitable for a floor application, but it is sold and used both as floor and wall tile. Petitioner's postconference brief, May 6, 2019, appendix A, p. 1.

[15] Responding producers reported that "other" ceramic tile included products such as ***. ***.

[16] Only ***.

[17] In 2018, 10 of 13 U.S. producers reported U.S. shipments of ceramic floor tile, 7 reported U.S. shipments of ceramic wall tile, and 3 reported U.S. shipments of other ceramic tile.

[18] Unit values for mosaic wall tile are comparatively high ($*** per square foot in 2018). Of the three firms reporting shipments of mosaic wall tile, unit values in 2018 were: ***.

Table III-7
Ceramic tile: U.S. producers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
Non-mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Non-mosaic and mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
	Value (1,000 dollars)				
Non-mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Non-mosaic and mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
	Unit value (dollars per square foot)				
Non-mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Non-mosaic and mosaic.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Table continued on next page.

Table III-7--Continued
Ceramic tile: U.S. producers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of quantity (percent)				
Non-mosaic.-- Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic.-- Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Non-mosaic and mosaic.-- Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
	Share of value (percent)				
Non-mosaic.-- Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic.-- Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Non-mosaic and mosaic.-- Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-2
Ceramic tile: U.S. producers' U.S. shipment volumes and AUVs, by product type (Non-mosaic vs. Mosaic), 2016-18, January to September 2018, and January to September 2019

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-3
Ceramic tile: U.S. producers' U.S. shipment volumes and AUVs, by product type (Floor vs. Wall vs. Other), 2016-18, January to September 2018, and January to September 2019

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-8 and figure III-4 present U.S. producers' U.S. shipments by water permeability.[19]

Table III-8
Ceramic tile: U.S. producers' U.S. shipments, by water permeability, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. shipments by water permeability.-- Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	884,741	933,827	889,973	680,155	636,950
	Value (1,000 dollars)				
U.S. shipments by water permeability.-- Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	1,214,136	1,290,801	1,252,033	952,443	911,026
	Unit value (dollars per square foot)				
U.S. shipments by water permeability.-- Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	1.37	1.38	1.41	1.40	1.43
	Share of quantity (percent)				
U.S. shipments by water permeability.-- Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. shipments by water permeability.-- Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[19] In 2018, 8 of 13 U.S. producers reported U.S. shipments of porcelain ceramic tile and 6 reported U.S. shipments of non-porcelain ceramic tile.

(*continued*...)

The majority of U.S. producers' U.S. tile shipments were of porcelain tile (approximately *** percent, by quantity, and *** percent, by value).[20] [21] Unit values of porcelain ceramic tile were higher than non-porcelain tile throughout the period for which data were collected ($*** per square foot in 2018 compared with $*** for non-porcelain tile).

Figure III-4
Ceramic tile: U.S. producers' U.S. shipment volumes and AUVs, by water permeability, 2016-18, January to September 2018, and January to September 2019

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers' inventories

Table III-9 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments. Overall, U.S. producers' end-of-period inventories increased by 24.9 percent between 2016 and 2018, and were 4.1 percent lower in January to September 2019 than in January to September 2018. All

[20] In its questionnaires, the Commission defined porcelain tile as "impervious ceramic tile with a water absorption coefficient not exceeding 0.5percent by weight, as measured by the ASTM C373 test method, regardless of clay composition, surface texture, or whether unglazed or glazed." U.S. producer questionnaire, p. 3. Although porcelain tile is defined by its low water absorption rate, ***. Staff field trip report, ***, January 27, 2020.

[21] Eight out of thirteen firms reported shipments of porcelain ceramic tile in 2018. Six firms reported shipments of non-porcelain ceramic tile, with *** accounting for ***.

U.S. producers other than *** reported higher end-of-period inventories in 2018 than in 2016. U.S. producers' ratio of inventories to total shipments increased by 7.0 percentage points between 2016 and 2018 and was 0.9 percentage points higher in January to September 2019 than in January to September 2018.

Table III-9
Ceramic tile: U.S. producers' inventories, 2016-18, January to September 2018, and January to September, 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' end-of-period inventories	258,066	313,811	322,295	333,427	319,787
	Ratio (percent)				
Ratio of inventories to.--					
U.S. production	28.8	31.4	35.5	35.3	37.3
U.S. shipments	29.2	33.6	36.2	36.8	37.7
Total shipments	28.8	33.3	35.8	36.3	37.2

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers' imports

U.S. producers' imports of ceramic tile are presented in table III-10.[22] Three U.S. producers (***) directly imported ceramic tile from China. ***.[23] *** subject imports combined for a ratio to *** production ranging from *** percent to *** percent from 2016 to 2018.[24] *** imported ceramic tile from China in quantities equivalent to *** of its U.S. production.

[22] Four U.S. producers (***) purchased ceramic tile between January 2018 and September 2019. ***. ***. Investigation Nos. 701-TA-621 and 731-TA-1447 (Preliminary): Ceramic Tile from China, Confidential Report, INV-RR-043, May 20, 2019, p. III-11, fn. 10.

[23] Petitioner' postconference brief, Exh. 1, p. 23.

[24] ***.

Table III-10
Ceramic tile: U.S. producers' imports, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
	Narrative				
***	***				
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
	Narrative				
***	***				
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
	Narrative				
***	***				
***	***				

Table continued on next page.

Table III-10--Continued
Ceramic tile: U.S. producers' imports, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
	Narrative				
***	***				
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
	Narrative				
***	***				
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
	Narrative				
***	***				

Table continued on next page.

Table III-10--Continued
Ceramic tile: U.S. producers' imports, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
	Narrative				
***	***				
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
	Narrative				
***	***				
	Quantity (1,000 square feet)				
***	***	***	***	***	***
***	***	***	***	***	***
	Ratio (percent)				
***	***	***	***	***	***
	Narrative				
***	***				

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. employment, wages, and productivity

Table III-11 shows U.S. producers' employment-related data. The number of production and related workers ("PRWs") increased by 0.6 percent from 2016 to 2018, and was 3.0 percent lower in January to September 2019 than in January to September 2018. *** was offset by higher employment at other U.S. producers with most of the increase due to ***. U.S. producers' wages paid, hourly wages, productivity, and unit labor costs increased, while total hours worked and hours worked per employee decreased between 2016 and 2018.

Table III-11
Ceramic tile: U.S. producers' employment related data, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
Production and related workers (PRWs) (number)	3,378	3,533	3,399	3,423	3,322
Total hours worked (1,000 hours)	7,122	7,396	6,990	5,428	5,202
Hours worked per PRW (hours)	2,108	2,093	2,056	1,586	1,566
Wages paid ($1,000)	170,681	183,701	179,494	136,464	134,537
Hourly wages (dollars per hour)	$23.97	$24.84	$25.68	$25.14	$25.86
Productivity (square feet per hour)	125.8	135.1	130.0	130.6	123.7
Unit labor costs (dollars per square foot)	$0.19	$0.18	$0.20	$0.19	$0.21

Source: Compiled from data submitted in response to Commission questionnaires.

Part IV: U.S. imports, apparent U.S. consumption, and market shares

U.S. importers

The Commission issued importer questionnaires to 81 firms believed to be importers of subject ceramic tile, as well as to all U.S. producers of ceramic tile.[1] Usable questionnaire responses were received from 38 companies, representing *** percent of U.S. imports from China in 2018, by quantity, and *** percent of imports from nonsubject sources, by quantity, under HTS heading 6907.[2] [3] Table IV-1 lists all responding U.S. importers of ceramic tile from China and other sources, their locations, and their shares of U.S. imports, in 2018.

[1] The Commission issued questionnaires to those firms identified in the petition, along with firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), may have accounted for more than one percent of total imports under HTS heading 6907 in 2018.

[2] Three of the responding firms, ***. ***.

[3] Prior to 2017, in-scope ceramic tile was imported under both HTS headings 6907 and 6908.

Table IV-1
Ceramic tile: U.S. importers, their headquarters, and share of total imports by source, 2018

Firm	Headquarters	Share of imports by source (percent)		
		China	Nonsubject sources	All import sources
American Wonder	Lebanon, TN	***	***	***
Anatolia	Vaughan, Canada, ON	***	***	***
Barcelona	Johnson City, TN	***	***	***
Bedrosians	Fresno, CA	***	***	***
C and C Cabinet	Honolulu, HI	***	***	***
Crossville	Crossville, TN	***	***	***
Dal-Tile	Dallas, TX	***	***	***
Del Conca	Loudon, TN	***	***	***
Design and Direct	Portland, OR	***	***	***
EV Materials	Anaheim, CA	***	***	***
FD Sales	Atlanta, GA	***	***	***
Florida Tile	Lexington, KY	***	***	***
Florim	Clarksville, TN	***	***	***
Golden	Honolulu, HI	***	***	***
Home Depot	Atlanta, GA	***	***	***
IB Supply	Carrollton, TX	***	***	***
Interceramic	Carrollton, TX	***	***	***
Jeffrey Court	Norco, CA	***	***	***
Kertiles	Miami, FL	***	***	***
LG Sourcing	Mooresville, NC	***	***	***
Landmark	Mount Pleasant, TN	***	***	***
Louisville	Louisville, KY	***	***	***
Luxterra	Miami, FL	***	***	***
Magic Village	Orlando, FL	***	***	***
Master's	Sunrise, FL	***	***	***
Merola	Manalapan, NJ	***	***	***
Metropica	Sunrise, FL	***	***	***
Mohawk	Calhoun, GA	***	***	***
MS International	Orange, CA	***	***	***
Ottimo	Anaheim, CA	***	***	***
Polus	Houston, TX	***	***	***
Roca	Dalton, GA	***	***	***
Stone Pride	Anaheim, CA	***	***	***
Stonepeak	Chicago, IL	***	***	***
Styleaccess	Carrollton, TX	***	***	***
Tile International	Humacao, P	***	***	***
Tile Outlets	Atlanta, GA	***	***	***
Tile Shop	Guaynabo, PR	***	***	***
Total		***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. imports

The quantity of U.S. imports from China, the largest source in each year from 2016 through 2018, increased 19.1 percent between 2016 and 2018, increasing 13.4 percent in 2017 and 5.1 percent in 2018. By value, U.S. imports from China increased 21.4 percent between 2016 and 2018, increasing 14.5 percent in 2017 and 6.1 percent in 2018. Imports from China were 18.1 percent lower in January to September 2019 than in January to September 2018, by quantity, and 5.0 percent lower, by value.

U.S. imports from nonsubject sources increased 7.1 percent between 2016 and 2018, by quantity, increasing 2.9 percent in 2017 and 4.1 percent in 2018. Imports from nonsubject sources were 5.8 percent higher in January to September 2019 than in January to September 2018, by quantity. U.S. imports from the largest nonsubject sources exhibited different trends. Imports from largest single nonsubject source, Mexico, declined in each year from 2016 through 2018, ending 18.5 percent lower in 2018 than in 2016, by quantity. Imports from Mexico were 1.9 percent lower in January to September 2019 than in January to September 2018.[4] U.S. imports from Italy, the second largest source, also declined, by 6.6 percent from 2016 to 2018, while U.S. imports from Spain, the third largest source, increased by 68.7 percent and the fourth largest source, Brazil, increased 60.7 percent, all by quantity.

The average unit values of imports from nonsubject sources in aggregate were higher than those for imports from China in each year from 2016 through 2018. The average unit values for imports from Italy and Spain were consistently higher than imports from China from 2016 through 2018, while the average unit values of imports from Brazil and Mexico were lower than imports from China from 2016 through 2018.[5]

The ratio of U.S. imports from China to U.S. production increased by 11.3 percentage points from 2016 to 2018. The ratio of U.S. imports from nonsubject sources to U.S. production increased by 8.7 percentage points between 2016 and 2018.

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[4] The petitioner and respondents stated that the decline in U.S. imports from Mexico were the result of increased demand in Mexico, coupled with increased freight costs, and decline in demand in the United States for red body tile, the predominant ceramic tile produced in Mexico. Conference transcript, p. 179 (Shah), petitioner's postconference brief, exh. 1 pp. 17-19.

[5] Petitioner and respondents noted that it is difficult to compare average unit values from different sources given the mix of products.

Table IV-2 and figure IV-1 present data for U.S. imports of ceramic tile from China and all other sources.

Table IV-2
Ceramic tile: U.S. imports, by source, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. imports from.--					
China	579,525	657,077	690,322	516,841	423,237
Mexico	464,228	397,476	378,168	292,812	287,272
Italy	384,715	378,754	359,214	277,690	248,838
Spain	183,060	244,832	308,846	238,265	260,585
Brazil	98,852	111,346	158,811	114,472	151,499
All other sources	269,809	309,333	295,163	226,097	268,282
Nonsubject sources	1,400,664	1,441,741	1,500,202	1,149,335	1,216,477
All import sources	1,980,189	2,098,818	2,190,524	1,666,176	1,639,713
	Value (1,000 dollars)				
U.S. imports from.--					
China	514,288	588,681	624,447	453,628	430,886
Mexico	265,226	219,942	229,995	178,466	178,240
Italy	749,496	747,346	708,731	548,363	496,414
Spain	243,662	307,299	358,031	276,639	323,474
Brazil	62,867	77,595	100,853	73,383	91,289
All other sources	255,236	276,007	270,214	208,458	218,873
Nonsubject sources	1,576,486	1,628,188	1,667,824	1,285,309	1,308,290
All import sources	2,090,774	2,216,869	2,292,270	1,738,937	1,739,176
	Unit value (dollars per square foot)				
U.S. imports from.--					
China	0.89	0.90	0.90	0.88	1.02
Mexico	0.57	0.55	0.61	0.61	0.62
Italy	1.95	1.97	1.97	1.97	1.99
Spain	1.33	1.26	1.16	1.16	1.24
Brazil	0.64	0.70	0.64	0.64	0.60
All other sources	0.95	0.89	0.92	0.92	0.82
Nonsubject sources	1.13	1.13	1.11	1.12	1.08
All import sources	1.06	1.06	1.05	1.04	1.06

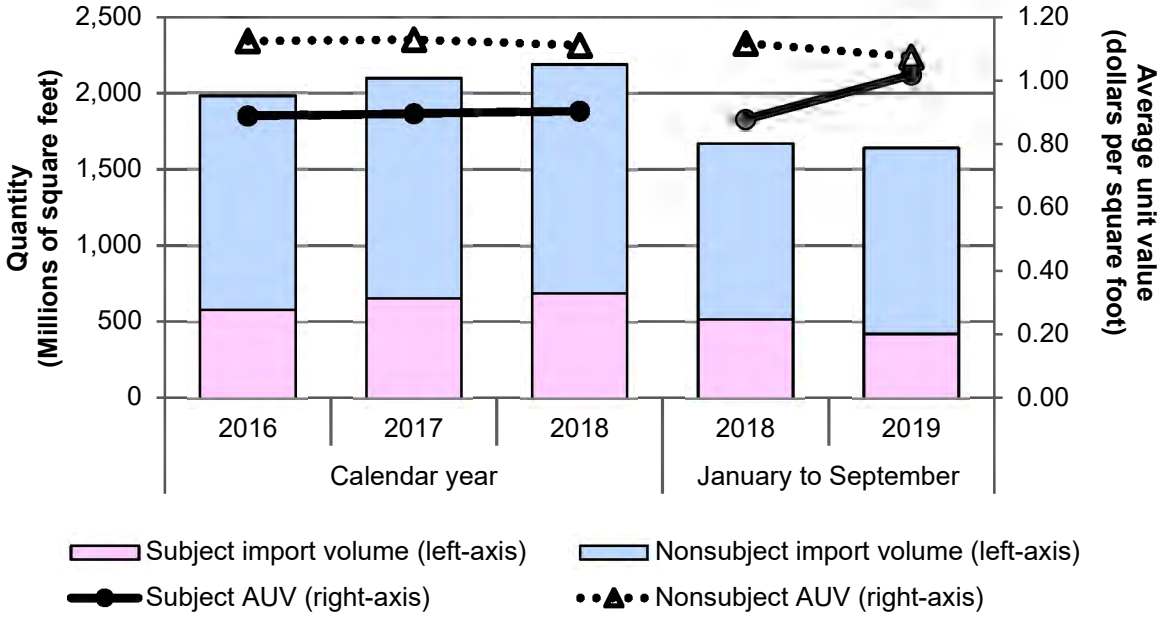
Table continued on next page.

Table IV-2--Continued
Ceramic tile: U.S. imports, by source, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of quantity (percent)				
U.S. imports from.--					
China	29.3	31.3	31.5	31.0	25.8
Mexico	23.4	18.9	17.3	17.6	17.5
Italy	19.4	18.0	16.4	16.7	15.2
Spain	9.2	11.7	14.1	14.3	15.9
Brazil	5.0	5.3	7.2	6.9	9.2
All other sources	13.6	14.7	13.5	13.6	16.4
Nonsubject sources	70.7	68.7	68.5	69.0	74.2
All import sources	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. imports from.--					
China	24.6	26.6	27.2	26.1	24.8
Mexico	12.7	9.9	10.0	10.3	10.2
Italy	35.8	33.7	30.9	31.5	28.5
Spain	11.7	13.9	15.6	15.9	18.6
Brazil	3.0	3.5	4.4	4.2	5.2
All other sources	12.2	12.5	11.8	12.0	12.6
Nonsubject sources	75.4	73.4	72.8	73.9	75.2
All import sources	100.0	100.0	100.0	100.0	100.0
	Ratio to U.S. production				
U.S. imports from.--					
China	64.7	65.7	76.0	72.9	65.8
Mexico	51.8	39.8	41.6	41.3	44.7
Italy	43.0	37.9	39.5	39.2	38.7
Spain	20.4	24.5	34.0	33.6	40.5
Brazil	11.0	11.1	17.5	16.1	23.6
All other sources	30.1	30.9	32.5	31.9	41.7
Nonsubject sources	156.4	144.2	165.1	162.1	189.1
All import sources	221.1	210.0	241.0	235.0	254.9

Source: Official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020.

Figure IV-1
Ceramic tile: U.S. import volumes and AUVs, 2016-18, January to September 2018, and January to September 2019



Source: Official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020.

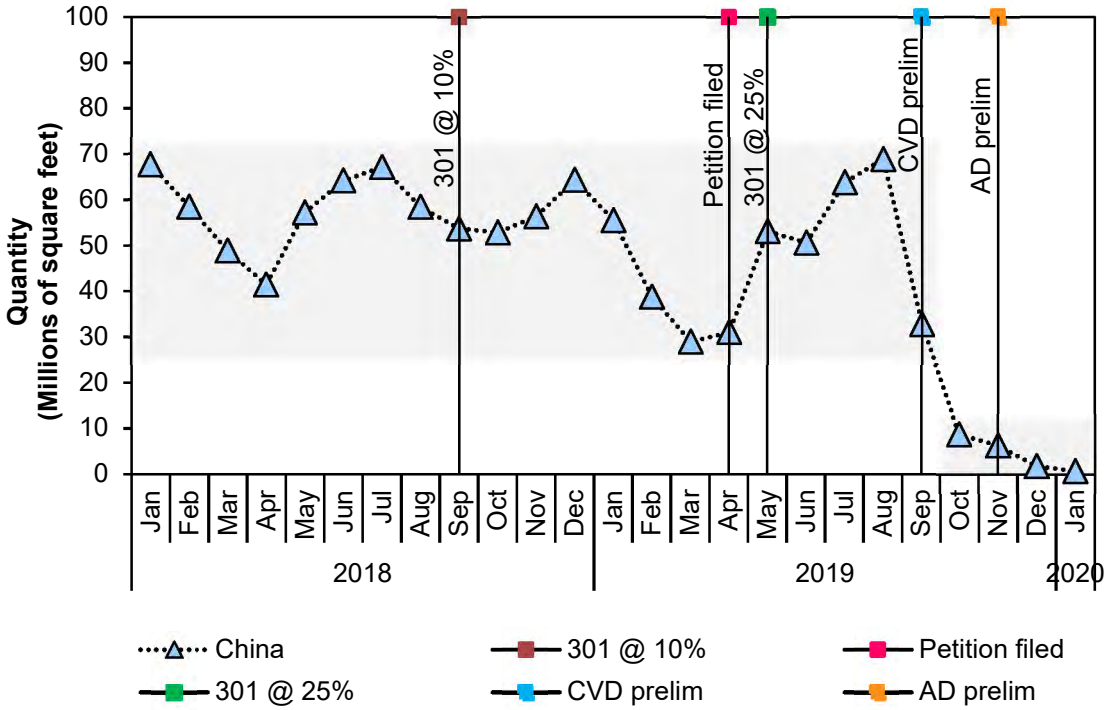
U.S. monthly imports of ceramic tile from China fluctuated from January 2018 to July 2019 before decreasing from August 2019 to January 2020, by quantity. Table IV-3 and figure IV-2 present monthly imports from January 2018 to January 2020.

Table IV-3
Ceramic tile: U.S. monthly imports, January 2018 to January 2020

Month	China	Brazil	Italy	Mexico	Spain	All other sources	Total
	Quantity (1,000 square feet)						
2018.-- January	67,720	9,994	27,704	32,650	22,283	23,779	184,130
February	58,452	8,763	25,917	29,264	23,260	19,898	165,554
March	48,858	10,123	29,038	32,567	27,265	26,009	173,862
April	41,450	10,592	29,961	34,701	24,813	23,313	164,831
May	57,176	14,805	34,817	33,613	29,309	26,987	196,706
June	64,110	11,415	34,363	31,041	28,817	28,584	198,331
July	67,075	17,464	35,256	32,874	30,413	28,074	211,156
August	58,343	16,953	34,901	35,669	31,163	26,423	203,452
September (10 percent 301)	53,656	14,364	25,733	30,432	20,941	23,029	168,155
October	52,872	15,388	28,273	30,828	26,393	25,002	178,757
November	56,321	15,731	27,498	28,708	22,322	21,423	172,003
December	64,288	13,220	25,753	25,820	21,866	22,641	173,589
2019.-- January	55,510	15,226	24,916	34,769	27,568	26,731	184,719
February	38,733	9,005	19,730	31,527	21,672	22,134	142,800
March	28,931	17,011	29,093	35,716	29,460	28,889	169,101
April (Petition filed)	31,066	19,502	27,566	31,690	24,698	25,718	160,240
May (25 percent 301)	53,085	19,769	28,230	36,733	31,018	27,210	196,046
June	50,620	18,617	31,344	30,559	35,728	28,424	195,292
July	63,749	18,091	33,134	28,668	31,986	38,748	214,376
August	68,829	16,824	29,168	30,256	31,979	33,495	210,551
September (Preliminary CVD duties)	32,713	17,455	25,656	27,354	26,478	36,932	166,588
October	8,654	17,377	25,343	28,922	27,975	38,852	147,122
November (Preliminary AD duties)	6,278	17,697	28,414	20,897	31,780	40,254	145,321
December	1,791	16,803	28,506	22,952	30,430	44,400	144,882
2020.-- January	728	17,165	25,659	26,338	25,371	45,483	140,745

Source: Official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020 and March 27, 2020 (for December 2019 and January 2020).

Figure IV-2
Ceramic tile: U.S. monthly imports from China, January 2018 to January 2020



Source: Official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020 and March 27, 2020 (for December 2019 and January 2020).

Critical circumstances

On April 7, 2020, Commerce issued its final determination that "critical circumstances" exist with regard to imports from China of ceramic tile from the China-wide entity.[6] In this investigation, if both Commerce and the Commission make affirmative final critical

[6] 85 FR 19425, April 20, 2020, referenced in app. A. When petitioners file timely allegations of critical circumstances, Commerce examines whether there is a reasonable basis to believe or suspect that (1) either there is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise, or the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV and that there was likely to be material injury by reason of such sales; and (2) there have been massive imports of the subject merchandise over a relatively short period.

circumstances determinations, certain subject imports may be subject to antidumping duties retroactive by 90 days from December 23, 2019, the effective date of Commerce's preliminary affirmative LTFV determination. Table IV-4 and figure IV-3 present this data.

Table IV-4
Ceramic tile: U.S. imports subject to Commerce's final AD critical circumstances determinations, October 2018 to September 2019

Month	Actual monthly quantity (1,000 square feet)	Outwardly cumulative subtotals (1,000 square feet)	Percentage change from comparable period (percent)
2018.-- October	***	***	
November	***	***	
December	***	***	
2019.-- January	***	***	
February	***	***	
March	***	***	
Petition file date: April 10, 2019			
April	***	***	***
May	***	***	***
June	***	***	***
July	***	***	***
August	***	***	***
September	***	***	***

Note: The percent increase or (decrease) is over the comparable pre-petition period.

Source: *** for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on January 27, 2020.

Figure IV-3
Ceramic tile: U.S. imports subject to Commerce's final AD critical circumstances determinations, October 2018 to September 2019

* * * * * * *

Source: *** for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on January 27, 2020.

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[7] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like ceramic tile where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually

[7] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[8] Imports from China accounted for 29.5 percent of total imports of ceramic tile by quantity from April 2018 through March 2019.

Table IV-5 presents data on U.S. imports of ceramic tile in the twelve-month period preceding the filing of the petition.

Table IV-5
Ceramic tile: U.S. imports in the twelve-month period preceding the filing of the petition, April 2018 through March 2019

Item	April 2018 through March 2019	
	Quantity (1,000 square feet)	Share quantity (percent)
U.S. imports from.--		
China	638,465	29.5
Nonsubject sources	1,525,135	70.5
All import sources	2,163,600	100.0

Source: Official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020.

[8] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Apparent U.S. consumption

Table IV-6 presents data on apparent U.S. consumption for ceramic tile. In 2018, apparent U.S. consumption was 3.1 billion square feet ($3.5 billion). By quantity, apparent consumption increased by 7.5 percent between 2016 and 2018, increasing by 5.9 percent in 2017 and 1.6 percent in 2018, and was 3.0 percent lower in January to September 2019 than in January to September 2018. By value, apparent U.S. consumption increased by 7.2 percent between 2016 and 2018, increasing by 6.1 percent in 2017 and 1.0 percent in 2018, and was 1.5 percent lower in January to September 2019 than in January to September 2018.

Table IV-6
Ceramic tile: Apparent U.S. consumption, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	884,741	933,827	889,973	680,155	636,950
U.S. imports from.--					
China	579,525	657,077	690,322	516,841	423,237
Mexico	464,228	397,476	378,168	292,812	287,272
Brazil	98,852	111,346	158,811	114,472	151,499
All other sources	837,584	932,919	963,223	742,052	777,705
Nonsubject sources	1,400,664	1,441,741	1,500,202	1,149,335	1,216,477
All import sources	1,980,189	2,098,818	2,190,524	1,666,176	1,639,713
Apparent U.S. consumption	2,864,930	3,032,645	3,080,497	2,346,331	2,276,663
	Value (1,000 dollars)				
U.S. producers' U.S. shipments	1,214,136	1,290,801	1,252,033	952,443	911,026
U.S. imports from.--					
China	514,288	588,681	624,447	453,628	430,886
Mexico	265,226	219,942	229,995	178,466	178,240
Brazil	62,867	77,595	100,853	73,383	91,289
All other sources	1,248,393	1,330,651	1,336,976	1,033,459	1,038,761
Nonsubject sources	1,576,486	1,628,188	1,667,824	1,285,309	1,308,290
All import sources	2,090,774	2,216,869	2,292,270	1,738,937	1,739,176
Apparent U.S. consumption	3,304,910	3,507,670	3,544,303	2,691,380	2,650,203

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020.

U.S. market shares

U.S. market share data are presented in table IV-7 and figure IV-4. U.S. producers' share of apparent consumption was 28.9 percent in 2018. U.S. producers' market share, by quantity, decreased by 2.0 percentage points between 2016 and 2018, and was 1.0 percentage points lower in January to September 2019 than in January to September 2018. U.S. imports from China's market share was 22.4 percent in 2018. The share of imports from China increased by 2.2 percentage points during 2016 to 2018, but was 3.4 percentage points lower in January to September 2019 than in January to September 2018. U.S. imports from nonsubject sources' share of apparent U.S. consumption was 48.7 percent in 2018. Nonsubject imports' share decreased by 0.2 percentage points during 2016 to 2018, but was 4.4 percentage points higher in January to September 2019 than in January to September 2018, by quantity. The share of nonsubject imports from Mexico decreased from 2016 to 2018 by 3.9 percentage points but was 0.1 percentage points higher in January to September 2019 than in January to September 2018, by quantity. The share of nonsubject imports from Brazil increased by 1.7 percentage points from 2016 to 2018 and was 1.8 percentage points higher in January to September 2019 than in January to September 2018, by quantity.

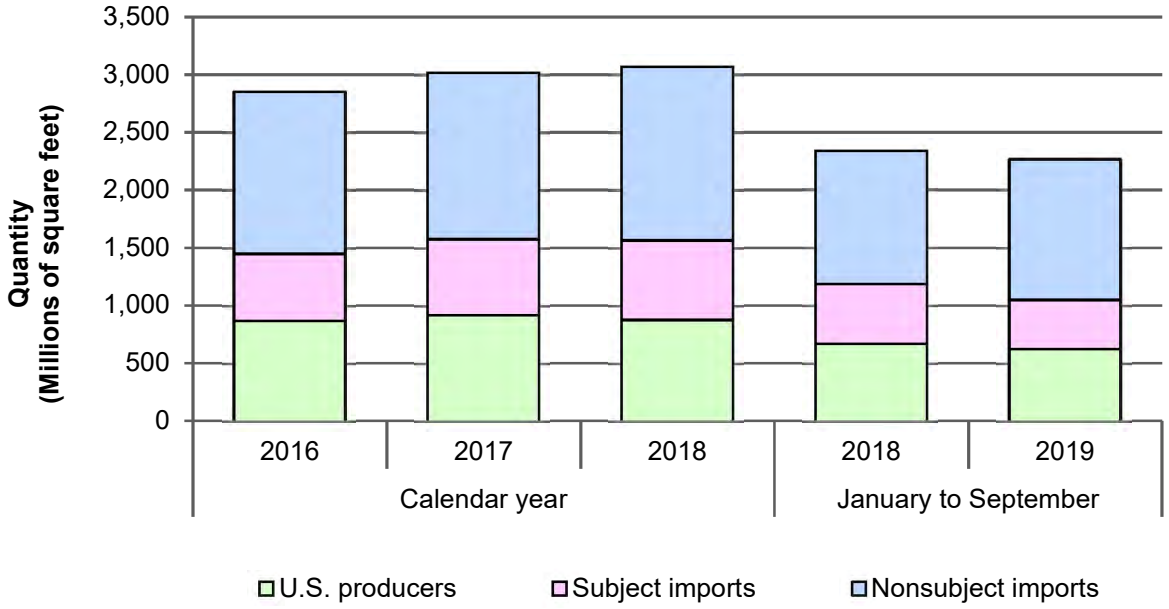
By value, U.S. producers' share of apparent U.S. consumption decreased by 1.4 percentage points between 2016 and 2018, and was 1.0 percentage points lower in January to September 2019 than in January to September 2018. The share of U.S. imports from China increased by 2.1 percentage points during 2016 to 2018, but was 0.6 percentage points lower in January to September 2019 than in January to September 2018. The share of imports from nonsubject sources decreased by 0.6 percentage points during 2016 to 2018, but was 1.6 percentage points higher in January to September 2019 than in January to September 2018. The share of nonsubject imports from Mexico decreased from 2016 to 2018 by 1.5 percentage points but was 0.1 percentage points higher in January to September 2019 than in January to September 2018, by value. The share of nonsubject imports from Brazil increased by 0.9 percentage points from 2016 to 2018 and was 0.7 percentage points higher in January to September 2019 than in January to September 2018, by value.

Table IV-7
Ceramic tile: Market shares, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
Apparent U.S. consumption	2,864,930	3,032,645	3,080,497	2,346,331	2,276,663
	Share of quantity (percent)				
U.S. producers' U.S. shipments	30.9	30.8	28.9	29.0	28.0
U.S. imports from.--					
China	20.2	21.7	22.4	22.0	18.6
Mexico	16.2	13.1	12.3	12.5	12.6
Brazil	3.5	3.7	5.2	4.9	6.7
All other sources	29.2	30.8	31.3	31.6	34.2
Nonsubject sources	48.9	47.5	48.7	49.0	53.4
All import sources	69.1	69.2	71.1	71.0	72.0
	Value (1,000 dollars)				
Apparent U.S. consumption	3,304,910	3,507,670	3,544,303	2,691,380	2,650,203
	Share of value (percent)				
U.S. producers' U.S. shipments	36.7	36.8	35.3	35.4	34.4
U.S. imports from.--					
China	15.6	16.8	17.6	16.9	16.3
Mexico	8.0	6.3	6.5	6.6	6.7
Brazil	1.9	2.2	2.8	2.7	3.4
All other sources	37.8	37.9	37.7	38.4	39.2
Nonsubject sources	47.7	46.4	47.1	47.8	49.4
All import sources	63.3	63.2	64.7	64.6	65.6

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020.

Figure IV-4
Ceramic tile: Apparent U.S. consumption, 2016-18, January to September 2018, and January to September 2019



Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011, 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000, 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051, 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000, 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed on February 11, 2020.

U.S. shipments by product type

Tables IV-8 to IV-14 present data on domestic producers and U.S. importers U.S. shipments by product type and water permeability. Additional data on U.S. importers' U.S. shipments by product type and water permeability is contained in Appendix G.

Mosaic ceramic tile

Table IV-8 presents data on U.S. producers' and U.S. importers' U.S. shipments of mosaic ceramic tile.[9] By quantity, U.S. producers' U.S. shipments of mosaic ceramic tile decreased *** percent from 2016 to 2018 and were *** percent lower in January to September 2019 than in January to September 2018.[10] U.S. producers' market share of U.S. shipments of mosaic tile decreased by *** percentage points from 2016 to 2018 and was *** percent points lower in January to September 2019 than in January to September 2018, by quantity.

U.S. importers' U.S. shipments of mosaic ceramic tile from China increased by *** percent from 2016 to 2018 and were *** percent higher in January to September 2019 than in January to September 2018, by quantity. The market share of shipments of imports from China of mosaic tile increased by *** percentage points from 2016 to 2018 and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

From nonsubject sources, U.S. importers' U.S. shipments of mosaic ceramic tile from increased by *** percent from 2016 to 2018 and were *** percent higher in January to September 2019 than in January to September 2018. The market share of shipments of imports from nonsubject sources of mosaic tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

[9] In 2018, 8 of 13 U.S. producers reported U.S. shipments of mosaic ceramic tile; 18 of 38 importers reported U.S. shipments of mosaic ceramic tile from China; and 15 of 38 importers reported U.S. shipments of mosaic ceramic tile from nonsubject sources.

[10] ***.

Table IV-8
Ceramic tile: U.S. producers' and U.S. importers' U.S. shipments of mosaic tile, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Mosaic	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Mosaic	***	***	***	***	***
	Ratio to overall apparent consumption				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Mosaic	***	***	***	***	***

Note.—The ratio to apparent consumption will not sum to 100 percent across all product break-outs as table IV-6 uses official U.S. import statistics to measure apparent U.S. consumption, and the product break-out market tables rely on questionnaire data.

Source: Compiled from data submitted in response to Commission questionnaires.

Non-mosaic ceramic tile

Table IV-9 presents data on U.S. producers' and U.S. importers' U.S. shipments of non-mosaic ceramic tile.[11] By quantity, U.S. producers' U.S. shipments of non-mosaic ceramic tile increased *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018. U.S. producers' market share of U.S. shipments of non-mosaic tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

U.S. importers' U.S. shipments of non-mosaic ceramic tile from China increased by *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018, by quantity. The market share of shipments of imports from China of non-mosaic tile increased by *** percentage points from 2016 to 2018 but was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

From nonsubject sources, U.S. importers' U.S. shipments of non-mosaic ceramic tile from increased by *** percent from 2016 to 2018 and were *** percent higher in January to September 2019 than in January to September 2018. The market share of shipments of imports from nonsubject sources of non-mosaic tile increased by *** percentage points from 2016 to 2018 and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

[11] In 2018, 13 of 13 U.S. producers reported U.S. shipments of non-mosaic ceramic tile; 22 of 38 importers reported U.S. shipments of non-mosaic ceramic tile from China; and 25 of 38 importers reported U.S. shipments of non-mosaic ceramic tile from nonsubject sources.

Table IV-9
Ceramic tile: U.S. producers' and U.S. importers' U.S. shipments of non-mosaic tile, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Non-mosaic	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Non-mosaic	***	***	***	***	***
	Ratio to overall apparent consumption				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Non-mosaic	***	***	***	***	***

Note.—The ratio to apparent consumption will not sum to 100 percent across all product break-outs as table IV-6 uses official U.S. import statistics to measure apparent U.S. consumption, and the product break-out market tables rely on questionnaire data.

Source: Compiled from data submitted in response to Commission questionnaires.

Ceramic floor tile

Table IV-10 presents data on U.S. producers' and U.S. importers' U.S. shipments of ceramic floor tile.[12] [13] By quantity, U.S. producers' U.S. shipments of ceramic floor tile increased *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018. U.S. producers' market share of U.S. shipments of floor tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

U.S. importers' U.S. shipments of ceramic floor tile from China increased by *** percent from 2016 to 2018 and were *** percent lower in January to September 2019 than in January to September 2018, by quantity. The market share of shipments of imports from China of floor tile increased by *** percentage points from 2016 to 2018 but was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

From nonsubject sources, U.S. importers' U.S. shipments of ceramic floor tile from increased by *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018. The market share of shipments of imports from nonsubject sources of floor tile increased by *** percentage points from 2016 to 2018 and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

[12] Responding producers were instructed that any tile meeting the questionnaire's definitions of both floor ceramic tile and wall ceramic tile should be classified as floor ceramic tile.

[13] In 2018, 10 of 13 U.S. producers reported U.S. shipments of ceramic floor tile; 25 of 38 importers reported U.S. shipments of ceramic floor tile from China; and 24 of 38 importers reported U.S. shipments of ceramic floor tile from nonsubject sources.

Table IV-10
Ceramic tile: U.S. producers' and U.S. importers' U.S. shipments of floor tile, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Floor	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Floor	***	***	***	***	***
	Ratio to overall apparent consumption				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Floor	***	***	***	***	***

Note.—The ratio to apparent consumption will not sum to 100 percent across all product break-outs as table IV-6 uses official U.S. import statistics to measure apparent U.S. consumption, and the product break-out market tables rely on questionnaire data.

Source: Compiled from data submitted in response to Commission questionnaires.

Ceramic wall tile

Table IV-11 presents data on U.S. producers' and U.S. importers' U.S. shipments of ceramic wall tile. [14] By quantity, U.S. producers' U.S. shipments of ceramic wall tile decreased by *** percent from 2016 to 2018 and were *** percent lower in January to September 2019 than in January to September 2018. U.S. producers' market share of U.S. shipments of wall tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

U.S. importers' U.S. shipments of ceramic wall tile from China increased by *** percent from 2016 to 2018 and were *** percent higher in January to September 2019 than in January to September 2018, by quantity. The market share of shipments of imports from China of wall tile increased by *** percentage points from 2016 to 2018 and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

From nonsubject sources, U.S. importers' U.S. shipments of ceramic wall tile from increased by *** percent from 2016 to 2018 and were *** percent higher in January to September 2019 than in January to September 2018. The market share of shipments of imports from nonsubject sources of wall tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

[14] In 2018, 7 of 13 U.S. producers reported U.S. shipments of ceramic wall tile; 18 of 38 importers reported U.S. shipments of ceramic wall tile from China; and 22 of 38 importers reported U.S. shipments of ceramic wall tile from nonsubject sources.

Table IV-11
Ceramic tile: U.S. producers' and U.S. importers' U.S. shipments of wall tile, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.-- China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Wall	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.-- China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Wall	***	***	***	***	***
	Ratio to overall apparent consumption				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.-- China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Wall	***	***	***	***	***

Note.—The ratio to apparent consumption will not sum to 100 percent across all product break-outs as table IV-6 uses official U.S. import statistics to measure apparent U.S. consumption, and the product break-out market tables rely on questionnaire data.

Source: Compiled from data submitted in response to Commission questionnaires.

Other ceramic tile

Table IV-12 presents data on U.S. producers' and U.S. importers' U.S. shipments of other ceramic tile.[15] [16] By quantity, U.S. producers' U.S. shipments of other ceramic tile decreased by *** percent from 2016 to 2018 and were *** percent lower in January to September 2019 than in January to September 2018. U.S. producers' market share of U.S. shipments of other tile increased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

U.S. importers' U.S. shipments of other ceramic tile from China increased by *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018, by quantity. The market share of shipments of imports from China of other tile increased by *** percentage points from 2016 to 2018 and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

From nonsubject sources, U.S. importers' U.S. shipments of other ceramic tile from decreased by *** percent from 2016 to 2018 and was *** percent lower in January to September 2019 than in January to September 2018. The market share of shipments of imports from nonsubject sources of other tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

[15] Responding importers reported that "other" ceramic tile included products such as decorative pieces, finishing tile, and trim. Email from ***; email from ***.

[16] In 2018, 3 of 13 U.S. producers reported U.S. shipments of other ceramic tile; 5 of 38 importers reported U.S. shipments of other ceramic tile from China; and 6 of 38 importers reported U.S. shipments of other ceramic tile from nonsubject sources. ***.

Table IV-12
Ceramic tile: U.S. producers' and U.S. importers' U.S. shipments of other tile, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Other	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Other	***	***	***	***	***
	Ratio to overall apparent consumption				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Other	***	***	***	***	***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note.—The ratio to apparent consumption will not sum to 100 percent across all product break-outs as table IV-6 uses official U.S. import statistics to measure apparent U.S. consumption, and the product break-out market tables rely on questionnaire data.

Source: Compiled from data submitted in response to Commission questionnaires.

Porcelain ceramic tile

Table IV-13 presents data on U.S. producers' and U.S. importers' U.S. shipments of porcelain ceramic tile.[17] [18] By quantity, U.S. producers' U.S. shipments of porcelain ceramic tile increased by *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018. U.S. producers' market share of U.S. shipments of porcelain tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

U.S. importers' U.S. shipments of porcelain ceramic tile from China increased by *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018, by quantity. The market share of shipments of imports from China of porcelain tile increased by *** percentage points from 2016 to 2018 but was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

From nonsubject sources, U.S. importers' U.S. shipments of porcelain ceramic tile from increased by *** percent from 2016 to 2018 and were *** percent higher in January to September 2019 than in January to September 2018. The market share of shipments of imports from nonsubject sources of porcelain tile increased by *** percentage points from 2016 to 2018 and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

[17] In 2018, 8 of 13 U.S. producers reported U.S. shipments of porcelain ceramic tile; 25 of 38 importers reported U.S. shipments of porcelain ceramic tile from China; and 27 of 38 importers reported U.S. shipments of porcelain ceramic tile from nonsubject sources.

[18] In its questionnaires, the Commission defined porcelain tile as "impervious ceramic tile with a water absorption coefficient not exceeding 0.5percent by weight, as measured by the ASTM C373 test method, regardless of clay composition, surface texture, or whether unglazed or glazed."

Table IV-13
Ceramic tile: U.S. producers' and U.S. importers' U.S. shipments of porcelain tile, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Porcelain	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Porcelain	***	***	***	***	***
	Ratio to overall apparent consumption				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Porcelain	***	***	***	***	***

Note.—The ratio to apparent consumption will not sum to 100 percent across all product break-outs as table IV-6 uses official U.S. import statistics to measure apparent U.S. consumption, and the product break-out market tables rely on questionnaire data.

Source: Compiled from data submitted in response to Commission questionnaires.

Non-porcelain ceramic tile

Table IV-14 presents data on U.S. producers' and U.S. importers' U.S. shipments of non-porcelain ceramic tile.[19] By quantity, U.S. producers' U.S. shipments of non-porcelain ceramic tile decreased by *** percent from 2016 to 2018 and were *** percent lower in January to September 2019 than in January to September 2018. U.S. producers' market share of U.S. shipments of non-porcelain tile decreased by *** percentage points from 2016 to 2018 and was *** percentage points lower in January to September 2019 than in January to September 2018, by quantity.

U.S. importers' U.S. shipments of non-porcelain ceramic tile from China increased by *** percent from 2016 to 2018 but were *** percent lower in January to September 2019 than in January to September 2018, by quantity. The market share of shipments of imports from China of non-porcelain tile increased by *** percentage points from 2016 to 2018 but was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

From nonsubject sources, U.S. importers' U.S. shipments of non-porcelain ceramic tile from increased irregularly from 2016 to 2018, ending *** percent higher in 2018 than in 2016, and were *** percent higher in January to September 2019 than in January to September 2018. The market share of shipments of imports from nonsubject sources of non-porcelain tile decreased from *** percent in 2016 to *** percent in 2017 and increased to *** percent in 2018, and was *** percentage points higher in January to September 2019 than in January to September 2018, by quantity.

[19] In 2018, 6 of 13 U.S. producers reported U.S. shipments of non-porcelain ceramic tile and ***; 16 of 38 importers reported U.S. shipments of non-porcelain ceramic tile from China; and 20 of 38 importers reported U.S. shipments of non-porcelain ceramic tile from nonsubject sources.

Table IV-14
Ceramic tile: U.S. producers' and U.S. importers' U.S. shipments of non-porcelain tile, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.-- China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Non-porcelain	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.-- China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Non-porcelain	***	***	***	***	***
	Ratio to overall apparent consumption				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.-- China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
U.S. producers and U.S. importers: Non-porcelain	***	***	***	***	***

Note.—The ratio to apparent consumption will not sum to 100 percent across all product break-outs as table IV-6 uses official U.S. import statistics to measure apparent U.S. consumption, and the product break-out market tables rely on questionnaire data.

Source: Compiled from data submitted in response to Commission questionnaires.

Part V: Pricing data

Factors affecting prices

Raw material costs

The initial raw material input used to produce ceramic tile is clay. While some amount of clay is common to all ceramic tile, the types and amounts and can vary widely.[1] Among the various types of clays, kaolin[2] and ball clay[3] are the predominant types used in ceramic tile production. The production of tile also uses silicate mineral additives such as feldspar, nepheline, granite, pyrophyllite, wollastonite, and talc.[4] Feldspar, in particular, is commonly added in the manufacture of porcelain tile.[5] Raw material costs remained relatively steady during 2016-18, ranging between 30.7 percent (2018) and 31.5 percent (2017) of the total cost of goods sold ("COGS").

The producer price indexes ("PPI") for kaolin and ball clay, and for crushed granite (a quartz-rich igneous rock) rose between January 2016 and September 2019, by 13.0 and 16.5 percent, respectively (figure V-1).

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[1] Petition, p. 10.

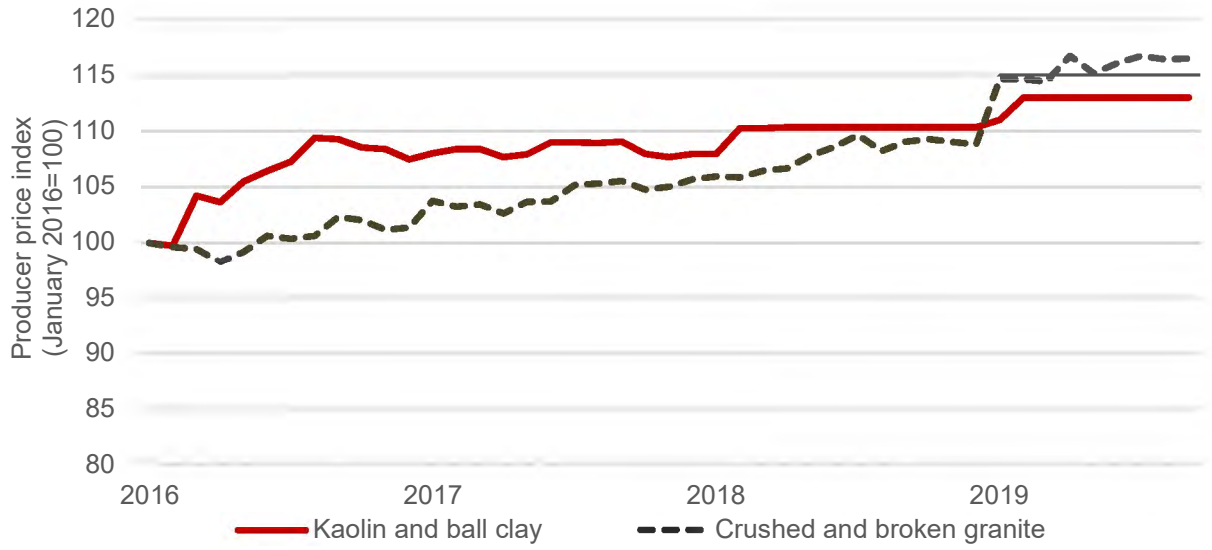
[2] "Kaolin, also called china clay, is a soft white clay that is an essential ingredient in the manufacture of china and porcelain and is widely used in the making of paper, rubber, paint, and many other products." *Encyclopedia Britannica* website, https://www.britannica.com/science/kaolin, accessed May 4, 2019. "The commercial value of kaolin is based on the mineral's whiteness and its fine, controllable particle size… {which} affects fluidity, strength, plasticity, color, abrasiveness and ease of dispersion." *Kaolin and Ball Clay Association* website, https://kabca.org/what-is-kaolin.php, accessed May 4, 2019.

[3] "Ball clays or plastic clays are fine grained, highly plastic sedimentary clays, which fire to a light or near white color. They are used mainly in the manufacture of ceramic whiteware and are valued for their key properties of plasticity, unfired strength and their light fired color. {They are} almost entirely used as ceramic raw materials for sanitaryware, wall and floor tile, and tableware. These sectors account for over 80% of total sales." *Kaolin and Ball Clay Association* website, https://kabca.org/what-is-ball-clay.php, accessed May 4, 2019.

[4] *Tile Council of North America* website, *Ceramic Tile Environmental Product Declaration, Industry-Wide Report*, https://www.tcnatile.com/images/pdfs/EPD-for-Ceramic-Tile-Made-in-North-America.pdf, retrieved May 4, 2019.

[5] Petition, p. 10.

Figure V-1
Mined clay and granite prices: Producer price index for kaolin and ball clay, and for crushed and broken granite, not seasonally adjusted, monthly, January 2016-September 2019



Source: U.S. Bureau of Labor Statistics, "PPI Industry Data," retrieved January 13, 2020.

Eleven of 13 responding U.S. producers reported that raw material prices have increased since January 1, 2016. *** stated that raw material prices increased in 2017 and 2018 but declined in 2019 to close to their 2016 level. Many of the responding U.S. producers reported being unable to pass along these cost increases to their customers. Importers provided more mixed responses, with 10 firms reporting no change in raw material prices, 9 reporting fluctuations, 8 reporting increases, and one reporting decreases.

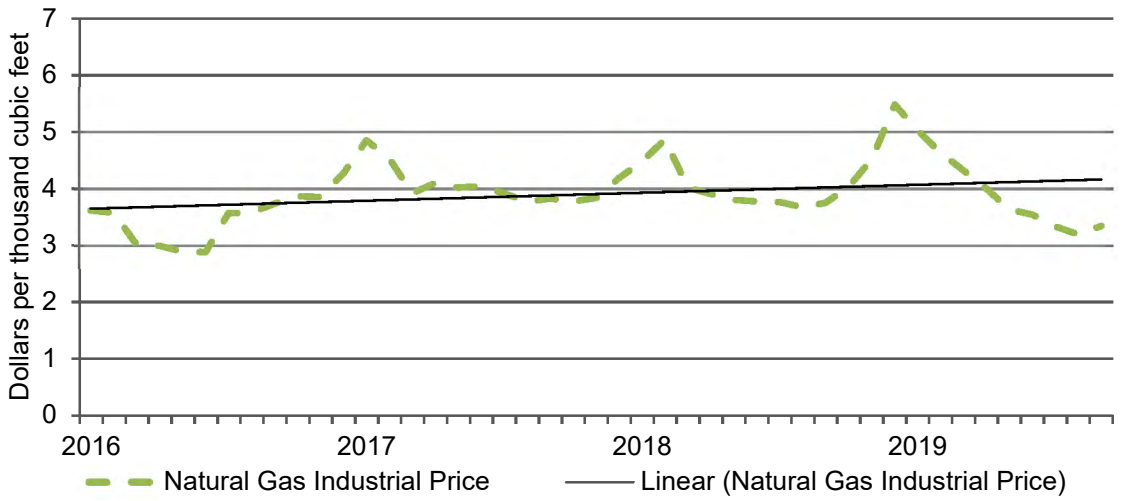
Energy costs

Energy costs make up a substantial portion of the production cost of ceramic tile. Most of the kilns used to dry the formed tile are heated with natural gas.[6] Industrial prices for natural gas increased during January 2016-September 2019, with peaks during the winter months (December through February) of each year (figure V-2).

Six of 13 responding U.S. producers reported that energy prices have increased since January 1, 2016, four reported they fluctuated, and three reported no change. A plurality of importers (11) reported no change in energy prices, 9 reported they fluctuated, 6 reported an increase, and one reported a decrease.

[6] Conference transcript, pp. 119-120 (Donaldson, Baran, Astrachan).

Figure V-2
Natural gas prices: Average industrial natural gas price, dollars per thousand cubic feet, January 2016-September 2019



Source: U.S. Energy Information Administration, retrieved January 13, 2020.

Less than half of responding purchasers (8 of 18) reported that they were familiar with raw material or energy costs of ceramic tile. Most firms reported that information regarding these costs had not affected contracts or negotiations to purchase ceramic tile; however, four purchasers reported that information on raw material prices had affected their purchase negotiations/contracts and three reported that information on energy costs had affected their purchase negotiations/contracts.

Transportation costs to the U.S. market

Transportation costs for ceramic tile shipped from China to the United States averaged 18.5 percent during 2018. These estimates were derived from official import data and represent the transportation and other charges on imports.[7]

[7] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2018 and then dividing by the customs value based on the same HTS subheadings used in Part IV. For Italy, such costs were 12.1 percent; for Spain, 16.2 percent; for Mexico, 7.6 percent; and for Brazil, 18.7 percent.

U.S. inland transportation costs

Most responding U.S. producers (10 of 13 firms) reported that the purchaser typically arranges transportation, while most importers (17 of 26 firms) reported that they typically arrange transportation to their customers. U.S. producers reported U.S. inland transportation costs ranging from 4 to 33 percent, while importers reported transportation costs ranging from less than 1 percent to 30 percent.[8]

Pricing practices

Pricing methods

Price list was the most commonly reported method used by U.S. producers and importers to set prices (table V-1). Firms also reported using transaction-by-transaction negotiations and contracts to set prices.

Table V-1
Ceramic tile: U.S. producers' and importers' reported price setting methods, by number of responding firms

Method	U.S. producers	Importers
Transaction-by-transaction	4	16
Contract	5	7
Set price list	12	17
Other	---	6
Responding firms	13	31

Note: The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers and importers reported selling most of their ceramic tile in the spot market, though importers sold a higher portion of their product through this method than did U.S. producers (table V-2).

[8] Four U.S. producers reported costs of 20 percent or more, five reported costs of between 10 and 18 percent and two reported costs of 4 to 5 percent. Thirteen importers reported costs of 10 percent or less, four reported costs of 15 percent, and four reported costs ranging from 22 to 30 percent. Petitioners stated that freights costs are "a huge factor" in the cost of the finished product. Conference transcript, pp. 98-102 (Donaldson, Curran, Mattioli).

Table V-2
Ceramic tile: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2018

* * * * * * *

Seven of the 13 responding U.S. producers reported that in 2018, all of their sales were on a spot basis, and an eighth producer (***) reported that the majority of its sales *** were on a spot basis. Of the five remaining U.S. producers, four reported that the majority of their sales were on an annual or long-term contract basis, and one reported that most of its sales were on a short-term contract basis.

Most U.S. producers and importers reported that their short-term, annual, and long-term contracts fix price (and sometimes both price and quantity), and that prices are not renegotiated during the contract. All responding U.S. producers and almost all responding importers reported that their contracts were not indexed to raw material costs.

Petitioner stated that purchasers in various channels of distribution cannot quickly change sourcing.[9] For example, it stated that big box retailers typically review their product lines annually and that negotiations with these retailers "often take months" and that for distributors, exiting a product line can take six months or longer. For homebuilders, tile selections may be made 12 to 18 months in advance, and for national accounts such as restaurants and hotels, suppliers have to commit to set prices for a year or longer.

Nine purchasers reported that they purchase ceramic tile daily, eight purchase weekly, and one purchases quarterly. Seventeen of 18 responding purchasers reported that their purchasing frequency had not changed since 2016. Most purchasers reported contacting between 1 and 7 suppliers before making a purchase, although four purchasers reported that they contact as many as 10 or more suppliers.

Sales terms and discounts

Most U.S. producers (11 of 13) and importers (23 of 27) typically quote prices on an f.o.b. basis. Most U.S. producers and importers offer some type of discount, including quantity

[9] Petitioner's response to Commission questions, April 9, 2020, pp. 21-23.

and/or total volume discounts (table V-3). Additionally, a number of firms reported offering other types of discounts including discounts based on expected sales volume or size of initial purchase, discounts off the price list, discounts that differ based on the specific customer, discounted freight, annual volume rebates for big box retailers, competitive retail matches, and trade member discounts.

Table V-3
Ceramic tile: U.S. producers' and importers' discount policies

Type of discount	U.S. producers	Importers
Quantity	7	13
Total volume	6	10
No policy	3	10
Other	5	12
Total responding firms	13	32

Source: Compiled from data submitted in response to Commission questionnaires.

Price leadership

Thirteen of the 18 purchasers listed one or more price leaders in the U.S. market including Dal-Tile (listed by 8 purchasers), FD Sales (5), Emser (5), MSI (4), Home Depot (3), Bedrosians (3), Anatolia (2), Lowe's (2), AZ Tile (1), Marazzi (1), and Mohawk (1). In general, purchasers stated that the price leaders were large players in the national market and offered low prices. One purchaser noted the impact of Home Depot and Lowe's as the largest retailers for ceramic tile. *** stated that Dal-Tile is the most specified brand in the U.S. market, and *** stated that Dal-Tile generally leads prices up with its quality product, while other purchasers stated that Dal-Tile offered low prices.

Price data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following ceramic tile products shipped to unrelated U.S. customers during January 2016-September 2019.

Product 1.--Porcelain tile, rectangular, 6"–8" in width by 24"–36" in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to home center retailers.

Product 2.--Porcelain tile, square or rectangular, 12" in width by 24" in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to distributors.

Product 3.--Non-porcelain ceramic tile, square or rectangular, 12" in width by 24" in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to home center retailers.

Product 4.--Non-porcelain ceramic tile, square or rectangular, 3”–6” in width by 6”–12” in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to other retailers.

Product 5.--Mosaic ceramic tile, 12” by 12” square or interlocking, on a mesh sheet. Sales to home center retailers.

Price data were requested for specified channels of distribution: sales to home center retailers for products 1, 3, and 5; sales to distributors for product 2; and sales to other retailers for product 4. In addition, home center retailers were requested to provide import purchase cost data for their imports from China of products 1, 3, and 5.

Eight U.S. producers and ten importers of Chinese ceramic tile provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[10] [11] Pricing data reported by these firms accounted for approximately 24.8 percent of U.S. producers’ commercial shipments and 14.5 percent of subject imports from China in 2018. Pricing products 1 and 2 accounted for the majority of the volume of useable pricing data reported by U.S. producers, while pricing product 3 followed by products 2 and 1 represented the majority of volume of useable pricing data reported for imports from China.[12]

[10] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[11] Pricing data reported by several U.S. producers were not included in the pricing analysis. U.S. producers *** produce high-end custom tiles and reported much higher prices than other U.S. producers. *** reported lower prices than other firms, since its sales *** included large quantities of “second choice” product, ***.

Some pricing data submitted by importers were also not included. ***.

[12] Data reported for U.S. producers represented the following shares of pricing product volume during January 2016-September 2019: product 1 (56 percent), product 2 (33 percent), product 3 (1 percent), product 4 (9 percent), and product 5 (less than 1 percent). Data reported for China represented the following shares of pricing product volume during January 2016-September 2019: product 1 (11 percent), product 2 (23 percent), product 3 (55 percent), product 4 (5 percent), and product 5 (6 percent).

One importer, ***, provided usable purchase cost data for products 1, 3, and 5 imported from China.[13] Import purchase cost data reported by this firm accounted for approximately *** percent of subject imports in 2018.

Price data for products 1-5 and home center retailers' import purchase cost data for products 1, 3, and 5, are presented in tables V-4 to V-7 and figures V-3 to V-6.[14] Nonsubject country prices for Brazil and Mexico are presented in Appendix E.

[13] Purchase cost data reported by several importers were not included since the firms appeared to have reported the data incorrectly: ***. ***. ***.

[14] LDP import value does not include any potential additional costs that a purchaser may incur by importing rather than purchasing from another importer or U.S. producer. Price-cost differentials are based on LDP import values whereas margins of underselling/overselling are based on importer sales prices.

Table V-4
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), and landed duty-paid costs, by quarter, January 2016-September 2019

Period	United States		China - price			China - cost		
	Price (dollars per square foot)	Quantity (1,000 square feet)	Price (dollars per square foot)	Quantity (1,000 square feet)	Margin (percent)	LDP value (dollars per square foot)	Quantity (1,000 square feet)	Price-cost differential (percent)
2016:								
Jan.-Mar.	1.16	26,126	***	***	***	***	***	***
Apr.-June	1.17	30,853	***	***	***	***	***	***
July-Sept.	1.16	31,162	***	***	***	***	***	***
Oct.-Dec.	1.17	33,294	***	***	***	***	***	***
2017:								
Jan.-Mar.	1.15	33,450	***	***	***	***	***	***
Apr.-June	1.18	34,505	***	***	***	***	***	***
July-Sept.	1.17	34,217	***	***	***	***	***	***
Oct.-Dec.	1.14	27,673	***	***	***	***	***	***
2018:								
Jan.-Mar.	1.17	29,795	***	***	***	***	***	***
Apr.-June	1.17	31,356	***	***	***	***	***	***
July-Sept.	1.16	25,779	***	***	***	***	***	***
Oct.-Dec.	1.14	29,495	***	***	***	***	***	***
2019:								
Jan.-Mar.	1.12	27,937	***	***	***	***	***	***
Apr.-June	1.09	24,005	***	***	***	***	***	***
July-Sept.	1.12	18,458	***	***	***	***	***	***

Note: Product 1: Porcelain tile, rectangular, 6”–8” in width by 24”–36” in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to home center retailers.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-5
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2016-September 2019

Period	United States		China - price		
	Price (dollars per square foot)	Quantity (1,000 square feet)	Price (dollars per square foot)	Quantity (1,000 square feet)	Margin (percent)
2016:					
Jan.-Mar.	1.76	14,499	1.40	3,018	20.4
Apr.-June	1.64	17,394	1.34	3,731	18.4
July-Sept.	1.71	15,939	1.34	3,716	21.7
Oct.-Dec.	1.68	16,353	1.32	3,798	21.3
2017:					
Jan.-Mar.	1.72	16,769	1.28	4,408	25.6
Apr.-June	1.52	21,736	1.25	4,608	17.7
July-Sept.	1.56	19,774	1.29	3,947	17.2
Oct.-Dec.	1.48	19,062	1.32	4,206	11.3
2018:					
Jan.-Mar.	1.58	18,540	1.34	4,044	15.5
Apr.-June	1.54	20,321	1.33	4,391	13.6
July-Sept.	1.54	19,069	1.34	4,495	12.9
Oct.-Dec.	1.48	18,051	1.35	4,475	8.9
2019:					
Jan.-Mar.	1.44	12,713	1.40	4,636	3.2
Apr.-June	1.43	14,750	1.49	4,753	(4.1)
July-Sept.	1.42	14,395	1.60	3,285	(12.5)

Note: Product 2: Porcelain tile, square or rectangular, 12” in width by 24” in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to distributors.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-6
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2016-September 2019

* * * * * * *

Table V-7
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter, January 2016-September 2019

Period	United States		China - price		
	Price (dollars per square foot)	Quantity (1,000 square feet)	Price (dollars per square foot)	Quantity (1,000 square feet)	Margin (percent)
2016: Jan.-Mar.	***	***	2.50	355	***
Apr.-June	***	***	2.13	591	***
July-Sept.	***	***	2.09	660	***
Oct.-Dec.	***	***	2.23	616	***
2017: Jan.-Mar.	***	***	2.01	897	***
Apr.-June	***	***	2.04	949	***
July-Sept.	***	***	2.20	926	***
Oct.-Dec.	***	***	2.27	942	***
2018: Jan.-Mar.	***	***	2.30	1,050	***
Apr.-June	***	***	2.44	1,036	***
July-Sept.	***	***	2.48	990	***
Oct.-Dec.	***	***	2.34	1,075	***
2019: Jan.-Mar.	***	***	2.50	1,097	***
Apr.-June	***	***	2.41	1,219	***
July-Sept.	***	***	2.43	1,090	***

Note: Product 4: Non-porcelain ceramic tile, square or rectangular, 3”–6” in width by 6”–12” in length (excluding mosaic ceramic tile and finishing ceramic tile). Sales to other retailers.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-8
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, January 2016-September 2019

* * * * * * *

Figure V-3
Ceramic tile: Weighted-average prices, import purchase costs, and quantities of domestic and imported product 1, by quarter, January 2016-September 2019

* * * * * * *

Figure V-4
Ceramic tile: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2016-September 2019

* * * * * * *

Figure V-5
Ceramic tile: Weighted-average prices, import purchase costs, and quantities of domestic and imported product 3, by quarter, January 2016-September 2019

* * * * * * *

Figure V-6
Ceramic tile: Weighted-average prices and quantities of domestic and imported product 4, by quarter, January 2016-September 2019

* * * * * * *

Figure V-7
Ceramic tile: Weighted-average prices, import purchase costs, and quantities of domestic and imported product 5, by quarter, January 2016-September 2019

* * * * * * *

Import purchase cost data

Importers reporting import purchase cost data were asked to provide additional information regarding the costs and benefits of importing ceramic tile. Firms were asked to estimate a variety of costs associated with their imports. ***.

***.

***.

Price and import purchase cost trends

Table V-9 summarizes the price and purchase cost trends, by country and by product. Domestic prices for products 1, 2, and 3 decreased during January 2016-December 2018, while the prices of domestic product 4 and 5 increased. As shown in the table, domestic price decreases ranged from 3.5 to 19.2 percent, while the price increases ranged from 3.7 to 5.6 percent. Import prices decreased for products 1 and 4, by *** and *** percent, respectively, while import prices increased for products 2, 3, and 5, by ***, *** and *** percent, respectively. Import purchase costs increased for the three products for which data were collected (products 1, 3, and 5), by *** to *** percent. Indexed price data and purchase cost data for products 1-5 are shown in figure V-8.

Table V-9
Ceramic tile: Summary of weighted-average f.o.b. prices and importer purchase costs for products 1-5 from the United States and China

Item	Number of quarters	Low price/cost (dollars per square feet)	High price/cost (dollars per square feet)	Change in price/cost over period (percent)
Product 1 (home center retailers):				
United States-price	15	1.09	1.18	(3.5)
China-price	15	***	***	***
China-cost	15	***	***	***
Product 2 (distributors):				
United States-price	15	1.42	1.76	(19.2)
China-price	15	1.25	1.60	14.3
Product 3 (home center retailers):				
United States-price	15	***	***	***
China-price	15	***	***	***
China-cost	15	***	***	***
Product 4 (other retailers):				
United States-price	15	***	***	***
China-price	15	2.01	2.50	(2.8)
Product 5 (home center retailers):				
United States-price	15	***	***	***
China-price	15	***	***	***
China-cost	15	***	***	***

Note: Change is percentage change from the first quarter in which data were available to the last quarter in which price data were available.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-8
Ceramic tile: Indexed prices and purchase costs, January 2016-September 2019

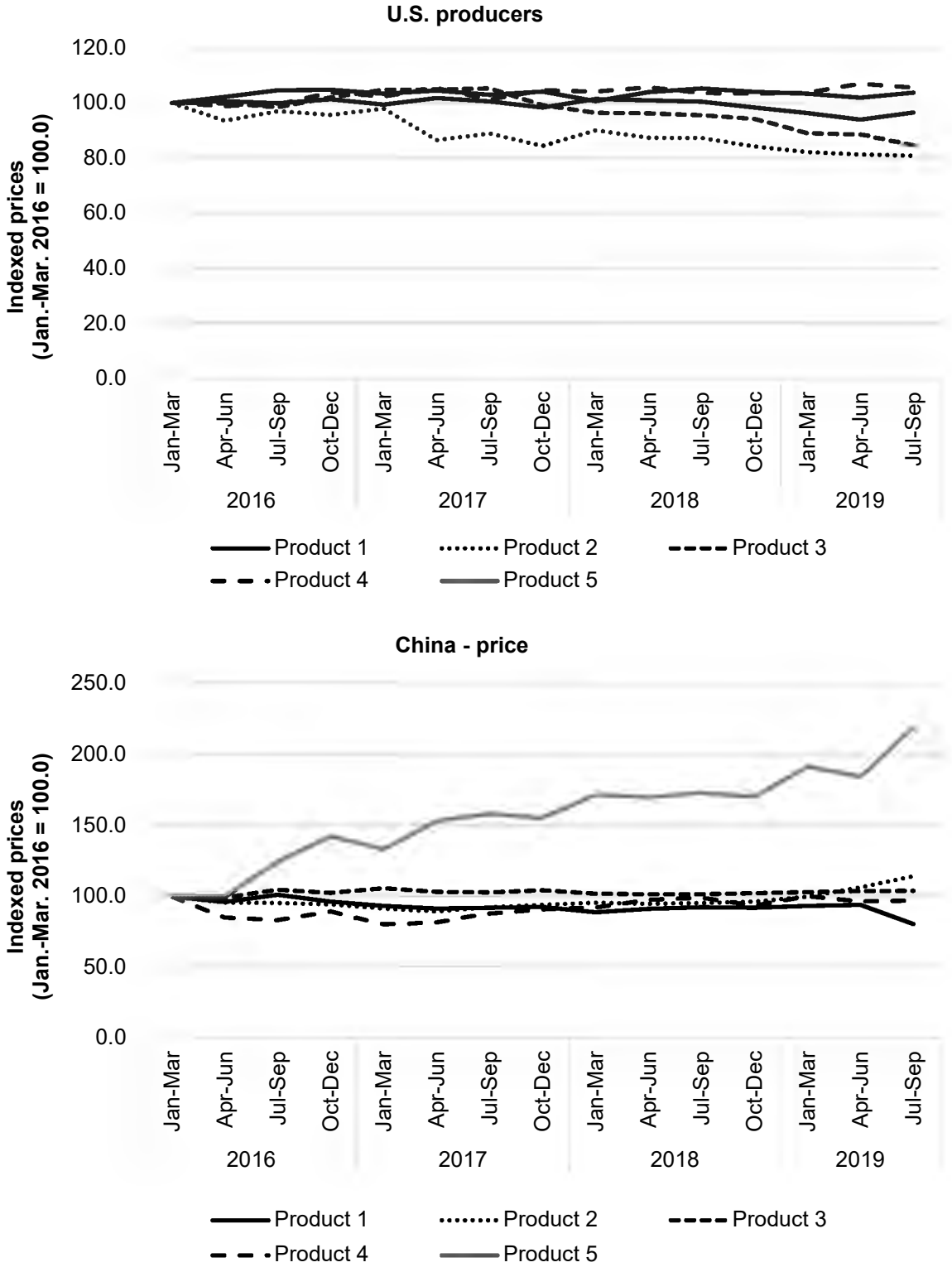
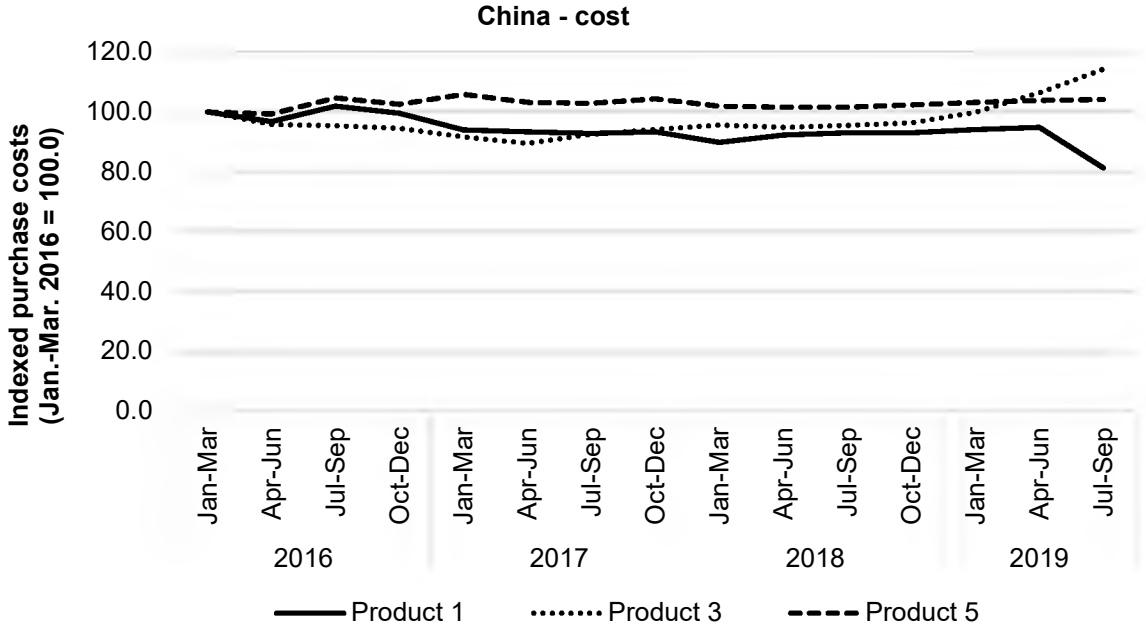


Figure continued on next page.

Figure V-8—Continued.
Ceramic tile: Indexed prices and purchase costs, January 2016-September 2019



Source: Compiled from data submitted in response to Commission questionnaires.

Price comparisons

As shown in table V-10, prices for ceramic tile imported from China were below those for U.S.-produced product in 51 of 75 instances (*** square feet); margins of underselling ranged from 0.3 to 65.5 percent. In the remaining 24 instances (*** square feet), prices for ceramic tile from China were between 0.0 and 44.1 percent above prices for the domestic product.

Table V-10
Ceramic tile: Instances of underselling/overselling and the range and average of margins, by product and by year, January 2016-September 2019

Source	Underselling				
	Number of quarters	Quantity (1,000 square feet)	Average margin (percent)	Margin Range (percent)	
				Min	Max
Product 1	8	***	***	***	***
Product 2	13	53,474	16.0	3.2	25.6
Product 3	15	***	***	***	***
Product 4	---	---	---	---	---
Product 5	15	***	***	***	***
Total, underselling	51	***	23.6	0.3	65.5
2016	12	***	***	***	***
2017	15	***	***	***	***
2018	16	***	***	***	***
2019	8	***	***	***	***
Total, underselling	51	***	23.6	0.3	65.5
Source	(Overselling)				
	Number of quarters	Quantity (1,000 square feet)	Average margin (percent)	Margin Range (percent)	
				Min	Max
Product 1	7	***	***	***	***
Product 2	2	8,038	(8.3)	(4.1)	(12.5)
Product 3	---	***	***	***	***
Product 4	15	***	(28.1)	***	***
Product 5	---	***	***	***	***
Total, overselling	24	***	(19.3)	(0.0)	(44.1)
2016	8	***	***	***	***
2017	5	***	***	***	***
2018	4	***	***	***	***
2019	7	***	***	***	***
Total, overselling	24	***	(19.3)	(0.0)	(44.1)

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Source: Compiled from data submitted in response to Commission questionnaires.

Price-cost comparisons

As shown in table V-11, LDP costs for ceramic tile imported from China were below the sales price for U.S.-produced product in all 45 instances (*** square feet); price-cost differentials ranged from *** to *** percent.

Table V-11
Ceramic tile: Comparisons of import purchase costs and U.S.-producer sales prices, by product and by year, January 2016-September 2019

	Import purchase cost lower than U.S. sales price				
Product	Number of quarters	Quantity (1,000 square feet)	Average price-cost differential (percent)	Price-cost differential range (percent)	
				Min	Max
Product 1	15	***	***	***	***
Product 3	15	***	***	***	***
Product 5	15	***	***	***	***
Total	45	***	***	***	***
2016	12	***	***	***	***
2017	12	***	***	***	***
2018	12	***	***	***	***
2019	9	***	***	***	***
Total	45	***	***	***	***

Note: These data include only quarters in which there is a comparison between the U.S. and subject product. There were no instances in which the import purchase cost was higher than the U.S. sales price.

Source: Compiled from data submitted in response to Commission questionnaires.

Lost sales and lost revenue

In the preliminary phase of the investigation, the Commission requested that U.S. producers of ceramic tile report purchasers to which they experienced instances of lost sales or revenue due to competition from subject imports during January 2016-December 2018. Of the responding U.S. producers, 7 of 9 reported that they had to reduce prices and 1 of 8 reported that it had to roll back announced price increases. Eight of 9 U.S. producers reported that they had lost sales. Five U.S. producers submitted lost sales and lost revenue allegations and identified 25 firms with which they lost sales or revenue (20 consisting of lost sales allegations, 4 consisting of lost revenue allegations, and 2 consisting of both types of allegations).

In the final phase of the investigations, of the 13 responding U.S. producers, nine reported that they had to reduce prices and one reported it had to roll back announced price increases, and 12 firms reported that they had lost sales.

Staff contacted 41 purchasers and received responses from eighteen purchasers.[15] Responding purchasers reported purchasing *** square feet of ceramic tile during January 2016-September 2019 (table V-12).

Of the eighteen responding purchasers, seven reported that, since 2016, they had purchased imported ceramic tile from China instead of U.S.-produced product. Six of these purchasers reported that subject import prices were lower than U.S.-produced product, and two of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. One purchaser (***) estimated that it purchased *** square feet of ceramic tile from China instead of domestic product (table V-13). Non-price reasons purchasers cited for purchasing subject imports included: supplier capabilities, product availability, preferred sizes, formats, polishing, and type of product available from foreign producers.

Of the eighteen responding purchasers, four reported that U.S. producers had reduced prices in order to compete with lower-priced imports from China, seven reported that U.S. producers did not reduce prices to compete with subject imports, and seven reported that they did not know (table V-14). The reported estimated price reduction ranged from 10 to 20 percent. In describing the price reductions, *** indicated that while there are price reductions from some U.S. producers there are also some price reductions from some importers. Additionally, *** described the U.S. product as a lower quality although it stated that quality is difficult to quantify.

[15] One purchaser (***) submitted a lost sales lost revenue survey response in the preliminary phase, but did not submit a purchaser questionnaire response in the final phase. In its preliminary phase response, it reported that it had not purchased subject imports instead of domestic product and that it did not know if U.S. producers reduced prices to compete with subject imports.

Table V-12
Ceramic tile: Purchasers' responses to purchasing patterns

* * * * * * *

Table V-13
Ceramic tile: Purchasers' responses to purchasing subject imports instead of domestic product

Purchaser	Subject imports purchased instead of domestic (Y/N)	Subject imports priced lower (Y/N)	If purchased subject imports instead of domestic, was price a primary reason		
			Y/N	If Yes, quantity (1,000 square feet)	If No, non-price reason
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	Yes--7; No--11	Yes--6; No--1	Yes--2; No--5	***	

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-14
Ceramic tile: Purchasers' responses to U.S. producer price reductions

Purchaser	Producers reduced price (Y/N)	If producer reduced prices:	
		Estimated U.S. price reduction (percent)	Additional information, if available
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total / average	Yes--4; No--7	16.7	---

Source: Compiled from data submitted in response to Commission questionnaires.

Part VI: Financial experience of U.S. producers

Background

Thirteen U.S. producers (***) provided usable financial data on their ceramic tile operations.[1] [2] [3] The data of these 13 U.S. producers are believed to account for the vast majority of U.S. ceramic tile operations in 2018.

Dal-Tile is the largest ceramic tile producer and distributor in the United States with *** manufacturing facilities and accounts for *** of U.S. ceramic tile production and sales.[4] Several smaller companies have long histories of ceramic tile production in the United States and continue to operate. Since 2016, two new startup companies (***) joined the U.S. ceramic tile industry. Ceramic tile include thousands of product types that often change in response to color and fashion trends, resulting in large

[1] Eleven U.S. producers reported financial results on the basis of generally accepted accounting principles (GAAP), two U.S. producers (***) used International Financial Reporting Standards (IFRS), and one U.S. producer (***) used tax basis reporting. All 13 responding U.S. producers reported fiscal years ending on December 31.

Commission staff conducted a verification of Dal-Tile's U.S. producer questionnaire response. ***. Staff verification report, Dal-Tile, April 14, 2020.

[2] Two producers, (***), reported purchasing inputs from related suppliers in 2018 with these purchases accounting for less than three percent of each producer's COGS in 2018. ***. ***. U.S. producer questionnaires, III-6, III-7, and III-8.

[3] Twelve U.S. producers reported that production and sales of ceramic tile generated all or more than 99 percent of their revenues in the same facilities that manufacture ceramic tile in 2018. ***. ***'s U.S. producer questionnaire, III-5 and *** emails to USITC staff, May 1, 2019 and February 26, 2020.

[4] Dal-Tile is owned by Mohawk Industries, a large global manufacturer of ceramic tile, stone and quartz tile/countertops, and flooring. Staff verification report, Dal-Tile, April 14, 2020 and Mohawk's 2018 annual report, pp. 6-10.

variations in product mix from company to company.[5] [6] Three very small U.S. producers (***) manufactured and sold only handmade, custom, and/or made-to-order non-porcelain ceramic tile during the annual and interim periods examined and collectively accounted for *** percent and *** percent of aggregated U.S. net sales quantity and value, respectively, over this period. The average per unit values of net sales, raw materials, direct labor, and profitability of these three U.S. producers mostly were higher than that of the U.S. industry as a whole; however, the very small size of these producers' operations resulted in no changes to the aggregated financial results of the U.S. ceramic tile industry.[7]

Net sales consisted primarily of commercial sales; however, five U.S. producers reported internal consumption and transfers to related firms.[8] These non-commercial sales combined accounted for *** percent to *** percent of total net sales value in each of the five periods examined. Non-commercial sales are included but not presented separately in this section of the report.

Operations on ceramic tile

Table VI-1 presents aggregated financial data on U.S. producers' operations of ceramic tile, while table VI-2 presents the corresponding changes in average unit values. Appendix F-1

[5] Ceramic tile is a "highly differentiated product" with thousands of SKUs and product lines. Product lines typically last three to four years before the introduction of new designs and colors. Both porcelain and non-porcelain ceramic tile have ***. Conference transcript, p. 83 (Mattioli), pp. 86-87 (Mattioli, Baran), p. 112 (Astrachan), p. 113 (Curran), 119 (Malashevich), and *** email to USITC staff, May 3, 2019.

[6] Value data may be a more accurate measure than quantity and per unit data because the industry does not have a standard measure of quantity across all products. ***. Petitioner testified that figuring out the best metric of volume was "the single thing that consumed most of our time" while preparing for the petition and concluded that the best measure they could find was square feet. *** email to USITC staff, May 3, 2019; conference transcript, p. 119 (Malashevich); and ***'s U.S. producer questionnaire, II-17.

[7] These three custom and handmade non-porcelain ceramic tile producers (***) sell to "higher-end clients" via showrooms, designers and architectural firms and not through big box stores, with 99 percent of production designated for specific customers. ***, ***, and ***, emails to USITC staff, February 24-26, 2020.

[8] ***) reported internal consumption *** or less of their total net sales over each of the five periods examined. ***, a very small U.S. producer *** reported internal consumption of *** percent or less of its total net sales in each of the five periods examined. *** reported transfers to related firms.

presents selected company-specific financial data. Figure VI-1 presents the net sales quantity of all thirteen responding U.S. producers in 2018. ***'s net sales quantity represented the largest share at *** percent, with the second and third largest producers *** and *** representing *** percent and *** percent, respectively. The remaining 10 U.S. producers combined represent *** percent of the net sales quantity of all responding U.S. producers in 2018. From 2016 to 2018, ***.

Figure VI-1
Ceramic tile: Share of net sales quantity, by company, 2018

* * * * * * *

Table VI-1
Ceramic tile: Results of operations of U.S. producers, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
Total net sales	894,767	943,782	900,336	688,113	644,732
	Value (1,000 dollars)				
Total net sales	1,229,786	1,307,649	1,269,406	965,767	923,466
Cost of goods sold.-- Raw materials	221,861	234,775	229,314	172,701	167,768
Energy costs	49,166	58,360	54,825	40,733	38,785
Direct labor	107,177	117,493	116,986	86,988	86,440
Other factory costs	336,048	330,782	335,817	254,209	261,246
Total COGS	714,252	741,410	736,942	554,631	554,239
Gross profit	515,534	566,239	532,464	411,136	369,227
SG&A expense	275,300	300,518	315,598	242,082	247,218
Operating income or (loss)	240,234	265,721	216,866	169,054	122,009
Interest expense	20,871	25,639	30,635	23,527	26,312
All other expenses	1,489	5,388	2,863	1,330	1,325
All other income	4,607	4,973	3,821	2,741	2,489
Net income or (loss)	222,481	239,667	187,189	146,938	96,861
Depreciation/amortization	84,084	100,373	113,738	86,872	91,266
Cash flow	330,251	362,608	348,558	233,810	188,127
	Ratio to net sales (percent)				
Cost of goods sold.-- Raw materials	18.0	18.0	18.1	17.9	18.2
Energy costs	4.0	4.5	4.3	4.2	4.2
Direct labor	8.7	9.0	9.2	9.0	9.4
Other factory costs	27.3	25.3	26.5	26.3	28.3
Average COGS	58.1	56.7	58.1	57.4	60.0
Gross profit	41.9	43.3	41.9	42.6	40.0
SG&A expense	22.4	23.0	24.9	25.1	26.8
Operating income or (loss)	19.5	20.3	17.1	17.5	13.2
Net income or (loss)	18.1	18.3	14.7	15.2	10.5

Table continued on next page.

Table VI-1—Continued
Ceramic tile: Results of operations of U.S. producers, 2016-18

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Ratio to total COGS (percent)				
Cost of goods sold.--					
Raw materials	31.1	31.7	31.1	31.1	30.3
Energy costs	6.9	7.9	7.4	7.3	7.0
Direct labor	15.0	15.8	15.9	15.7	15.6
Other factory costs	47.0	44.6	45.6	45.8	47.1
Average COGS	100.0	100.0	100.0	100.0	100.0
	Unit value (dollars per square foot)				
Total net sales	1.37	1.39	1.41	1.40	1.43
Cost of goods sold.--					
Raw materials	0.25	0.25	0.25	0.25	0.26
Energy costs	0.05	0.06	0.06	0.06	0.06
Direct labor	0.12	0.12	0.13	0.12	0.13
Other factory costs	0.38	0.35	0.37	0.37	0.40
Average COGS	0.80	0.79	0.82	0.80	0.85
Gross profit	0.58	0.60	0.59	0.60	0.58
SG&A expense	0.31	0.32	0.35	0.36	0.39
Operating income or (loss)	0.27	0.28	0.24	0.25	0.19
Net income or (loss)	0.25	0.25	0.21	0.22	0.15
	Number of firms reporting				
Operating losses	1	3	3	4	4
Net losses	1	4	3	4	5
Data	12	13	13	13	13

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-2
Ceramic tile: Changes in AUVs, between calendar years and between partial year periods

Item	Between calendar years			Between partial year period
	2016-18	2016-17	2017-18	2018-19
	Change in AUVs (dollars per square foot)			
Total net sales	0.04	0.01	0.02	0.03
Cost of goods sold.--				
Raw materials	0.007	0.00	0.01	0.01
Energy costs	0.006	0.01	(0.00)	0.00
Direct labor	0.01	0.00	0.005	0.01
Other factory costs	(0.00)	(0.03)	0.02	0.04
Average COGS	0.02	(0.01)	0.033	0.06
Gross profit	0.02	0.02	(0.01)	(0.03)
SG&A expense	0.04	0.01	0.03	0.03
Operating income or (loss)	(0.03)	0.01	(0.04)	(0.06)
Net income or (loss)	(0.04)	0.005	(0.05)	(0.07)

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

Net sales

Total net sales quantity and value of U.S. producers fluctuated from 2016 to 2018, increasing from 2016 to 2017 before declining from 2017 to 2018 (table VI-1); ***. U.S. producers (***) reported the largest net sales quantity declines in absolute terms from 2016 to 2018, with these declines offset somewhat by the gains of three *** U.S. producers (***).[9] Net sales value increased for seven U.S. producers (***) from 2016 to 2018, with the three *** producers experiencing the largest increase when measured in percent change (table F-1). In absolute values, *** reported the largest revenue increase (***) followed by *** (***); *** reported the largest revenue loss (***) (table F-1).[10] Aggregated, the U.S. ceramic tile industry reported net sales quantity and value increases of 0.6 percent and 3.2 percent, respectively, from 2016 to 2018. Both total net sales value and quantity were lower in January-September 2019 ("interim 2019") than in January-September 2018 ("interim 2018").

Average net sales unit values of U.S. producers increased from 2016 to 2018, starting with $1.37 per-square foot in 2016 to $1.39 in 2017, and then to $1.41 in 2018; average net sales unit value was higher in interim 2019 than in interim 2018 (tables VI-1 and C-1). ***. Per-square foot net sales values ranged from a low of $*** in 2017 reported by *** to a high of $*** in 2016 and 2018 reported by ***

[9] *** started operations in mid-2016; *** began production of ceramic tile in 2014 and doubled its capacity in January 2017 after a fire in 2016. As shown in table F-1, these *** producers accounted for the *** of the reported gains in net sales quantity from 2016 to 2018. U.S. producers' questionnaires, II-2, III-9a, and conference transcript, pp. 44 and 48 (Molina).

[10] *** reported lost sales to its biggest customer, ***, throughout the period examined. ***. Florim testified that it cannot compete with tile imported from China that are priced at or lower than its cost of production. ***'s Lost Sales/Lost Revenue questionnaire, conference transcript, p. 43 (Haynes), and staff telephone interview with ***.

(table F-1).[11] Variations in per-square foot ceramic tile sales value may be explained by factors such as producer size, *** and product mix.[12] [13]

Cost of goods sold and gross profit or (loss)

Aggregated total cost of goods sold ("COGS") of U.S. producers fluctuated from 2016 to 2018, increasing from 2016 to 2017 before declining in 2018; total COGS was slightly lower in interim 2019 than in interim 2018 (tables VI-1 and C-1). ***). Average per unit values of raw materials, energy, direct labor, other factory costs, and COGS were relatively steady from 2016 to 2018, fluctuating by $0.03 or less (table VI-1).

[11] The average per unit net sales values of the *** were much higher than the industry average, ranging from $*** per-square foot in 2016 reported by MPM to a high of $*** per-square foot in 2018 reported by ***. These three custom ceramic tile producers reported sales being tied to seasonality of the residential construction market and macroeconomic conditions because these handmade tiles are sold based on fashion preferences and not on function. ***. ***, ***, and ***, emails to USITC staff, February 24-26, 2020.

As noted earlier in this section of the report, these three U.S. producers' sales accounted for *** percent by quantity and *** percent by value of aggregated U.S. producers' net sales.

[12] *** was the only U.S. producer that reported per-square foot unit values below $1 (***). ***. ***, email to USITC staff, April 26, 2019.

[13] *** accounted for less than *** of total net sales quantity, *** percent of total net sales value from 2016 to 2018, and was the only non-handmade and custom tile producer that reported per-square foot values above $2 (***). *** explained that its high net sales per-square foot values were the result of not selling to big box stores, not requiring distributors to maintain inventory with minimum order sizes, and selling porcelain tile with ***. ***, email to USITC staff, April 26, 2019.

***.

Other factory costs represent the largest share of total COGS, fluctuating from 44.6 percent to 47.0 percent of total COGS from 2016 to 2018 and were a greater share of total COGS in interim 2019 than in interim 2018. Other factory costs decreased by 0.1 percent in absolute values from 2016 to 2018 but were higher in interim 2019 than in interim 2018 (tables VI-1 and C-1). Average per unit other factory costs decreased from $0.38 per-square foot in 2016 to $0.35 per-square foot in 2017 before increasing to $0.37 per-square foot in 2018 and were higher in interim 2019 than in interim 2018 (table VI-1). *** (table F-1).[14] On a per-square foot basis, *** (table F-1). Product mix (porcelain, non-porcelain, custom, or handmade ceramic tile) may explain the variation in other factory costs among producers.[15]

Raw material costs represent the second largest share of total COGS and was stable at 31.1 percent in 2016 and 2018, with a slight increase of 31.7 percent in 2017; raw material costs were a smaller share of total COGS in interim 2019 than in interim 2018. Raw materials costs increased by 3.4 percent in absolute values from 2016 to 2018 and were lower in interim 2019 than in interim 2018 (tables VI-1 and C-1). Average per unit raw material costs remained the same at $0.25 per-square foot from 2016 to 2018 and were slightly higher in interim 2019 than in interim 2018 (table VI-1). Table VI-3 presents details on specific raw material inputs as a share of total raw material costs in 2018. Minerals such as silica and feldspar were the leading

[14] *** reported no primary cost driver for other factory costs and these costs include ***.

[15] The reported other factory costs for individual producers may not accurately measure the variations in cost for product mix and scale of operations, especially for *** and ***. For example, ***, reported the lowest per-square foot other factory costs of $*** in 2017 and $*** in 2018 while *** producer *** reported the one of the higher per-square foot other factory costs ranging from $*** per-square foot to $*** per-square foot from 2016 to 2018 (table F-1). The *** ceramic tile producers reported selling ***, with per-square foot factory costs ranging lows of $*** to $*** reported by *** to highs of $*** to $*** reported by *** from 2016 to 2018 (table F-1).

cost of raw materials in all three measures (absolute value, unit value, and share of value), with clay and surfacing materials close behind. Other raw materials accounted for the smallest share of total raw materials at 19.8 percent of value and included packaging, nephteline, chemical stains, and unfinished ceramic tile.[16] Average per unit raw material cost varied dramatically from company to company, reflecting underlying differences in product mix and producer size.[17] [18]

Table VI-3
Ceramic tile: Raw material costs and source of U.S. producers, by type 2018

Item	Calendar year 2018			Acquisition method	
	Value (1,000 dollars)	Unit value (dollars per square foot)	Share of value (percent)	Make	Purchase
Clay	59,567	0.07	26.0	1	12
Silica, feldspar, and other minerals	69,091	0.08	30.1	---	12
Glazing, decorating, and other surfacing materials	55,347	0.06	24.1	---	12
Other material inputs	45,308	0.05	19.8	---	7
Total, raw materials	229,314	0.25	100.0		

Note: "Other material inputs" include packaging, nephteline, chemical stains, and unfinished ceramic tile.

Source: Compiled from data submitted in response to Commission questionnaires.

[16] *** reported unusually higher than average other raw material costs of the non-handmade and custom ceramic tile producers, explaining that it uses ***. It also produces ***. Another factor is that ***'s porcelain ceramic tile is ***. ***, email to USITC staff, April 26, 2019.

[17] Petitioner reported that the costs of producing porcelain ceramic tile is "as much as ***" the costs of producing non-porcelain ceramic tile, with raw materials for porcelain body averaging $*** per square foot while non-porcelain body averages $***. Petitioner's postconference brief, att. A, p. 20.

[18] The average per unit raw material cost of the *** were consistently much higher than the aggregated U.S. ceramic tile industry average, ranging from $*** per-square foot in 2016 reported by MPM to a high of $*** per-square foot in 2018 reported by ***. In addition to using ***. *** and ***, emails to USITC staff, February 25-26, 2020.

As noted earlier in this section of the report, these three U.S. producers' sales accounted for *** percent by quantity and *** percent by value of aggregated U.S. producers' net sales.

Direct labor costs represent the third largest share of total COGS, increasing from 15.0 percent in 2016 to 15.9 percent in 2018 and were a slightly smaller share of total COGS in interim 2019 than in interim 2018. Direct labor costs increased by 9.2 percent in absolute values from 2016 to 2018 and were lower in interim 2019 than in interim 2018 (tables VI-1 and C-1). Average per unit direct labor costs remained the same in 2016 and 2017 at $0.12 per-square foot before increasing to $0.13 per-square foot in 2018 and were slightly higher in interim 2019 than in interim 2018 (table VI-1). Direct labor costs also varied from company to company as result of product mix, with the lowest direct labor cost of $*** per-square foot reported by *** and the highest $*** per-square foot reported by *** (table F-1).[19]

Energy costs represent the smallest share of total COGS, fluctuating within a narrow band from 6.9 percent to 7.9 percent of total COGS were a smaller share of total COGS in interim 2019 than in interim 2018. Energy costs increased by 11.5 percent in absolute values from 2016 to 2018 but were lower in interim 2019 than in interim 2018 (tables VI-1 and C-1). Average per unit energy costs also increased (from $0.05 per-square foot in 2016 to $0.06 per-square foot in 2017 and 2018) and average per unit values were the same in interim periods (table VI-1). Similar to other components of COGS, energy costs also varied from company to company, with the lowest energy cost of $*** per-square foot reported by *** and the highest $*** per-square foot reported by *** (table F-1).

As a ratio to net sales, average COGS were the same in 2016 and 2018 at 58.1 percent but was slightly lower at 56.7 percent in 2017; average COGS ratio to net sales were higher in interim 2019 than in interim 2018 (tables VI-1 and C-1). *** (table F-1).

Aggregate gross profit of U.S. producers fluctuated from ($515.5 million in 2016, $566.2 million in 2017, $532.5 million in 2018), with an increase of 3.3 percent from 2016 to 2018;

[19] The average per unit direct labor cost of the three custom and handmade non-porcelain ceramic tile producers (***) were consistently much higher than the aggregated U.S. ceramic tile industry average, ranging from $*** per-square foot in 2016 reported by MPM to a high of $*** per-square foot in interim 2019 reported by *** (table F-1). The handmade nature of these tiles ***. *** and ***, emails to USITC staff, February 25-26, 2020.

As noted earlier in this section of the report, these three U.S. producers' sales accounted for *** percent by quantity and *** percent by value of aggregated U.S. producers' net sales.

gross profits were lower in interim 2019 than in interim 2018 (tables VI-1 and C-1). *** and accounted for the *** declines in gross profit reported by six producers (***) from 2016 to 2018 (table F-1).

Selling, general, and administrative expenses and operating income or (loss)

Selling, general, and administrative ("SG&A") expense ratios (i.e., total SG&A expenses divided by net sales) of U.S. producers increased each annual period from 2016 to 2018, from a low of 22.4 percent in 2016 to 24.9 percent from 2018; the SG&A expense ratio was higher in interim 2019 than in interim 2018 (table VI-1).[20] [21] Selling expenses were approximately 78.7 percent of total SG&A costs while general and administrative expenses stayed virtually constant.[22] *** (table F-1).[23] Other companies' SG&A expense ratios fluctuated dramatically from 2016 to 2018, with a high of *** to a low of *** (table F-1).

Aggregate operating income of U.S. producers fluctuated from ($240.2 million in 2016, $265.7 million in 2017, $216.9 million in 2018), a decline of 9.7 percent from 2016 to 2018; operating profits were lower in interim 2019 than in interim 2018 (tables VI-1 and C-1). ***;

[20] One small U.S. producer ***. *** accounted for less than two percent of total net sales of ceramic tile from 2016 to 2018. ***'s U.S. producer questionnaire and *** emails to USITC staff, May 1, 2019 and February 26, 2020.

[21] Two companies (***) reported nonrecurring charges in ***. U.S. producer questionnaires, III-10.

[22] Calculated from U.S. producer questionnaires, III-9a.

[23] ***. ***, email to USITC staff, May 3, 2019.

Dal-Tile accounted for *** of the U.S. industry's operating income (table F-1). Seven out of 13 U.S. producers (***) reported declines in operating income from 2016 to 2018, with *** reporting the largest decline (table F-1). Aggregated for the industry, operating margins (i.e. operating income divided by net sales) increased from 19.5 percent in 2016 to 20.3 percent in 2017 before declining to 17.1 percent in 2018; operating margins were lower in interim 2019 than in interim 2018.

Other expenses and income

Aggregated interest expenses of U.S. producers increased steadily from 2016 to 2018 while other expenses and other income fluctuated from 2016 to 2018; interest expenses were higher while other expenses and other income were lower in interim 2019 than in interim 2018 (table VI-1). As a share of net sales, interest expenses and all other expenses and income accounted for 3.0 percent or less of total reported net sales from 2016 to 2018 and were higher in interim 2019 than in interim 2018.[24]

Net income or (loss)

Similar to gross and operating income, aggregated net income of U.S. producers increased from $222.5 million in 2016 to $239.7 million in 2017, before decreasing to $187.2 million in 2018, a decline of 15.9 percent from 2016 to 2018; net income was much lower in interim 2019 than in interim 2018 (tables VI-1 and C-1). Similar to its gross and operating income, *** (table F-1). ***. Collectively, net profit margins of U.S. producers were similar in 2016 and 2017 at 18.1 percent and 18.3 percent, respectively, before decreasing to 14.7 percent in 2018; the net profit margin was lower in interim 2019 than in interim 2018. As with other profitability indicators, ***'s net profit margins were *** the U.S. industry average and *** reported by eight U.S. producers (***).[25]

[24] Calculated from U.S. producer questionnaire, III-9a.
[25] ***.

Variance analysis

A variance analysis is not presented in this report due to large differences in product mix (e.g., porcelain, non-porcelain, mosaic, and handmade tiles), producer size, and data fluctuations from startup producers.

Capital expenditures and research and development expenses

Table VI-4 presents capital expenditures and research and development ("R&D") expenses by company. Table VI-5 presents the detailed narrative responses by company with regard to the nature and focus of capital expenditures and R&D expenses. Petitioners stated that the ceramic tile industry is "very capital-intensive."[26] Aggregated capital expenditures decreased by 79.0 percent from 2016 to 2018 and were higher in interim 2019 than in interim 2018.[27] *** accounted for most of the capital expenditures in 2016 and 2018.[28] Most companies incurred capital expenditures for new machinery and equipment modernization. R&D expenses increased by *** percent from 2016 to 2018 and were lower in interim 2019 than in interim 2018. Responding U.S. producers reported R&D expenses related to developing new products and improving digital printing. Seven producers (***) reported very little or zero R&D expenses, with three of these seven U.S. producers (***) stating that R&D costs related to ceramic tile production are incurred by their parent companies.[29]

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[26] Petitioners' response to Commission questions, April 6, 2020, p. 16 and Petitioners' posthearing brief, p. 4.

[27] Petitioners reported reduced or stalled capital investment for plant expansions during the period examined. Petitioners' response to Commission questions, April 6, 2020, pp. 35 and 42.

[28] *** Landmark started production in 2016. Del Conca is also a relatively new producer, with its ceramic tile factory starting operations in 2014. Witnesses testified that it takes at least two years from site selection to plant construction and that the new ceramic tile companies made their decision based on the market view in 2012 and 2013. Conference transcript, p. 81 (Baran); *Contemporary Stone and Tile Design Magazine webpage,* https://www.stoneworld.com/articles/89222-landmark-ceramics-hosts-grand-opening-for-new-production-facility, retrieved May 20, 2019; and *Del Conca webpage*, http://www.delconcausa.com/del-conca-usa/about-us/company-profile/, retrieved April 24, 2019.

[29] U.S. producer questionnaires, III-13.

No patent or copyright protection exists within the ceramic tile industry, but does exist within the equipment used to manufacture ceramic tile.[30] R&D for ceramic tile equipment is beyond the scope of these investigations.

Table VI-4
Ceramic tile: Capital expenditures and R&D expenses of U.S. producers, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Capital expenditures (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total capital expenditures	304,372	147,141	64,051	45,560	84,201
	R&D expenses (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total R&D expenses	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[30] Conference transcript, pp. 32 and 34 (Curran) and p. 84 (Astrachan).

Table VI-5
Ceramic tile: Nature and focus of capital expenditures and research and development (R&D) expenses for U.S. producers, by firm, since January 1, 2016

Firm	Nature and focus of capital expenditures
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.

Table continued on next page.

Table VI-5—Continued
Ceramic tile: Nature and focus of capital expenditures and research and development (R&D) expenses for U.S. producers, by firm, since January 1, 2016

Firm	Nature and focus of capital expenditures
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
	Nature and focus of R&D expenses
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.

Source: Compiled from data submitted in response to Commission questionnaires.

Assets and return on assets

Table VI-6 presents data on the U.S. producers' total assets and their return on assets ("ROA").[31] Total assets utilized by U.S. producers fluctuated, increasing by 7.8 percent from 2016 to 2017 but decreased by 1.1 percent from 2017 to 2018; the ROA fluctuated within a narrow band. Negative ROA ratios were reported by ***, reflecting the same trend as their operating margins and reported by small U.S. producer ***. ***.[32]

[31] The return on assets is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value for the subject product.

[32] As noted earlier in this section of the report, ***. *** emails to USITC staff, May 1, 2019 and February 26, 2020.

Table VI-6
Ceramic tile: U.S. producers' total assets and return on assets, 2016-18, January to September 2018, and January to September 2019

Firm	Calendar years		
	2016	2017	2018
	Total net assets (1,000 dollars)		
American Wonder	***	***	***
Crossville	***	***	***
Dal-Tile	***	***	***
Del Conca	***	***	***
Florida Tile	***	***	***
Florim	***	***	***
Interceramic	***	***	***
Ironrock	***	***	***
Landmark	***	***	***
MPM	***	***	***
Pratt	***	***	***
Stonepeak	***	***	***
Syzygy	***	***	***
Total net assets	1,821,877	1,963,526	1,941,149
	Operating return on assets (percent)		
American Wonder	***	***	***
Crossville	***	***	***
Dal-Tile	***	***	***
Del Conca	***	***	***
Florida Tile	***	***	***
Florim	***	***	***
Interceramic	***	***	***
Ironrock	***	***	***
Landmark	***	***	***
MPM	***	***	***
Pratt	***	***	***
Stonepeak	***	***	***
Syzygy	***	***	***
Average operating ROA	14.5	14.7	13.6

Source: Compiled from data submitted in response to Commission questionnaires.

Capital and investment

The Commission requested U.S. producers of ceramic tile to describe any actual or potential negative effects of imports of ceramic tile from China on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Tables VI-7 tabulates the responses of U.S. producers on their ceramic tile operations. Table VI-8 presents the detailed narrative responses of U.S. producers regarding actual and anticipated negative effects of subject imports on their ceramic tile operations.

Table VI-7
Ceramic tile: Actual and anticipated negative effects of imports on investment and growth and development

Item	No	Yes
Negative effects on investment	3	10
Cancellation, postponement, or rejection of expansion projects		7
Denial or rejection of investment proposal		1
Reduction in the size of capital investments		5
Return on specific investments negatively impacted		6
Idling of one or more kilns longer than anticipated		8
Other		3
Negative effects on growth and development	5	8
Rejection of bank loans		1
Lowering of credit rating		0
Problem related to the issue of stocks or bonds		0
Ability to service debt		0
Other		8
Anticipated negative effects of imports	0	13

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-8
Ceramic tile: Narratives relating to actual and anticipated negative effects of imports on investment and growth and development, since January 1, 2016

Item / Firm	Narrative
Cancellation, postponement, or rejection of expansion projects:	
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
Denial or rejection of investment proposal:	
***	***.
Reduction in the size of capital investments:	
***	***.
***	***.
***	***.
***	***.
***	***.
Return on specific investments negatively impacted:	
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.

Table continued on next page.

Table VI-8—Continued
Ceramic tile: Narratives relating to actual and anticipated negative effects of imports on investment and growth and development, since January 1, 2016

Item / Firm	Narrative
Idling of one or more kilns longer than anticipated:	
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
Other negative effects on investments:	
***	***.
***	***.
***	***.
Rejection of bank loans:	
***	***.
Other effects on growth and development:	
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.

Table continued on next page.

Table VI-8—Continued
Ceramic tile: Narratives relating to actual and anticipated negative effects of imports on investment and growth and development, since January 1, 2016

Item / Firm	Narrative
Anticipated effects of imports:	
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.
***	***.

Source: Compiled from data submitted in response to Commission questionnaires.

Part VII: Threat considerations and information on nonsubject countries

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

The industry in China

China is the world's largest producer, consumer, and exporter of ceramic tile. Chinese production of ceramic tile is estimated to be 5.7 billion square meters (61.2 billion square feet), the equivalent to 43.4 percent of world production in 2018. Consumption of ceramic tile in China is estimated to be 4.8 billion square meters (52.1 billion square feet), or 37.8 percent of world consumption in 2018.[3] In 2019 there were an estimated 1,450 producers of ceramic tile with 3,600 production lines in China, according to the China Building Ceramics and Sanitaryware Association ("CBCSA").[4] The city of Foshan, in Guangdong Province, is considered the leading center for China's ceramic tile industry, where some 305 producers account for a combined annual production of 1.2 billion square meters (12.9 billion square feet). Over the past decade, Foshan accounted for 54 percent of China's total output and 25 percent of global output. The City of Zibo, in Shangdong Province, is the production center for low-value and glazed polished ceramic tile and Fujian Province is the center for low-value and wall ceramic tile in China.[5]

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[3] Annual ceramic tile production in China declined during 2016-18, from 6.5 billion square meters (69.9 billion square feet) in 2016 (by 1.5 percent) to 6.4 billion square meters (68.9 billion square feet) in 2017 and (by 11.2 percent) to 5.7 billion square meters (61.2 billion square feet) in 2018. Conversely, ceramic tile consumption in China during the POI slightly increased (by 0.4 percent) from 5.5 billion square meters (58.9 billion square feet) in 2016 to 5.5 billion square meters (59.2 billion square feet) in 2017, and then decreased (by 12.0 percent) to 4.8 billion square meters (52.1 billion square feet) in 2018. Tile Edizioni, "World Production and Consumption of Ceramic Tile," *Ceramic World Review*, issue No. 128, August/October 2019, pp. 52, 54, http://www.tiledizioni.it/ita/riviste/20158/Ceramic-World-Review-n-128-2018.aspx.

[4] *Tile & Stone Journal*, "China's Maturing Manufacturers Now Produce Half of the World's Ceramic Tiles," September 2018, http://www.tileandstonejournal.com/featured-articles/china-s-maturing-manufacturers-now-produce-half-of-the-world-s-ceramic-tiles/; CBCSA, "It is Estimated that the Output Value of China's Ceramic Products will Reach 1.100 Billion Yuan in 2020," March 13, 2020, http://china-china.cn/News/News_Detail.asp?ID=28349 {English translation}.

The Association of Italian Manufacturers of Machinery and Equipment for the Ceramic Industry's ("ACIMAC's") annual research reported an estimated 1,400 producers of ceramic tile with 3,500 production lines in China in 2017. Tile Edizioni, "World Production and Consumption of Ceramic Tile," *Ceramic World Review*, issue No. 128, August/October 2018, p. 64, https://www.ceramicworldweb.it/cww-en/magazines/ceramic-world-review-1282018/.

[5] Zheng, Kenson, "How to Import Tile from China," Forshan Sourcing Co., August 8, 2017, https://www.foshansourcing.com/how-to-import-tile-from-china-2/ and *Tile & Stone Journal*, "China's Maturing Manufacturers Now Produce Half of the World's Ceramic Tiles," September 2018, http://www.tileandstonejournal.com/featured-articles/china-s-maturing-manufacturers-now-produce-half-of-the-world-s-ceramic-tiles/.

China's ceramic tile industry is not highly concentrated, with the top-ten producers having combined annual capacity for only 4.1 percent of total industry production. New Pearl Group is the largest ceramic tile producer in China with combined annual production capacity of 200 million square meters (2.2 billion square feet), followed by New Zhongyuan Group with combined capacity of 100 million square meters (1.1 billion square feet), Nabel with combined capacity of 78 million square meters (840 million square feet), and Wonderful with combined capacity of 58 million square meters (624 million square feet).6

The Chinese government noted that the ceramic industry in China, during the previous Twelfth Five-Year Plan period (2011 to 2015), experienced continuing increased industry concentration and growth of large enterprise groups, with rapid development of ceramics industrial parks and industrial clusters, and rising collaborative industry innovation, especially for energy efficiency, pollution control, manufacturing technology advancements, and product development.[7] Industry issues identified for addressing during the current Thirteenth Five-Year Plan period (2016 to 2020) include excess production capacity (national building ceramic production capacity was estimated to exceed 13 billion square meters (161 billion square feet) in 2015), weak innovation and design capabilities, lagging product-support services, and lack of significant international brand recognition.

[6] *Tile & Stone Journal*, "China's Maturing Manufacturers Now Produce Half of the World's Ceramic Tiles," September 2018, http://www.tileandstonejournal.com/featured-articles/china-s-maturing-manufacturers-now-produce-half-of-the-world-s-ceramic-tiles/.

[7] Respondents' prehearing brief, exhibit 5-J: "Guiding Opinions on the Development of Building Ceramics and Sanitary Ware Industry in the 13th Five-Year Plan," p. 1.

The Commission issued foreign producers' or exporters' questionnaires to 50 firms believed to produce and/or export ceramic tile from China.[8] Usable responses to the Commission's questionnaire were received from 43 firms.[9] These firms' exports to the United States accounted for approximately 50.7 percent of U.S. imports of ceramic tile from China in 2018.[10] According to estimates requested of the responding Chinese producers, the production of ceramic tile in China reported in questionnaires accounts for approximately 8.9 percent of overall production of ceramic tile in China in 2018.[11] Table VII-1 presents information on the ceramic tile operations of the responding producers in China and table VII-2 presents information of the ceramic tile operations of the responding resellers in China.

[8] These firms were identified through a review of information submitted in the petition and contained in *** records.

[9] Staff received useable foreign producer questionnaire responses from 43 firms in China that produce ceramic tile or resell ceramic tile as exports to the United States. In addition to being producers, three firms, ***, reported that they were also resellers of ceramic tile to the United States during 2016 to 2018.

[10] Official exports statistics under HS subheadings 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90 as reported by the Government of China's Customs in the Global Trade Atlas database, accessed March 10, 2020.

[11] According to Tile Edizioni, Chinese production of ceramic tile was estimated to be 61.2 billion square feet in 2018 (see footnote 3). The Commission requested foreign firms provide production for 2018. In 2018, responding firms produced approximately *** square feet of ceramic tile. Based on these figures, it is estimated that responding foreign producers accounted for *** percent of ceramic tile production in China during 2018.

Table VII-1
Ceramic tile: Summary data for producers in China, 2018

Firm	Production (1,000 square feet)	Share of reported production (percent)	Exports to the United States (1,000 square feet)	Share of reported exports to the United States (percent)	Total shipments (1,000 square feet)	Share of firm's total shipments exported to the United States (percent)
Belite	***	***	***	***	***	***
Bode	***	***	***	***	***	***
Dongguan	***	***	***	***	***	***
Dongpeng	***	***	***	***	***	***
Gani	***	***	***	***	***	***
Gold Medal	***	***	***	***	***	***
Guangdong Kito	***	***	***	***	***	***
Guangxi Goshen	***	***	***	***	***	***
Hemei	***	***	***	***	***	***
Heyuan	***	***	***	***	***	***
Huida	***	***	***	***	***	***
Jiangxi Wifi	***	***	***	***	***	***
Kim Hin	***	***	***	***	***	***
Monalisa	***	***	***	***	***	***
Nabel	***	***	***	***	***	***
New Zhong Yuan	***	***	***	***	***	***
Overland	***	***	***	***	***	***
Qualicer	***	***	***	***	***	***
Romantic	***	***	***	***	***	***
Sanfi	***	***	***	***	***	***
Sanwon	***	***	***	***	***	***
Shiwan Yulong	***	***	***	***	***	***
Sunvin	***	***	***	***	***	***
Winto	***	***	***	***	***	***
Xinruncheng	***	***	***	***	***	***
Total	4,550,410	100.0	195,294	100.0	4,468,739	4.4

Note.--Share and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent.

Note.--Exports to the United States does not include resales to the United States. For information on resales to the United States, please reference table VII-2.

Source: Compiled from data submitted in response to Commission questionnaires.

Table VII-2
Ceramic tile: Resellers in China, 2018

Resellers	Resales exported to the United States (1,000 square feet)	Share of resales exported to the United States (percent)
Ant	***	***
Castel	***	***
Elegance	***	***
Foshan Porcelain	***	***
Guangdong Kito	***	***
Hoe Hin	***	***
Hudson	***	***
JBN	***	***
JDD	***	***
Kertiles	***	***
Mainland	***	***
Nabel	***	***
Newpearl	***	***
Quanzhou Lans	***	***
Sincere	***	***
Stota	***	***
Sumso	***	***
Sunvin	***	***
Temgoo	***	***
Xinzhongwei	***	***
Total	154,660	100.0

Note.--Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent.

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

As presented in table VII-3 producers and/or exporters in China reported several operational and organizational changes since January 1, 2016.

Table VII-3
Ceramic tile: China producers' and/or exporters' reported changes in operations, since January 1, 2016

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on ceramic tile

Table VII-4 presents information on the ceramic tile operations of the responding producers and exporters in China. The capacity and production of the responding producers in China increased by 16.6 and 14.5 percent, respectively, between 2016 and 2018, and are projected to increase by 1.8 and 2.6 percent, respectively, between 2018 and 2020. The greater increase in capacity resulted in capacity utilization of the responding producers in China declining from 87.3 percent in 2016 to 85.8 percent in 2018, and is projected to increase to 86.5 percent in 2020. Total shipments of the responding producers in China increased by 19.4 percent between 2016 and 2018, driven largely by an increase in total home market shipments, which increased by 25.8 percent over the same period. Exports to the United States of the responding producers in China increased by 6.4 percent between 2016 and 2018, and are projected to decrease by 73.7 percent by 2020.[12] The combined exports to the United States of the responding producers and resellers in China increased 10.4 percent between 2016 and 2018, increasing 11.8 percent in 2017 and then decreasing 1.2 percent in 2018. Projected combined exports to the United States of the responding producers and resellers in China are estimated to decrease by 49.5 percent between 2018 and 2019, and by 92.2 percent in 2020.

[12] ***, which exported *** square feet of ceramic tile to the United States in 2018, projects that it will export *** square feet of ceramic tile in 2020. Nine firms (***) project that they will export *** square feet of ceramic tile to the United States in 2020. These firms exported *** square feet of ceramic tile to the United States in 2018. *** reported that it would close its tile factory in ***. Email correspondence from ***, January 31, 2020. *** reported that their U.S. clients are not willing to pay the current duty rate on ceramic tile from China and, as a result, project *** exports of ceramic tile to the United States in 2020. Email correspondence from ***, February 1, 2020; email correspondence from ***, January 29, 2020; and email correspondence from ***, January 31, 2020. The remaining firms (***) have not provided a narrative to explain their 2020 projections of ceramic tile exports to the United States.

Table VII-4
Ceramic Tile: Data for producers in China, 2016-18, and projected 2019 and 2020

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2016	2017	2018	2019	2020
	Quantity (1,000 square feet)				
Capacity	4,550,646	5,018,338	5,304,486	5,405,311	5,398,980
Production	3,974,855	4,259,110	4,550,410	4,670,930	4,669,605
End-of-period inventories	1,861,132	1,610,584	1,564,488	1,514,216	1,450,303
Shipments:					
Home market shipments:					
Internal consumption/ transfers	188,040	204,397	258,813	507,883	500,508
Commercial home market shipments	2,789,996	3,394,530	3,488,430	3,626,164	3,705,993
Total home market shipments	2,978,036	3,598,927	3,747,243	4,134,047	4,206,501
Export shipments to:					
United States	183,610	187,274	195,294	98,567	25,957
All other markets	581,230	562,312	526,202	487,292	545,165
Total exports	764,840	749,586	721,496	585,859	571,122
Total shipments	3,742,876	4,348,513	4,468,739	4,719,906	4,777,623
	Ratios and shares (percent)				
Capacity utilization	87.3	84.9	85.8	86.4	86.5
Inventories/production	46.8	37.8	34.4	32.4	31.1
Inventories/total shipments	49.7	37.0	35.0	32.1	30.4
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	5.0	4.7	5.8	10.8	10.5
Commercial home market shipments	74.5	78.1	78.1	76.8	77.6
Total home market shipments	79.6	82.8	83.9	87.6	88.0
Export shipments to:					
United States	4.9	4.3	4.4	2.1	0.5
All other markets	15.5	12.9	11.8	10.3	11.4
Total exports	20.4	17.2	16.1	12.4	12.0
Total shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
Resales exported to the United States	133,376	167,096	154,660	78,213	1,182
Total exports to the United States	316,986	354,370	349,954	176,780	27,139
	Ratios and shares (percent)				
Share of total exports to the United States:					
Exported by producers	57.9	52.8	55.8	55.8	95.6
Exported by resellers	42.1	47.2	44.2	44.2	4.4
Adjusted share of total shipments exported to the United States	8.5	8.1	7.8	3.7	0.6

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

All but ***, reported that they were not able to switch production (capacity) between ceramic tile and other products using the same equipment and/or labor. *** stated that ***.

Exports

According to GTA, the leading export markets for ceramic tile from China in 2018 are Indonesia, the Philippines, the United States, and Vietnam (table VII-5). During 2016-18, the United States was the top export market for ceramic tile from China (accounting for 9.2 percent in 2018), followed by the Philippines (7.2 percent), Vietnam (6.7 percent), and Indonesia (6.5 percent).

Table VII-5
Ceramic tile: Exports from China, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
United States	391,199	376,428	409,391
Philippines	348,618	300,822	318,376
Vietnam	295,817	308,345	296,291
Indonesia	237,263	250,546	287,908
Korea	269,324	260,396	256,048
Thailand	174,113	169,606	184,803
Hong Kong	157,831	226,694	180,089
Australia	197,230	156,079	169,519
Malaysia	209,832	129,594	153,296
All other destination markets	3,690,059	2,479,118	2,196,462
Total exports	5,971,286	4,657,626	4,452,183
	Share of value (percent)		
United States	6.6	8.1	9.2
Philippines	5.8	6.5	7.2
Vietnam	5.0	6.6	6.7
Indonesia	4.0	5.4	6.5
Korea	4.5	5.6	5.8
Thailand	2.9	3.6	4.2
Hong Kong	2.6	4.9	4.0
Australia	3.3	3.4	3.8
Malaysia	3.5	2.8	3.4
All other destination markets	61.8	53.2	49.3
Total exports	100.0	100.0	100.0

Source: Official exports statistics under HS subheadings 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90 as reported by the Government of China's Customs in the Global Trade Atlas database, accessed March 10, 2020.

U.S. inventories of imported merchandise

Table VII-6 presents data on U.S. importers' reported end-of-period inventories of ceramic tile. Importers' inventories of ceramic tile from China and from nonsubject sources increased in 2017 and 2018. Inventories of U.S. imports from China grew by *** percent between 2016 and 2018, increasing *** percent in 2017 and by *** percent in 2018, and were *** percent higher in January to September 2019 than January to September 2018.[13] Inventories of imports from nonsubject sources grew by *** percent between 2016 and 2018, increasing by *** percent in 2017 and by *** percent in 2018, and were *** percent higher in January to September 2019 than January to September 2018. Inventories of ceramic tile from China and nonsubject sources increased relative to U.S. shipments of imports by *** and *** percentage points, respectively, between 2016 and 2018.[14]

[13] The largest increase, by quantity, of inventories of U.S. imports from China during 2016-18 was ***. ***. ***. ***. The firm's share of inventories to imports from China ***.

[14] *** accounted for the largest increase in inventories of imports from nonsubject sources during 2016-18. The firm's share of inventories to imports from nonsubject sources increased from *** percent in 2016 to *** percent in 2018.

Table VII-6
Ceramic tile: U.S. importers' inventories, 2016-18

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of ceramic tile from China after September 30, 2019. Table VII-7 presents the data for twenty-eight responding firms. Three firms, ***, accounted for *** percent of arranged U.S. imports from all import sources between October 2019 and September 2020.

Table VII-7
Ceramic tile: Arranged U.S imports, by source, October 2019 through September 2020

* * * * * * *

Note.--During October-December 2019 U.S. imports of ceramic tile from China were 14.9 million square feet and from nonsubject sources were 227.5 million square feet. Compiled from official Commerce statistics for HTS 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90.

Source: Compiled from data submitted in response to Commission questionnaires.

Antidumping or countervailing duty orders in third-country markets

Ceramic tile from China is subject to several antidumping duty actions (table VII-8) and safeguard measures (table VII-9) in third-county markets.

Table VII-8
Ceramic tile: Antidumping duty orders on ceramic tile originating in China in third-country markets

Third-country market	Subject product	Effective date	Actions
Argentina[1]	Plates and fine stoneware tiles	February 2018	AD duty order imposed with a rate of 27.7 percent.
Brazil[2]	Technical porcelain (classifiable in HS 6907.90)	December 2019	Review initiated of existing AD duty orders, imposed back in December 2014, with rates of $3.34−$6.42 per square meter ($0.31−$0.60 per square foot).
European Union[3]	Glazed or unglazed ceramic flags and paving, hearth, or wall tiles; glazed and unglazed ceramic mosaic cubes, whether or not on a backing	September 2011	AD duty orders imposed with rates of 26.3−69.7.
		November 2017	AD duty orders were extended for another five years with rates of 29.3−69.7.
Gulf Cooperation Council ("GCC")[4]	Ceramic flags and paving, hearth, floor or wall tiles, whether or not on a backing; finishing ceramics	November 2018	AD investigation Initiated.
Korea[5]	Ceramic tile	July 2018	AD duty orders were extended for another three years with recommended rates of 9.06−29.41 percent.
India[6]	Glazed tiles, other than vitrified	October 2009	AD duty orders imposed with rates of either "nil" or 137 rupees per square meter (12.7 rupees per square foot).
	Unglazed or glazed porcelain/vitrified tiles	March 2016	AD duty orders imposed with rates of either "nil" or $0.28−$1.87 per square meter (12.7 rupees per square foot).
	Glazed and unglazed, porcelain and vitrified tiles in polished or unpolished finish with less than 3 percent water absorption	April 2017	AD duty orders imposed with rates of either "nil" or $0.28−$1.87 per square meter ($0.03−$0.17 per square foot)

Table continued on next page.

Table VII-8--Continued
Ceramic tile: Antidumping duty orders on ceramic tile originating in China in third-country markets

Third-country market	Subject product	Effective date	Actions
Mexico[7]	Unglazed or glazed ceramic flags and paving, hearth, or wall tiles	May 2016	Provisional AD duty orders imposed with rates of $2.9−$12.42 per square meter ($0.27−$1.15 per square foot).
		October 2016	AD duty orders imposed with rates of $2.9−$12.42 per square meter ($0.27−$1.15 per square foot).
Pakistan[8]	Ceramic, porcelain, vitrified, granite wall and floor tiles	April 2014	AD duty order imposed with rates of 0−49.9 percent for a period not to exceed 54 months.
	Glazed or unglazed ceramic floor and wall tiles, sizes above 3,600 square cm	October 2017	AD duty orders imposed with rates of 9.35−36.35 percent.

[1] Global Trade Alert, "Argentina: Definitive Antidumping Duty on Imports of Certain Plates and Tiles from China, India, Malaysia, Viet Nam and Brazil," intervention 15002, no date, https://www.globaltradealert.org/intervention/15002/anti-dumping/argentina-definitive-antidumping-duty-on-imports-of-certain-plates-and-tiles-from-china-india-malaysia-viet-nam-and-brazil (retrieved March 17, 2020).
[2] Global Trade Alert, "Brazil: Definitive Antidumping Duty on Imports of Technical Porcelain from China," intervention 17340, no date, https://www.globaltradealert.org/intervention/17340/anti-dumping/brazil-definitive-antidumping-duty-on-imports-of-technical-porcelain-from-china (retrieved March 17, 2020).
[3] European Commission, Commission Implementing Regulation (EU) 2017/2179, November 22, 2017; Commission Implementing Regulation (EU) 917/2011, September 12, 2011; Commission Implementing Regulation (EU) 258/2011, March 16, 2011.
[4] Saudi Ceramic Company filed an antidumping complaint against tile imports by GCC members (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) from China, India, and Spain. Argaam Investment Co., "Saudi Ceramic Says Anti-dumping Complaint Under Investigation," November 5, 2018; GCC Bureau of Technical Secretariat for Anti Injurious Practices in International Trade, "Initiation of Anti-Dumping Investigation Against Imports of Ceramic Flags and paving, Hearth, Floor, or Wall Tiles, Whether Or Not On a Backing, Finished Ceramics, Originating in China, India, and Spain," *Official Gazette*, November 5, 2018.
[5] Kim, E.J., "S. Korea Extends Anti-dumping Duties on Chinese Ceramic Tile," Yonhap News Agency, July 19, 2018.
[6] India Directorate General of Anti-dumping & Allied Duties, "Anti-Dumping Investigation Concerning Imports of Ceramic Tiles Originating In or Exported From China PR, Final Findings," 14/16/2008-DGAD, October 9, 2009; "Final Finding, Anti-Dumping Investigation Concerning Imports of Glazed/Unglazed Porcelain/Vitrified Tiles in Polished or Unpolished Finish With Less than 3% Water Absorption, Originating In or Exported From China PR," 14/14/2014-DGAD, April 8, 2017, http://www.dgtr.gov.in/sites/default/files/NCV%20Press%20English%20-%208.4.17.pdf; Indian Ministry of Commerce and Industry, Directorate General of Anti-Dumping & Allied Duties, "Anti-Dumping Investigation Concerning Imports of Glazed/Unglazed Porcelain/Vitrified Tiles in Polished or Unpolished Finish with Less Than 3% Water Absorption Originating In or Exported From China PR," Notification No.14/14/2014-DGAD, April 8, 2017, http://www.dgtr.gov.in/sites/default/files/NCV%20Press%20English%20-%208.4.17.pdf.

Table notes continued on next page.

Table VII-8--Continued
Ceramic tile: Antidumping duty orders on ceramic tile originating in China in third-country markets

[7] Global Trade Alert, "Mexico: Definitive Antidumping Duty on Imports of Ceramic Tiles for Walls and Floors from China," n.d. (retrieved August 25, 2018).
[8] Pakistan National Tariff Commission, "Report on Final Determination and Levy of Antidumping Duty on Import of Tiles Which Includes Ceramic, Porcelain/Vitrified/Granite Wall and Floor Tiles in Glazed/Unglazed, Polished/Unpolished Finish Originating In and/or Exported From the People's Republic of China," A.D.C. No. 11/2006/NTC/CT, March 24, 2007; "Final Determination and Levy of Antidumping Duty on Import of Tiles Which Includes Ceramic, Porcelain/Vitrified/Granite Wall and Floor Tiles in Glazed/Unglazed, Polished/Unpolished Finish Originating In and/or Exported From the People's Republic of China," A.D.C. No. 11/2006/NTC/CT, May 8, 2012 https://ntc.gov.pk/wp-content/uploads/2016/05/150512Final-Report-on-Tiles-IHC-_Non-Conf_-.pdf; Global Trade Alert, "Pakistan: Definitive Antidumping Duty on Imports of Wall and Floor Tiles from China," Intervention 14149, n.d., https://www.globaltradealert.org/intervention/14149/anti-dumping/pakistan-definitive-antidumping-duty-on-imports-of-wall-and-floor-tiles-from-china (retrieved March 17, 2020); Pakistan National Tariff Commission, "Report on Final Determination and Levy of Antidumping Duty on Imports of Wall and Floor Tiles Originating in and / or Exported From the People's Republic of China," A.D.C No.45/2016/NTC/Tiles, October 10, 2017, https://ntc.gov.pk/wp-content/uploads/2017/10/Non-Conf..Tiles-FD-Report-45-final.pdf; Global Trade Alert, "Pakistan: Provisional Extension of Antidumping Duty on Imports of Tiles from China and Subsequent Suspension by Judicial Decision," intervention 18904, n.d., https://www.globaltradealert.org/intervention/18904/anti-dumping/pakistan-provisional-extension-of-antidumping-duty-on-imports-of-tiles-from-china-and-subsequent-suspension-by-judicial-decision (retrieved March 17, 2020).

Source: References cited: Petition, p. 6; exhs. I-2 "AD orders imposed by other countries on Chinese tile imports;" Petitioner's postconference brief, attachment U.3 "Trade remedy documentation;" India Directorate General of Anti-dumping & Allied Duties; Pakistan National Tariff Commission.

Table VII-9
Ceramic tile: Safeguard measures on ceramic tile originating from China in third-country markets

Third-country market	Subject product	Effective date	Actions
Ecuador[1]	Smooth ceramics	November 2019	Safeguard investigations initiated.
Indonesia[2]	Ceramic flags and paving, hearth, or wall tiles	October 2018	October 12, 2018 –October 11, 2021 (23 percent)
Philippines[3]	Ceramic floor and wall tiles	December 2018	Safeguard investigations initiated.

[1] World Trade Organization ("WTO"), Committee on Safeguards, "Ecuador: Notification Under Article 12.1(A) of the Agreement on Safeguards on the Initiation of an Investigation Process and the Reasons for It," G/SG/N/6/ECU/10, December 6, 2019, https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=@Symbol=%20(g/sg/n/6/ecu/10)&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChanged=true#.
[2] WTO, Committee on Safeguards, "Notification Pursuant to Article 12.1(C) of the Agreement on Safeguards, Indonesia," G/SG/N/10/IDN/20/Suppl.1, G/SG/N/11/IDN/17, October 8, 2018.
[3] Philippines Department of Trade and Industry, "Notice of the Initiation of a Preliminary Investigation on the Application for Safeguard Measures on the Importation of Ceramic Floor and Wall Tiles from Various Countries," SG Case 02-2018, December 20, 2018.

Source: References cited: Petitioner's postconference brief, attachments U.1 – U.2 "Trade remedy documentation."

Information on nonsubject countries

Brazil, Italy, Mexico, and Spain were the leading nonsubject sources for U.S. imports of ceramic tile during 2016-18 (see table IV-2).

The industry in Brazil

Brazil was the world's third largest producer of all types of ceramic tile in 2018, accounting for 6.1 percent of global output that year or 793 million square meters (8.5 billion square feet).[15] Leading producers based in Brazil (in descending order of production) include: Grupo Cedasa/Incopisos Cerâmica, Cerâmica Carmelo Fior, Grupo Fragnani, Cerâmaica Elizabeth, and Portobello Group. These firms, operating only in Brazil, exported between 3 and

[15] Tile Edizioni, "World Production and Consumption of Ceramic Tile," *Ceramic World Review*, issue No. 128, August/October 2019, p. 52, http://www.tiledizioni.it/ita/riviste/20158/Ceramic-World-Review-n-128-2018.aspx.

22 percent of their ceramic tile production in 2018.[16] Brazil's exports of ceramic tile increased by 45.6 percent from 2016 to 2018 (table VII-10). In 2018, the Dominican Republic (22.5 percent), the United States (15.4 percent), Paraguay (10.8 percent), and Argentina (9.8 percent) were the leading export destinations, together accounting for nearly three-fifths (58.6 percent) of Brazil's ceramic tile exports. U.S. producer Dal-Tile's parent company, Mohawk Industries Inc., announced its October 2018 acquisition of Brazilian ceramic tile producer Eliane Group, with six production facilities located in the states of Bahia and Santa Catarina.[17]

Table VII-10
Ceramic tile: Exports from Brazil by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
United States	44,494	56,128	69,286
Dominican Republic	19,682	19,521	101,345
Paraguay	35,842	47,686	48,651
Argentina	31,233	40,263	44,312
Chile	18,540	19,376	19,950
Colombia	13,730	16,895	16,516
Uruguay	12,445	15,015	15,228
Bolivia	14,219	13,391	13,020
Honduras	8,102	10,083	11,126
All other destination markets	110,630	106,142	110,445
Total exports	308,917	344,500	449,878

Table continued on next page.

[16] Tile Edizioni, "The World's Top Ceramic Tile Manufacturers," *Ceramic World Review*, v. 133/2019, August/October 2019, pp. 64-67, https://www.ceramicworldweb.it/cww-en/magazines/ceramic-world-review-1332019/.

[17] Respondents' prehearing brief, exhibit 3-A-10: Ceramic World Web, "Mohawk Industries to Acquire Eliane, Ceramic," November 16, 2018.

Table VII-10--Continued
Ceramic tile: Exports from Brazil by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Share of value (percent)		
United States	14.4	16.3	15.4
Dominican Republic	6.4	5.7	22.5
Paraguay	11.6	13.8	10.8
Argentina	10.1	11.7	9.8
Chile	6.0	5.6	4.4
Colombia	4.4	4.9	3.7
Uruguay	4.0	4.4	3.4
Bolivia	4.6	3.9	2.9
Honduras	2.6	2.9	2.5
All other destination markets	35.8	30.8	24.5
Total exports	100.0	100.0	100.0

Note.--Import quantities not provided due to differences in units of measure amongst reporting countries.

Source: Official export statistics under HS subheadings 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90, as reported by Brazil's Foreign Trade Secretariat ("SECEX"), in the IHS Markit, Global Trade Atlas database, accessed March 10, 2020.

The industry in Italy

Italy was the world's sixth largest producer of all types of ceramic tile in 2018, accounting for 3.2 percent of global output that year or 416 million square meters (4.5 billion square feet).[18] Leading producers based in Italy (in descending order of revenues, of €200 million or more) included: Concorde Group, Iris Ceramica Group, Fin-floor Group, and Panaria Group, all having multinational operations, including those located in the United States; followed by Casalgrande Padana and Cooperativa Ceramica d'Imola, both having operations only in Italy. These firms reported exports accounted for 74-85 percent of their output in 2018.[19] Italy's exports of ceramic tile increased by 6.8 percent from 2016 to 2018 (table VII-11). In 2018, France (16.2 percent), the United States (13.3 percent), and Germany (12.6 percent) were the leading export destinations, together accounting for over two-fifths (42.1 percent) of Italy's ceramic tile exports.

[18] Tile Edizioni, "World Production and Consumption of Ceramic Tile," *Ceramic World Review*, issue No. 128, August/October 2019, p. 52, http://www.tiledizioni.it/ita/riviste/20158/Ceramic-World-Review-n-128-2018.aspx.

[19] Tile Edizioni, "The Top Italian Tile Producers," *Ceramic World Review*, v. 133/2019, August/October 2019, pp. 68-71, https://www.ceramicworldweb.it/cww-en/magazines/ceramic-world-review-1332019/.

Table VII-11
Ceramic tile: Exports from Italy by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
United States	650,201	651,977	621,277
France	730,642	751,239	757,292
Germany	584,731	594,030	591,264
Belgium	165,261	166,503	168,336
Switzerland	153,520	156,723	166,044
United Kingdom	150,811	158,765	161,920
Canada	119,321	132,337	137,189
Austria	120,079	122,575	133,973
Netherlands	101,690	115,982	126,182
All other destination markets	1,605,009	1,737,499	1,813,960
Total exports	4,381,265	4,587,630	4,677,438
	Share of value (percent)		
United States	14.8	14.2	13.3
France	16.7	16.4	16.2
Germany	13.3	12.9	12.6
Belgium	3.8	3.6	3.6
Switzerland	3.5	3.4	3.5
United Kingdom	3.4	3.5	3.5
Canada	2.7	2.9	2.9
Austria	2.7	2.7	2.9
Netherlands	2.3	2.5	2.7
All other destination markets	36.6	37.9	38.8
Total exports	100.0	100.0	100.0

Note.--Import quantities not provided due to differences in units of measure amongst reporting countries.

Source: Official export statistics under HS subheadings 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90, as reported by Eurostat, in the IHS Markit, Global Trade Atlas database, accessed March 10, 2020.

Six U.S. producers are related to ceramic tile producers in Italy (table III-2); namely: ***, ***, ***, ***, ***, and ***.

Two U.S. producers (***) imported ceramic tile from Italy (table III-10). ***. ***.

The industry in Mexico

Mexico was the world's eleventh largest producer of all types of ceramic tile in 2017, accounting for *** percent of global output that year or *** square meters (*** square feet).[20] Leading producers based in Mexico (in descending order of output) include: Grupo Lamosa (with multinational operations), VitroMex (with operations only in Mexico), and Internacional de Ceramica SAB de CV (with operations in both Mexico and the United States). These firms reported exporting 26-40 percent of their output in 2018.[21] Mexico's exports of ceramic tile declined by 17.8 percent from 2016 to 2018 (table VII-12). The United States was the predominant export destination in 2018, accounting for over four-fifths (81.2 percent) of Mexico's ceramic tile exports. The petitioner cited several factors for declining exports to the United States, including overall domestic consumption growth for Mexican-origin ceramic tile, especially glazed porcelain tile;[22] rising Mexican freight costs in recent years;[23] and the predominance in Mexican production of red-body tile, due to the type of clay available in Mexico, a product for which demand has declined in the U.S. market.[24]

[20] Petition, exh. I-15-C "Ceramic tile market information;" Respondents postconference brief, exh. 7 "Information on third-country markets, excerpts from exhibit I-15 of the Petition," ***, p. 23.

[21] Tile Edizioni, "The World's Top Ceramic Tile Manufacturers," *Ceramic World Review*, v. 133/2019, August/October 2019, pp. 64-67, https://www.ceramicworldweb.it/cww-en/magazines/ceramic-world-review-1332019/.

[22] Petitioner's postconference brief, attachment A "Responses to Commission staff questions," p. 16; conference transcript, p. 65 (Baran).

[23] Conference transcript, p. 66 (Baran).

[24] Petitioner's postconference brief, attachment A "Responses to Commission staff questions," pp. 16-17.

Table VII-12
Ceramic tile: Exports from Mexico by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
United States	263,807	216,137	213,317
Panama	9,898	9,729	11,738
Guatemala	8,772	8,314	7,262
Chile	9,821	7,727	6,262
Nicaragua	8,600	8,687	5,963
Costa Rica	7,699	5,873	5,803
El Salvador	4,368	4,819	4,026
Colombia	1,150	1,559	2,320
Belize	1,423	1,819	1,810
All other destination markets	4,285	10,079	4,338
Total exports	319,823	274,743	262,838
	Share of value (percent)		
United States	82.5	78.7	81.2
Panama	3.1	3.5	4.5
Guatemala	2.7	3.0	2.8
Chile	3.1	2.8	2.4
Nicaragua	2.7	3.2	2.3
Costa Rica	2.4	2.1	2.2
El Salvador	1.4	1.8	1.5
Colombia	0.4	0.6	0.9
Belize	0.4	0.7	0.7
All other destination markets	1.3	3.7	1.7
Total exports	100.0	100.0	100.0

Note.--Import quantities not provided due to differences in units of measure amongst reporting countries.

Source: Official export statistics under HS subheadings 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90, as reported by the Government of Mexico's National Institute of Statistics and Geography ("INEGI"), in the IHS Markit, Global Trade Atlas database, accessed March 10, 2020.

U.S. producer *** imported from ***[25] and *** (tables III-2 and III-10). Moreover, *** (table III-10).

[25] *** importer questionnaire response.

The industry in Spain

Spain was the world's fifth largest producer of all types of ceramic tile in 2018, accounting for 4.0 percent of global output that year or 530 million square meters (5.7 billion square feet).[26] Leading producers based in Spain (in descending order of output) include: Pamesa Cerámica and STN Group. These firms, operating only in Spain, reported exports accounting for about three-quarters (71-76 percent) of their output in 2018.[27] Spain's exports of ceramic tile increased by 13.3 percent from 2016 to 2018 (table VII-13). France (11.0 percent), the United States (9.5 percent), and the United Kingdom (6.1 percent) were the leading export destinations in 2018, together accounting for over one-quarter (26.5 percent) of Spain's ceramic tile exports. U.S. producer *** reported being related to *** (table III-2).[28]

Table VII-13
Ceramic tile: Exports from Spain by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
United States	207,979	264,726	306,108
France	284,851	314,006	354,425
United Kingdom	183,431	190,823	196,647
Italy	100,251	115,886	128,228
Germany	103,453	107,469	122,233
Israel	108,279	115,346	115,330
Morocco	84,039	89,571	107,005
Saudi Arabia	162,419	131,892	105,064
Russia	79,649	88,108	89,068
All other destination markets	1,540,141	1,621,401	1,711,215
Total exports	2,854,492	3,039,227	3,235,322

Table continued on next page.

[26] Tile Edizioni, "World Production and Consumption of Ceramic Tile," *Ceramic World Review*, issue No. 128, August/October 2019, p. 52, http://www.tiledizioni.it/ita/riviste/20158/Ceramic-World-Review-n-128-2018.aspx.

[27] Tile Edizioni, "The World's Top Ceramic Tile Manufacturers," *Ceramic World Review*, v. 133/2019, August/October 2019, pp. 64-67, https://www.ceramicworldweb.it/cww-en/magazines/ceramic-world-review-1332019/.

[28] *** producer questionnaire response.

Table VII-13--Continued
Ceramic tile: Exports from Spain by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Share of value (percent)		
United States	7.3	8.7	9.5
France	10.0	10.3	11.0
United Kingdom	6.4	6.3	6.1
Italy	3.5	3.8	4.0
Germany	3.6	3.5	3.8
Israel	3.8	3.8	3.6
Morocco	2.9	2.9	3.3
Saudi Arabia	5.7	4.3	3.2
Russia	2.8	2.9	2.8
All other destination markets	54.0	53.3	52.9
Total exports	100.0	100.0	100.0

Note.--Import quantities not provided due to differences in units of measure amongst reporting countries.

Source: Official export statistics under HS subheadings 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90, as reported by Eurostat, in the IHS Markit, Global Trade Atlas database, accessed March 10, 2020.

Global exports

Data on global exports of ceramic tile during 2016-18 are presented in table VII-14. In 2018, Italy (26.3 percent), China (25.0 percent), and Spain (18.2 percent) were the largest exporters (in terms of value) of ceramic tile, together accounting for over two-thirds (69.4 percent) of all global exports.

Table VII-14
Ceramic tile: Global exports by leading exporters, 2016-18

Exporter	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
United States	57,089	44,732	47,067
Italy	4,381,265	4,587,630	4,677,438
China	5,971,286	4,657,626	4,452,183
Spain	2,854,492	3,039,227	3,235,322
India	666,211	830,476	1,016,990
Turkey	512,369	551,680	597,526
Iran	341,198	368,969	465,627
Brazil	308,917	344,500	449,878
Germany	407,928	432,963	442,011
All other destination markets	2,433,651	2,519,033	2,433,120
Total exports	17,934,406	17,376,837	17,817,161
	Share of value (percent)		
United States	0.3	0.3	0.3
Italy	24.4	26.4	26.3
China	33.3	26.8	25.0
Spain	15.9	17.5	18.2
India	3.7	4.8	5.7
Turkey	2.9	3.2	3.4
Iran	1.9	2.1	2.6
Brazil	1.7	2.0	2.5
Germany	2.3	2.5	2.5
All other destination markets	13.6	14.5	13.7
Total exports	100.0	100.0	100.0

Note.--Import quantities not provided due to differences in units of measure amongst reporting countries.

Source: Official export statistics under HS subheadings 6907.10, 6907.21, 6907.22, 6907.23, 6907.30, 6907.40, 6907.90, 6908.10 and 6908.90 reported by various national statistical authorities, in the IHS Markit, Global Trade Atlas database, accessed March 10, 2020.

APPENDIX A

***FEDERAL REGISTER* NOTICES**

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
84 FR 15637, April 16, 2019	*Ceramic Tile From China; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.govinfo.gov/content/pkg/FR-2019-04-16/pdf/2019-07573.pdf
84 FR 20093, May 8, 2019	*Ceramic Tile From the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*	https://www.govinfo.gov/content/pkg/FR-2019-05-08/pdf/2019-09451.pdf
84 FR 20101, May 8, 2019	*Ceramic Tile From the People's Republic of China: Initiation of Countervailing Duty Investigation*	https://www.govinfo.gov/content/pkg/FR-2019-05-08/pdf/2019-09452.pdf
84 FR 25561, June 3, 2019	*Ceramic Tile From China*	https://www.govinfo.gov/content/pkg/FR-2019-06-03/pdf/2019-11462.pdf
84 FR 29497, June 24, 2019	*Ceramic Tile From the People's Republic of China: Postponement of Preliminary Determination in the Countervailing Duty Investigation*	https://www.govinfo.gov/content/pkg/FR-2019-06-24/pdf/2019-13314.pdf
84 FR 46711, September 5, 2019	*Ceramic Tile From the People's Republic of China: Postponement of Preliminary Determination in the Less-Than-Fair-Value Investigation*	https://www.govinfo.gov/content/pkg/FR-2019-09-05/pdf/2019-19193.pdf
84 FR 48125, September 12, 2019	*Ceramic Tile From the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination, Preliminary Negative Critical Circumstances Determination, and Alignment of Final Determination With Final Antidumping Duty Determination*	https://www.govinfo.gov/content/pkg/FR-2019-09-12/pdf/2019-19794.pdf

84 FR 61877, November 15, 2019	*Ceramic Tile From the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Negative Critical Circumstances Determination, and Postponement of Final Determination*	https://www.govinfo.gov/content/pkg/FR-2019-11-14/pdf/2019-24734.pdf
84 FR 66010, December 2, 2019	*Ceramic Tile From China; Scheduling of the Final Phase of Countervailing Duty and Anti-Dumping Duty Investigations*	https://www.govinfo.gov/content/pkg/FR-2019-12-02/pdf/2019-26016.pdf
84 FR 68114, December 13, 2019	*Ceramic Tile From the People's Republic of China: Notice of Correction to the Preliminary Affirmative Determination of Sales at Less Than Fair Value*	https://www.govinfo.gov/content/pkg/FR-2019-12-13/pdf/2019-26905.pdf
85 FR 19425, April 7, 2020	*Ceramic Tile From the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value, and Final Partial Affirmative Critical Circumstances Determination*	https://www.govinfo.gov/content/pkg/FR-2020-04-07/pdf/2020-07188.pdf
85 FR 19440, April 7, 2020	*Ceramic Tile From the People's Republic of China: Final Affirmative Countervailing Duty Determination, and Final Negative Critical Circumstances Determination*	https://www.govinfo.gov/content/pkg/FR-2020-04-07/pdf/2020-07189.pdf

APPENDIX B

LIST OF HEARING PARTICIPANTS

CALENDAR OF HEARING

Those listed below participated in the United States International Trade Commission's hearing:

Subject: Ceramic Tile from China

Inv. Nos.: 701-TA-621 and 731-TA-1447 (Final)

Dates: April 2-10, 2020

The hearing was opened by Chairman David S. Johanson via teleconference on April 2, 2020, and the schedule for written submissions was provided as follows:

Tuesday, March 31, 2020 by 12 noon.: Parties submitted and served witness testimony.
Thursday, April 2, 2020 at 10:00 a.m.: Commission staff sent a first set of questions to parties.
Monday, April 6, 2020 by 10:00 a.m.: Parties submitted and served responses to first set of questions.
Tuesday, April 7, 2020 by 5:15 p.m.: Commission staff sent a second set of questions to parties.
Thursday, April 9, 2020 by 5:15 p.m.: Parties submitted and served posthearing briefs and responses to the second set of questions

In Support of the Imposition of
Antidumping and Countervailing Duty Orders:

Barnes & Thornburg LLP
Washington, DC
on behalf of

Coalition for Fair Trade in Ceramic Tile

David Baran, Senior Vice of Manufacturing, Dal-Tile Corporation

Eric Astrachan, Executive Director, Tile Council of North America,
and Executive Director, Coalition for Fair Trade in Ceramic Tile

Gianni Mattioli, Executive Vice President, Dal-Tile Corporation

Tim Curran, Co-President, The Curran Group

Dan Haynes, Environmental Manager, Florim USA

In Support of the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Michael Franceschelli, Chief Executive Officer, Florida Tile

Mark Shannon, Executive Vice President – Sales, Crossville, Inc.

Bruce Malashevich, President, Economic Consulting Services, LLC

David M. Spooner)
Christine J. Sohar Henter)
Nicholas A. Galbraith)
) – OF COUNSEL
Linda M. Weinberg)
Clinton K. Yu)
Adetayo Osuntogun)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:

Hogan Lovells (US) LLP
Washington, DC
on behalf of

Bedrosians Tile & Stone
China Chamber of Commerce of Metals, Minerals & Chemicals
Importers & Exporters ("CCCMC") and its members
Jeffrey Court, Inc.
M S International, Inc.

Scott Hassman, Jeffrey Court, Inc.

Rajesh Shah, M S International, Inc.

Marisa Bedrosian-Kosters, Bedrosians Tile & Stone

Danyang Liu, CCCMC

Dr. Mitchell Ginsburg, Charles River Associates

Jonathan T. Stoel)
Craig A. Lewis)
) – OF COUNSEL
Benjamin O. Kostrzewa)
Nicholas W. Laneville)

CLOSING ARGUMENTS/REBUTTAL REMARKS ON APRIL 10, 2020 AT 9:30 A.M.

Opening Statement (Chairman David S. Johanson, USITC)

Closing Arguments by Those in Support of Petitions
David M. Spooner, Barnes & Thornburg LLP

Closing Arguments by Those in Opposition to Petitions
Jonathan T. Stoel, Hogan Lovells US LLP
Craig A. Lewis, Hogan Lovells US LLP

Rebuttal Remarks by Those in Support of Petitions
David M. Spooner, Barnes & Thornburg LLP

Rebuttal Remarks by Those in Opposition to Petitions
Jonathan T. Stoel, Hogan Lovells US LLP

Closing Statement (Chairman David S. Johanson, USITC)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
Ceramic tile: Summary data concerning the U.S. market, 2016-18, January to September 2018, and January to September 2019
(Quantity=1,000 square feet; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per square foot; Productivity=square feet per hour; and Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to September		Calendar year			Jan-Sep
	2016	2017	2018	2018	2019	2016-18	2016-17	2017-18	2018-19
U.S. consumption quantity:									
Amount	2,864,930	3,032,645	3,080,497	2,346,331	2,276,663	▲7.5	▲5.9	▲1.6	▼(3.0)
Producers' share (fn1)	30.9	30.8	28.9	29.0	28.0	▼(2.0)	▼(0.1)	▼(1.9)	▼(1.0)
Importers' share (fn1):									
China	20.2	21.7	22.4	22.0	18.6	▲2.2	▲1.4	▲0.7	▼(3.4)
Mexico	16.2	13.1	12.3	12.5	12.6	▼(3.9)	▼(3.1)	▼(0.8)	▲0.1
Brazil	3.5	3.7	5.2	4.9	6.7	▲1.7	▲0.2	▲1.5	▲1.8
All other sources	29.2	30.8	31.3	31.6	34.2	▲2.0	▲1.5	▲0.5	▲2.5
Nonsubject sources	48.9	47.5	48.7	49.0	53.4	▼(0.2)	▼(1.3)	▲1.2	▲4.4
All import sources	69.1	69.2	71.1	71.0	72.0	▲2.0	▲0.1	▲1.9	▲1.0
U.S. consumption value:									
Amount	3,304,910	3,507,670	3,544,303	2,691,380	2,650,203	▲7.2	▲6.1	▲1.0	▼(1.5)
Producers' share (fn1)	36.7	36.8	35.3	35.4	34.4	▼(1.4)	▲0.1	▼(1.5)	▼(1.0)
Importers' share (fn1):									
China	15.6	16.8	17.6	16.9	16.3	▲2.1	▲1.2	▲0.8	▼(0.6)
Mexico	8.0	6.3	6.5	6.6	6.7	▼(1.5)	▼(1.8)	▲0.2	▲0.1
Brazil	1.9	2.2	2.8	2.7	3.4	▲0.9	▲0.3	▲0.6	▲0.7
All other sources	37.8	37.9	37.7	38.4	39.2	▼(0.1)	▲0.2	▼(0.2)	▲0.8
Nonsubject sources	47.7	46.4	47.1	47.8	49.4	▼(0.6)	▼(1.3)	▲0.6	▲1.6
All import sources	63.3	63.2	64.7	64.6	65.6	▲1.4	▼(0.1)	▲1.5	▲1.0
U.S. imports from:									
China:									
Quantity	579,525	657,077	690,322	516,841	423,237	▲19.1	▲13.4	▲5.1	▼(18.1)
Value	514,288	588,681	624,447	453,628	430,886	▲21.4	▲14.5	▲6.1	▼(5.0)
Unit value	$0.89	$0.90	$0.90	$0.88	$1.02	▲1.9	▲1.0	▲1.0	▲16.0
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Mexico:									
Quantity	464,228	397,476	378,168	292,812	287,272	▼(18.5)	▼(14.4)	▼(4.9)	▼(1.9)
Value	265,226	219,942	229,995	178,466	178,240	▼(13.3)	▼(17.1)	▲4.6	▼(0.1)
Unit value	$0.57	$0.55	$0.61	$0.61	$0.62	▲6.5	▼(3.1)	▲9.9	▲1.8
Brazil:									
Quantity	98,852	111,346	158,811	114,472	151,499	▲60.7	▲12.6	▲42.6	▲32.3
Value	62,867	77,595	100,853	73,383	91,289	▲60.4	▲23.4	▲30.0	▲24.4
Unit value	$0.64	$0.70	$0.64	$0.64	$0.60	▼(0.1)	▲9.6	▼(8.9)	▼(6.0)
All other sources:									
Quantity	837,584	932,919	963,223	742,052	777,705	▲15.0	▲11.4	▲3.2	▲4.8
Value	1,248,393	1,330,651	1,336,976	1,033,459	1,038,761	▲7.1	▲6.6	▲0.5	▲0.5
Unit value	$1.49	$1.43	$1.39	$1.39	$1.34	▼(6.9)	▼(4.3)	▼(2.7)	▼(4.1)
Nonsubject sources:									
Quantity	1,400,664	1,441,741	1,500,202	1,149,335	1,216,477	▲7.1	▲2.9	▲4.1	▲5.8
Value	1,576,486	1,628,188	1,667,824	1,285,309	1,308,290	▲5.8	▲3.3	▲2.4	▲1.8
Unit value	$1.13	$1.13	$1.11	$1.12	$1.08	▼(1.2)	▲0.3	▼(1.6)	▼(3.8)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	1,980,189	2,098,818	2,190,524	1,666,176	1,639,713	▲10.6	▲6.0	▲4.4	▼(1.6)
Value	2,090,774	2,216,869	2,292,270	1,738,937	1,739,176	▲9.6	▲6.0	▲3.4	▲0.0
Unit value	$1.06	$1.06	$1.05	$1.04	$1.06	▼(0.9)	▲0.0	▼(0.9)	▲1.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-1--Continued
Ceramic tile: Summary data concerning the U.S. market, 2016-18, January to September 2018, and January to September 2019
(Quantity=1,000 square feet; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per square foot; Productivity=square feet per hour; and Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to September		Calendar year			Jan-Sep
	2016	2017	2018	2018	2019	2016-18	2016-17	2017-18	2018-19
U.S. producers':									
Average capacity quantity	1,007,886	1,128,296	1,165,482	889,523	862,658	▲15.6	▲11.9	▲3.3	▼(3.0)
Production quantity	895,622	999,528	908,820	709,133	643,304	▲1.5	▲11.6	▼(9.1)	▼(9.3)
Capacity utilization (fn1)	88.9	88.6	78.0	79.7	74.6	▼(10.9)	▼(0.3)	▼(10.6)	▼(5.1)
U.S. shipments:									
Quantity	884,741	933,827	889,973	680,155	636,950	▲0.6	▲5.5	▼(4.7)	▼(6.4)
Value	1,214,136	1,290,801	1,252,033	952,443	911,026	▲3.1	▲6.3	▼(3.0)	▼(4.3)
Unit value	$1.37	$1.38	$1.41	$1.40	$1.43	▲2.5	▲0.7	▲1.8	▲2.1
Export shipments:									
Quantity	10,029	9,955	10,363	7,961	7,787	▲3.3	▼(0.7)	▲4.1	▼(2.2)
Value	15,715	16,845	17,411	13,370	12,673	▲10.8	▲7.2	▲3.4	▼(5.2)
Unit value	$1.57	$1.69	$1.68	$1.68	$1.63	▲7.2	▲8.0	▼(0.7)	▼(3.1)
Ending inventory quantity	258,066	313,811	322,295	333,427	319,787	▲24.9	▲21.6	▲2.7	▼(4.1)
Inventories/total shipments (fn1)	28.8	33.3	35.8	36.3	37.2	▲7.0	▲4.4	▲2.5	▲0.9
Production workers	3,378	3,533	3,399	3,423	3,322	▲0.6	▲4.6	▼(3.8)	▼(3.0)
Hours worked (1,000s)	7,122	7,396	6,990	5,428	5,202	▼(1.9)	▲3.8	▼(5.5)	▼(4.2)
Wages paid ($1,000)	170,681	183,701	179,494	136,464	134,537	▲5.2	▲7.6	▼(2.3)	▼(1.4)
Hourly wages (dollars per hour)	$23.97	$24.84	$25.68	$25.14	$25.86	▲7.1	▲3.6	▲3.4	▲2.9
Productivity	125.8	135.1	130.0	130.6	123.7	▲3.4	▲7.5	▼(3.8)	▼(5.3)
Unit labor costs	$0.19	$0.18	$0.20	$0.19	$0.21	▲3.6	▼(3.6)	▲7.5	▲8.7
Net sales:									
Quantity	894,767	943,782	900,336	688,113	644,732	▲0.6	▲5.5	▼(4.6)	▼(6.3)
Value	1,229,786	1,307,649	1,269,406	965,767	923,466	▲3.2	▲6.3	▼(2.9)	▼(4.4)
Unit value	$1.37	$1.39	$1.41	$1.40	$1.43	▲2.6	▲0.8	▲1.8	▲2.1
Cost of goods sold (COGS):									
Raw materials	221,861	234,775	229,314	172,701	167,768	▲3.4	▲5.8	▼(2.3)	▼(2.9)
Energy costs	49,166	58,360	54,825	40,733	38,785	▲11.5	▲18.7	▼(6.1)	▼(4.8)
Direct labor	107,177	117,493	116,986	86,988	86,440	▲9.2	▲9.6	▼(0.4)	▼(0.6)
Other factory costs	336,048	330,782	335,817	254,209	261,246	▼(0.1)	▼(1.6)	▲1.5	▲2.8
Total COGS	714,252	741,410	736,942	554,631	554,239	▲3.2	▲3.8	▼(0.6)	▼(0.1)
Gross profit or (loss) (fn2)	515,534	566,239	532,464	411,136	369,227	▲3.3	▲9.8	▼(6.0)	▼(10.2)
SG&A expenses	275,300	300,518	315,598	242,082	247,218	▲14.6	▲9.2	▲5.0	▲2.1
Operating income or (loss) (fn2)	240,234	265,721	216,866	169,054	122,009	▼(9.7)	▲10.6	▼(18.4)	▼(27.8)
Net income or (loss) (fn2)	222,481	239,667	187,189	146,938	96,861	▼(15.9)	▲7.7	▼(21.9)	▼(34.1)
Capital expenditures	304,372	147,141	64,051	45,560	84,201	▼(79.0)	▼(51.7)	▼(56.5)	▲84.8
R&D expenses	***	***	***	***	***	***	***	***	***
Net assets	1,821,877	1,963,526	1,941,149	NA	NA	▲6.5	▲7.8	▼(1.1)	NA
Unit COGS	$0.80	$0.79	$0.82	$0.81	$0.86	▲2.5	▼(1.6)	▲4.2	▲6.7
Unit SG&A expenses	$0.31	$0.32	$0.35	$0.35	$0.38	▲13.9	▲3.5	▲10.1	▲9.0
Unit operating income or (loss) (fn2)	$0.27	$0.28	$0.24	$0.25	$0.19	▼(10.3)	▲4.9	▼(14.4)	▼(23.0)
Unit net income or (loss) (fn2)	$0.25	$0.25	$0.21	$0.21	$0.15	▼(16.4)	▲2.1	▼(18.1)	▼(29.6)
COGS/sales (fn1)	58.1	56.7	58.1	57.4	60.0	▼(0.0)	▼(1.4)	▲1.4	▲2.6
Operating income or (loss)/sales (fn1)	19.5	20.3	17.1	17.5	13.2	▼(2.5)	▲0.8	▼(3.2)	▼(4.3)
Net income or (loss)/sales (fn1)	18.1	18.3	14.7	15.2	10.5	▼(3.3)	▲0.2	▼(3.6)	▼(4.7)

Notes:

Note.--Shares and ratios shown as "0.0" percent represent non-zero values less than "0.05" percent (if positive) and greater than "(0.05)" percent (if negative). Zeroes, null values, and undefined calculations are suppressed and shown as "---". Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits; The directional change in profitability provided when one or both comparison values represent a loss.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 6907.10.0000, 6907.21.1005, 6907.21.1011, 6907.21.1051, 6907.21.2000, 6907.21.3000, 6907.21.4000, 6907.21.9011, 6907.21.9051, 6907.22.1005, 6907.22.1011 6907.22.1051, 6907.22.2000, 6907.22.3000, 6907.22.4000, 6907.22.9011, 6907.22.9051, 6907.23.1005, 6907.23.1011, 6907.23.1051, 6907.23.2000, 6907.23.3000 6907.23.4000, 6907.23.9011, 6907.23.9051, 6907.30.1005, 6907.30.1011, 6907.30.1051, 6907.30.2000, 6907.30.3000, 6907.30.4000, 6907.30.9011, 6907.30.9051 6907.40.1005, 6907.40.1011, 6907.40.1051, 6907.40.2000, 6907.40.3000, 6907.40.4000, 6907.40.9011, 6907.40.9051, 6907.90.0011, 6907.90.0051, 6908.10.1000 6908.10.2000, 6908.10.5000, 6908.90.0011, and 6908.90.0051, accessed February 11, 2020.

APPENDIX D

COMMERCE'S FINAL LTFV MARGINS

Ceramic tile: Commerce's final weighted-average LTFV margins with respect to imports from China

Exporter	Producer	Final dumping margin (percent)
Anatolia Tile & Stone Inc	Hubei ASA Ceramics Co., Ltd Guangdong Bode Fine Building Material Co., Ltd	229.04
	Foshan Mona Decoration Material Co., Ltd. (DBA Guang Dong Bo Hua Ceramics Co., Ltd.)	
	Heyuan Dongyuan Eagle Branch Ceramics Ltd	
	Foshan Gold Medal Ceramics International Trade Co., Ltd	
	Greens Patio Workshop Co., Ltd	
	Fujian Huatai Group Co., Ltd	
	Foshan Tianyao Ceramics Co., Ltd	
	Foshan Ibel Import and Export Ltd	
	Max Glory International Limited	
	Foshan Leo Import and Export Trading Co., Ltd	
	Guangdong Mona Lisa Trading Co., Ltd	
	Foshan Amosa International Business Company	
	Foshan Yonglie Export and Import Company Limited	
	Elegance International Inc.	
	Foshan International Trade Co., Ltd	
	Foshan Rhino Building Materials Co., Ltd	
	Foshan Romantic Ceramics Co., Ltd	
	Heyuan Romantic Ceramics Co., Ltd	
	Pingxiang Dacheng Ceramics Technology Co., Ltd	
	Jingdezhen Seed Ceramic Co., Ltd	
	Foshan Xinfu Imp. & Exp. Co., Ltd	
	Foshan Nah Hai Sky Glass Mosaic Limited	
	Super Building Material Co., Ltd. (Xiamen)	
	Foshan Tong Hai International Import and Export Trading Corporation Limited	
	Rabbit Song Building Material Co., Ltd	
Avangarde Ceramiche	Fujian Nan'an Xinglong Ceramics Co., Ltd	229.04
	Guangdong Jiajun Ceramics Co., Ltd	
Beijing Shiji Mingtai Inc	Jinjiang Guoxing Ceramics Building Materials Co., Ltd	229.04
	Fujian Honghua Group Co., Ltd	
	Fujian Zhangzhou Jianhua Ceramics Co., Ltd	
	Foshan Dongpeng Ceramics Co., Ltd	
	Fujian Huatai Group Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Quanzhou Zhiran Ceramics Co., Ltd	
	Quanzhou Yuanlong Building Materials Development Co., Ltd	
	Fujian Xindezhou Ceramics Co., Ltd	
	Jinjiang Juntao Ceramics Industry Co., Ltd	
Beilitai (Tianjin) Tile Co., Ltd	Beilitai (Tianjin) Tile Co., Ltd	229.04
	san Ceramics (Anyang) Co., Ltd	
	Tianjin Honghui Creative Technology Co., Ltd	
Buddy Mosaic Limited	Foshan Tanhua Building Materioal C., Ltd	229.04
China Stone Limited	Qingyuan MegaCera Ceramic Co., Ltd	229.04
	Foshan Kovic Import and Export Co., Ltd	
Dongguan City Wonderful Ceramics Industrial Park Co., Ltd	Dongguan City Wonderful Ceramics Industrial Park Co., Ltd	229.04
Dongguan City Wonderful Decoration Materials Co., Ltd	Dongguan City Wonderful Decoration Materials Co., Ltd	229.04
Dox Building Materials Co., Limited	White Rabbit Ceramics Co., Ltd	229.04
	Rabbit Song Building Material Co., Ltd	
Elegance International Inc	Tegaote Ceramics Co., Ltd	229.04
	Foshan Nanhai District Zhengbin New Materials Co., Ltd	
Everstone Industry (Qingdao) Co., Ltd	Foshan Tanhua Building Materioal C., Ltd	229.04
Foshan Advance Import and Export Co., Ltd	Foshan Xinlianfa Ceramics Co., Ltd	229.04
Foshan Ant Buying Service Co., Ltd	Foshan Xindonglong Ceramic Co., Ltd	229.04
	Foshan Shiwan Yulong Ceramic Co., Ltd	
	Heshan Heqiang Art China & Dinnerware Co., Ltd	
	Foshan Kingfer Building Material Co., Ltd	
	Luoding Junhua Ceramics Industrial Co., Ltd	
	Foshan Xinamei Material Co., Ltd	
	Foshan Be Tf Fu Decorative Material Co., Ltd	
	Foshan Verona Borde Co., Ltd	
	Jiangmen Xuri Ceramic Co., Ltd	
	Foshan Yongzhuo Material Co., Ltd	
	Sihui Jiefeng Material Co., Ltd	
	Foshan Caidian Material Co., Ltd	
Foshan Artist Ceramics Co., Ltd	Sheng Taoju Ceramics	229.04
	Zhaoqing Langfeng Ceramics Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Zhong Rong Ceramic Building Materials Co., Ltd	
	Foshan Xindonglong Ceramic Co., Ltd	
	Guangxi Jinmen Building Material Co., Ltd	
	Fujian Lvdao Ecology Technology Co., Ltd	
	Guangdong Fangxiang Ceramic Co., Ltd	
	Foshan Nanhai Yuda Ceremics Co., Ltd	
	Xinxing County Jin Mali Ceramics Co., Ltd	
	Foshan Chancheng Lijiahua Ceramics Co., Ltd	
	Foshan City Nanhai Junhong Ceramic Decoration Material Co., Ltd	
Foshan Atpalas Ceramics Co., Ltd	Foshan Yuanzhen Building Materials Co., Ltd	229.04
Foshan CTC Group Co., Ltd	Guangdong Jiajun Ceramics Co., Ltd	229.04
Foshan Disong Trading Co., Ltd	Zhaoqing Xinciyu Ceramics Co., Ltd	229.04
Foshan Dolphin Trading Co., Ltd	Foshan Shiwan Yulong Ceramic Co., Ltd	229.04
	Si Hui Jiefeng Decoration Materials Co., Ltd	
	Dongguan City Wonderful Ceramics Industrial Park Co., Ltd	
	Luoding Junhua Ceramics Industrial Co., Ltd	
	Guangdong Bode Fine Building Material Co., Ltd	
	Kaiping Tilee's Building Materials Co., Ltd	
	Zhuhai Xuri Ceramics Co., Ltd	
	Foshan Top Black Ceramics Co., Ltd	
	Guangdong Xinruncheng Ceramics Co., Ltd	
	Heyuan Romantic Ceramics Co., Ltd	
	Guangdong Xiejin Ceramics Co., Ltd	
	Liling Dolphin Ceramics Co., Ltd	
	Foshan Oceano Ceramics Co., Ltd	
	Kaiping Lihang Building Materials Co., Ltd	
	Hunan Tianxin Technology Co., Ltd	
	Oyg Glass Spar Decoration Materials Co., Ltd	
Foshan Dongpeng Ceramic Co., Ltd	Qingyuan Nafuna Ceramics Co., Ltd	229.04
	Fengcheng Dongpeng Ceramics Co., Ltd	
	Lixian Xinpeng Ceramic Co., Ltd	
	Foshan Donghuashengchang New Material Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
Foshan Dongxin Economy And Trade Co., Ltd	Zhangzhou Aoli Ceramic Development Co., Ltd	229.04
Foshan Eiffel Ceramic Co., Ltd	Foshan Bubuking Decorating Techniques Co., Ltd	229.04
	Guangdong Shenghui Ceramics Co., Ltd	
	Qingyuan Baoshima Ceramics Co., Ltd	
Foshan Eminent Industry Development Co., Ltd	Foshan Huanqiu Ceramics Co., Ltd	229.04
Foshan Everstone Import & Export Co., Ltd	Foshan Gani Ceramics Co., Ltd	229.04
Foshan Gani Ceramics Co., Ltd	Qingyuan Gani Ceramics Co., Ltd	229.04
Foshan Gold Medal Ceramics International Trade Co., Ltd	Guangdong Goldmedal Ceramics Co., Ltd	229.04
Foshan Griffiths Building Material Ltd	Foshan Lihua Ceramics Co., Ltd	229.04
Foshan Hudson Economics And Trade Co., Ltd	Guangdong Kito Ceramics Group Co., Ltd	229.04
	Foshan Shiwan Eagle Brand Ceramic Co., Ltd	
	Guangdong Overland Ceramics Co., Ltd	
	Guangdong Bode Fine Building Material Co., Ltd	
	Foshan Yuanmei Craft Ceramics Factory	
	Foshan Nanhai Yuheng Decorative Material Co., Ltd	
	Guangzhou Cowin New Materials Co., Ltd	
	Guangdong Kito Trading Co., Ltd	
Foshan Ibel Import And Export Ltd	Foshan Ibel Import And Export Ltd	229.04
Foshan International Trade Co., Ltd	Foshan B&W Ceramics Co., Ltd	229.04
	Fogang Tongqing Ceramics Co., Ltd	
Foshan Junjing Industrial Co., Ltd	Guangdong Jialian Enterprise Ceramics Co., Ltd	229.04
	Foshan Jinhong Ceramics Co., Ltd	
	Foshan Jinyi Ceramics Co., Ltd	
	Foshan Nanhai Longpeng Vitrified Brick Co., Ltd	
	Jiangxi Shiwan Global Ceramics Co., Ltd	
	Xinxing County Jinmaili Ceramics Co., Ltd	
	Foshan Lailida Building Material Co., Ltd	
	Fujian Mingsheng Ceramic Development Co., Ltd	
	Foshan Qiangshengda Building Material Co., Ltd	
	Guangdong Shenghui Ceramics Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Guangdong Xiejin Ceramics Co., Ltd	
	Qingyuan Xinjinshan Ceramics Co., Ltd	
	Sihui Quanquan Ceramics Co., Ltd	
	Enping Xiangda Ceramics Co., Ltd	
	Foshan Xinhenglong Polishing Brick Co., Ltd	
	Enping Xinjincheng Ceramics Co., Ltd	
	Guangdong Xinruncheng Ceramics Co., Ltd	
	Foshan Shiwan Yulong Ceramics Co., Ltd	
	Jiangmen Xinxingwei Building Material Co., Ltd	
	Jinjiang Zhongrong Ceramic Building Material Co., Ltd	
Foshan Kiva Ceramics Co., Ltd	Guangdong Xinruncheng Ceramic Co., Ltd	229.04
	Foshan Nanhai Yuda Ceramic Co., Ltd	
	Guangdong Shenghui Ceramic Co., Ltd	
	Guangdong Kito Ceramic Trading Co., Ltd	
	Zhaoqing Jincheng Ceramic Co., Ltd	
	Guangdong Yongsheng Ceramic Co., Ltd	
	Foshan Jialeshi Building Materials Co., Ltd	
	Guangxi Yaou Ceramics Co., Ltd	
	Foshan Nanhai Xinya Ceramic Co., Ltd	
Foshan Leo Import and Export Trading Co., Ltd	Foshan Jingmeida Ceramics Procuct Co., Ltd	229.04
	Fujian Yuekai Building Materials Industry Co., Ltd	
	Guangxi Hengxi Building Materials Co., Ltd	
	Foshan Shiwan Yulong Ceramic Co., Ltd	
	Chaoyang Rongfu Ceramics Co., Ltd	
	Xianning Xianzhuanjiang Building Materials Co., Ltd	
	Jiangxi Jingcheng Ceramics Co., Ltd	
	Jiangxi Wifi Ceramics Co., Ltd	
	Guangdong Jiajun Ceramics Co., Ltd	
	Foshan Giania Ceramics Co., Ltd	
Foshan Ligaote Ceramics Co., Ltd	Foshan Ligaote Ceramics Co., Ltd	229.04
Foshan Livin Ceramics Co., Ltd	Zhaoqing Jinhang Ceramics Co., Ltd	229.04
	Cenxi Lianchuang Ceramics Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
Foshan Mainland Import and Export Co., Ltd	Fujian Nanan Baoda Building Materials Co., Ltd	229.04
	Fujian Jinjiang Baoda Ceramics Co., Ltd	
	Nan'an Xiejin Building Material Commercial Firm	
	Nan'an Xiejin Building Materials Co., Ltd	
	Fujian Honghua Group Co., Ltd	
	Fujian Xindezhou Ceramics Co., Ltd	
Foshan Medici Building Material Co., Ltd	Chaoyang Rongfu Ceramic Tile Co., Ltd	229.04
	Jianping Jinzheng Ceramic Tile Co., Ltd	
	Fujian Yuekai Building Material Co., Ltd	
	Fuzhou Hengyu Ceramic Tile Co., Ltd	
	Fujian Minqing Ouya Ceramic Tile Co., Ltd	
	Foshan Lazio Building Material Co., Ltd	
	Zhaoqing Gaoyao Guangfu Ceramic Tile Co., Ltd	
Foshan Muzzi Decor And Tile Co., Ltd	Pingxiang Dacheng Ceramics Technologies Co., Ltd	229.04
Foshan Oceanland Ceramics Co., Ltd	Foshan Super Ceramics Co., Ltd	229.04
	Qingyuan Baoshima Ceramic Co., Ltd	229.04
	Xinxing Jianxing Ceramics Co., Ltd	
	Enping Quansheng Ceramics Co., Ltd	
	Guangdong Shenghui Ceramics Co., Ltd	
Foshan Paramount Import and Export Co., Ltd	Foshan Ligaote Ceramics Co., Ltd	229.04
	Foshan Nanhai District Energy Building Material Co., Ltd	
	Foshan Shiwan Yulong Ceramic Co., Ltd	
	Luoding Junhua Ceramics Industrial Co., Ltd	
	Guangdong Bode Fine Building Material Co., Ltd	
Foshan Porcelain Plaza Trading Co., Ltd	Foshan Ottima Ceramic Co., Ltd	229.04
	Foshan Dongpeng Ceramic Co., Ltd	
	Jinjiang City Zhongrong Ceramic Building Material Co., Ltd	
	Foshan Bannilu Ceramic Co., Ltd	
	Foshan Yibaiwang Building Material Co., Ltd	
Foshan Qualicer Industrial Co., Ltd	Guangzhou Cowin New Materials Co., Ltd	229.04
Foshan Rainbow Color Export & Import Co.,	Foshan Baleno Ceramic Co., Ltd	229.04
	Foshan Ligaote Ceramic Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
Ltd		
Foshan Rhino Building Materials Co., Ltd	Guangdong Gold Medal Ceramics Co., Ltd	229.04
	Chaoyang Rong Fu Ceramic Co., Ltd	
Foshan Romantic Ceramics Co., Ltd	Heyuan Romantic Ceramics Co., Ltd	229.04
	Pingxiang Dacheng Ceramics Technology Co., Ltd	
Foshan Saiguan Import & Export Co., Ltd	Saifei (Guangdong) New Materials Co., Ltd	229.04
Foshan San Honore Imp & Exp CO., LTD	Quanzhou Zhiran Ceramics Company Ltd	229.04
	Fujian Zunwei Ceramics Company Ltd	
Foshan Sanden Enterprise Co., Ltd	Tegaote Ceramics Co., Ltd	229.04
	Zhaoqing Langfeng Ceramics Co., Ltd	
	Guangzhou Cowin New Materials Co., Ltd	
	Foshan Chengke New Material Co., Ltd	
	Foshan Jingmeida Ceramics Co., Ltd	
Foshan Shangking Group Co., Ltd	Guangdong Qianghui (QHTC) Ceramics Co., Ltd	229.04
Foshan Shiwan Yulong Ceramic Co., Ltd	Foshan Shiwan Yulong Ceramic Co., Ltd	229.04
Foshan Sincere Building Materials Co., Ltd	Foshan City Lihua Ceramic Co., Ltd	229.04
	Enping City Huachang Ceramic Co., Ltd	
Foshan Soaraway Industrial Co., Ltd	Foshan Shiwan Yulong Ceramic Co., Ltd	229.04
	Foshan Tai-Decor Decoration Materials Co., Ltd	
Foshan Sumso Construction Materials Co., Ltd	Foshan Laili Ceramics Co., Ltd	229.04
Foshan Sundare Building Materials Co., Ltd	Foshan Qingyuan Baoshima Co., Ltd	229.04
	Foshan New Henglong Polished Tiles Co., Ltd	
	Foshan Nanhai Xinyiya Decoration Materials Co., Ltd	
Foshan Sunvin Ceramics Co., Ltd	Sihui Jie Feng Decoration Materials Co., Ltd	229.04
Foshan Tbs Trading Co., Ltd	Foshan Jiameisheng Ceramic Co., Ltd	229.04
	Qingyuan Xinjinshan Ceramics Co., Ltd	
	Zhuhai Xuri Ceramics Co., Ltd	
	Foshan Elephome Ceramics Co., Ltd	
	Jinjiang Zhongrong Ceramics Of Build Material Co., Ltd	
	Quanzhou Yuanlong Building Materials Development Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Fujian Honghua Group Co., Ltd	
	Foshan Nanhai Jinzhilan Decoration Material Co., Ltd	
	Jinjiang Guoxing Ceramic Building Material Co., Ltd	
	Guangdong Yongsheng Ceramics Co., Ltd	
	Heyuan Romanic Ceramics Co., Ltd	
	Zhaoqing Jinhang Ceramics Co., Ltd	
	Foshan Yibao Ceramics Co., Ltd	
	Qingyuan Ouya Ceramic Co., Ltd	
	Foshan Top Black Ceramics Co., Ltd	
	Guangdong Jialian Enterprise Ceramics Co., Ltd	
	Sihui City Xin Quan Ye Ceramics Co., Ltd	
	Guangdong Hemei Ceramic Co., Ltd	
	Fujian Jinjiang Lianxing Building Materials Co., Ltd	
	Foshan New Yidian Ceramic Co., Ltd	
Foshan Tianyao Ceramics Co., Ltd	Guangdong Sihui Kedi Ceramics Co., Ltd	229.04
Foshan Uni-Depot Porcelanico Co., Ltd	Guangdong Tianbi Ceramics Co., Ltd	229.04
Foshan United Export Co., Ltd	Guangdong Shenghui Ceramics Co., Ltd	229.04
	Guangdong Zhongsheng Ceramics Co., Ltd	
	Fujian Honghua Group Co., Ltd	
	Guangdong Godbet Ceramics Co., Ltd	
	Fujian Nan'an Baoda Building Material Co., Ltd	
	Zhangzhou City Aoli Ceramic Development Co. Ltd	
Foshan Viewgres Co., Ltd	Guangdong Bohua Ceramics Co., Ltd	229.04
	Shandong Tongyi Ceramics Science & Technology Co., Ltd	
	Shandong Green Ceramics Co., Ltd	
	Ginca Ceramics Co., Ltd	
	Xiejin Ceramics Co., Ltd	
	Foshan Yigao Ceramic Co., Ltd	
	Enping City Huachang Ceramic Company Limited	
	Guangzhou Cowin New Materials Co., Ltd	
	Kaiping Kunen Building Materials Co., Ltd	
Foshan Walton Building Materials Co., Ltd	Belite Ceramics (Anyang) Co., Ltd	229.04
	Lianxing Ceramics Co., Ltd	
	Foshan Yibao Ceramics Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Foshan Gaosheng Building Materials Co., Ltd	
	Foshan Shiwan Eagle Brand Ceramic Co., Ltd	
	Xingning Toscana Ceramics Co., Ltd	
Foshan Winbill Trading Company Limited	Guangdong Yonghang Advanced Materials Industrial Co., Ltd	229.04
Foshan Yinghui Industrial Co., Ltd	Heshan Heqiang Art China & Dinnerware Co., Ltd	229.04
Fujian Minmetals Cbm Co., Ltd	Fujian Minqing Ouya Ceramic Tile Co., Ltd	229.04
	Xinxing Jianxing Ceramics Co., Ltd	
	Tianjin Belite Ceramics Co., Ltd. Foshan Branch	
Fujian Minqing Hao Ye Ceramics Co., Ltd	Fujian Minqing Hao Ye Ceramics Co., Ltd	229.04
Fuzhou Shuangxin Ceramic Co., Ltd	Fujian Xindezhou Ceramic Co., Ltd	229.04
	Fujian Nan'an Baoda Building Material Co., Ltd	
	Fujian Zhuangyi Building Material Co., Ltd	
	Zhangzhou Aoli Ceramic Development Co., Ltd	
Gearex Corporation	Kaiping Tilee's Building Materials Co., Ltd	229.04
	Foshan Oceano Ceramics Co., Ltd	
	Jingdezhen Oceano Ceramics Co., Ltd	
	Guangdong Xinruncheng Ceramics Co., Ltd	
	Foshan Kioro Trade Co., Ltd	
	Zhaoqing Xinhe Ceramics Co., Ltd	
	Fogang Tongqing Ceramics Co., Ltd	
	Foshan Bolier Building Materials Co., Ltd	
	Guandong Kasor Ceramics Technology Co., Ltd	
	Max Glory International Ltd	
	Rongfu Ceramics Co., Ltd	
	Tegaote Ceramics Co., Ltd	
	Elegance International Inc	
	Foshan Shiwan Yulong Ceramic Co., Ltd	
	Foshan Top-Black Ceramic Co., Ltd	
	Kim Hin Ceramics (Shanghai) Co., Ltd	
	Jiangxi Province Shiwan Huanqiu Ceramics Co., Ltd	
	Foshan Huanqiu Ceramics Co., Ltd	
	Foshan Leo Import And Export Trading Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Gearex Technical Ceramic Kun Shan Co., Ltd	
Global Trading Co., Ltd	Guangdong Kito Ceramic Trading Co., Ltd	229.04
Guangdong Bode Fine Building Material Co	Guangdong Bode Fine Building Material Co	229.04
Guangdong Jiajun Ceramics Co., Ltd	Guangdong Jiajun Ceramics Co., Ltd	229.04
Guangdong Jiamei Ceramics Co., Ltd	Guangdong Jiamei Ceramics Co., Ltd	229.04
Guangdong Jinying Import & Export Co., Ltd	Guangdong Sheng Hui Ceramics Co., Ltd	229.04
	Xingning Toscana Ceramics Co., Ltd	
	Guangdong Jialian Enterprise Ceramics Co., Ltd	
	Jiangxi Shiwan Huanqiu Ceramics Co., Ltd	
Guangdong Kito Ceramics Group Co., Ltd	Jingdezhen Kito Ceramic Co., Ltd	229.04
	Foshan Sanshui Kito Ceramic Co., Ltd	
	Guangdong Gold Medal Ceramics Co., Ltd	
Guangdong Monalisa Trading Co., Ltd	Monalisa Group Co., Ltd	229.04
Guangdong Overland Ceramics Co., Ltd	Guangdong Overland Ceramics Co., Ltd	229.04
Guangdong Winto Ceramics Co., Ltd	Guangdong Homeway Ceramics Co., Ltd	229.04
Hangzhou Nabel China Co., Ltd	Deqing Nabel Co., Ltd	229.04
Heyuan Dongyuan Eagle Brand Ceramic Co., Ltd	Heyuan Dongyuan Eagle Brand Ceramic Co., Ltd	229.04
Hoe Hin Building Materials Co., Limited	Foshan liangjian ceramics Co., Limited	229.04
	Guangdong Bode Fine Building Material	
	Kaipingkunenbuilding Materials Co., Ltd	
	Zhaoqing Langfeng Ceramics Co., Ltd	
	Kaiping Tilee's Building Materials Co	
	Foshan Shanghui decoration material Co., Ltd	
	Tegaote Ceramics Co., Ltd	
	Fogang Tongqing Ceramics Co., Ltd	
	Guangdong Xinruncheng Ceramics Co., Ltd	
	Guangdong Simpire Building Material Co., Ltd	
	Foshan Newyidian Ceramic Co., Ltd	
	Foshan Shiwan Yulong Ceramic Co; Ltd	
Hong Kong Kito Cerarnic Co., Limited	Guangdong Kito Ceramics Group Co., Ltd	229.04
	Jingdezhen Kito Ceramic Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Foshan Sanshui Kito Ceramic Co., Ltd	
	Guangdong Gold Medal Ceramics Co., Ltd	
JDD Industry Co., Limited	Guangdong KITO Ceramics Group Co., Ltd	229.04
	Guangdong KITO Trading Co., Ltd	
	Guangdong Bode Fine Building Material Co., Ltd	
	White Rabbit Ceramics Co., Ltd	
	Guangdong Xinruncheng Ceramics Co., Ltd	
	Heyuan Dongyuan Eagle Brand Ceramic Co., Ltd	
	Enping Jingye Ceramic Co., Ltd	
	Guangdong Shenghui Ceramics Co., Ltd	
	Zhaoqing Guoshi Enterprise Mingjia Ceramics Co., Ltd	
	Fogang Tongqing Ceramics Co., Ltd	
	Guangdong Overland Ceramics Co., Ltd	
	Dongguan City Wonderful Ceramics Industrial Park Co., Ltd	
	Dongguan City Wonderful Decoration Materials Co., Ltd	
	Guangdong Jiamei Ceramics Co., Ltd	
	Jiangxi Hemei Ceramics Co., Ltd	
	GuangDong Simpire Building Materials Co., Ltd	
	Fujian Chaosheng Ceramics Co., Ltd	
	Guangdong Tianbi Ceramics Co., Ltd	
Jiangxi Wifi Ceramics Co., Ltd	Jiangxi Sun Ceramics Co., Ltd	229.04
Jingdezhen Kito Ceramic Co., Ltd	Jingdezhen Kito Ceramic Co., Ltd	229.04
	Guangdong Gold Medal Ceramic Co., Ltd	
Jingdezhen Seed Ceramic Co., Ltd	Jingdezhen Seed Ceramic Co., Ltd	229.04
Kaiping City China Trade Import & Export Co., Ltd	Kaiping Tilee's Building Materials Co., Ltd	229.04
Kertiles (Foshan) Inc	Guangdong Shenghui Ceramics Co., Ltd	229.04
	Bite Mosaic Co., Ltd	
	Foshan Nanhai Suode Mosaic Co., Ltd	
	Guangdong Xinruncheng Ceramics Co., Ltd	
	Foshan Jialeshi Building Co., Ltd	
	Foshan Lailida Ceramics Co., Ltd	
	Love Song Mosaic Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Linyi Aoda Ceramic Co., LTD	
	Toptiles International Shangdong Limited	
	Linyi Lianshun Cermaics Co., Ltd	
	Foshan Nanhai Yuda Ceramics Co., Ltd	
	Guangdong Yonghang New Materials Industry Co., Ltd	
	Guangdong Yongsheng Ceramics Co., Ltd	
	Foshan Viewgres Co., Ltd	
	Shandong Lion king Ceramics Science & Technology Company., Ltd	
	Quanzhou Minmetals Huayi Trading Co., Ltd	
	Heyuan Dongyuan Eagle Brand Ceramics Co., Ltd	
	Foshan Liangjian Ceramics Co., Ltd	
	Foshan Bull Ceramics Co., Ltd	
	Foshan Huiya Ceramics Co., Ltd	
	Foshan Jinmali Ceramics Co., Ltd	
	Shandong Qidu Ceramics Co., Ltd	
	Shandong Jiabao Ceramics Co., Ltd	
	Foshan Huan Qiu Ceramics	
	Jiangmen Xuri Ceramics Co., Ltd	
Kim Hln Ceramics (Shanghai) Co., Ltd	KIM HIN CERAMICS (SHANGHAI) CO., LTD	229.04
Mcmarmocer Ceramics Limited	Guangdong Overland Ceramics Co., Ltd	229.04
Megacera Incorporation Limited	Foshan Giance Trading Co., Ltd	229.04
	Foshan Accuwealth Trading Co., Ltd	
Modern Home Ceramics Co., Limited	Zibo Fengxia Ceramics Co., Ltd	229.04
	Zibo Jin Yi Ceramics Co., Ltd	
Nanning Ying Jin Ling Trade Co., Ltd	Saifei (Guangdong) New Materials Co., Ltd	229.04
	Guangdong Fuqiang Ceramic Co., Ltd	

Exporter	Producer	Final dumping margin (percent)
	Foshan Rongyi Construction Materials Co., Ltd	
	Foshan Cizun Ceramics Co., Ltd	
	Guangdong Xie Jin Ceramics Co., Ltd	
New Zhong Yuan Ceramics Import & Export Co., Ltd. of Guangdong	Southern Building Materials and Sanitary Co., Ltd of Qingyuan City	229.04
	Guangdong Luxury Micro-Crystal Stone Technology Co., Ltd	
	Jiangxi Fuligao Ceramics Co., Ltd	
	Hubei Baojiali Ceramics Co., Ltd	
Porschelain Building Materials Co., Ltd	Guangdong Gold Medal Ceramics Co., Ltd	229.04
Qingdao Oriental Bright Trading Co., Ltd	Zibo Fengxia Ceramics Co., Ltd	229.04
	Zibo Jin Yi Ceramics Co., Ltd	
Quanzhou Lans Ceramic Products Co., Ltd	Fujian Tilechina Industrial Co., Ltd	229.04
	Quanzhou Yuanlong Building Materials Development Co., Ltd	
	Fujian Likai Ceramic Co., Ltd	
	Fujian Jinjiang Jincheng Ceramics Co., Ltd	
Rabbit Song Building Material Co., Ltd	White Rabbit Ceramics Co., Ltd	229.04
Shandong Kingstone Ceramics Co., Ltd	Shandong Lianzhong Ceramics Co., Ltd	229.04
	Shandong Shunwei Ceramics Co., Ltd	
	Zibo Xinyijin Ceramic Technology Co., Ltd	
Shanghai Gaudimila Import & Exporter Co., Ltd	Shanghai Gaudimila Construction Materials Co., Ltd	229.04
Sinorock (Jiangxi) Co., Ltd	Fujian Huatai Group Co., Ltd	229.04
Stota Ceramics Co., Ltd	Xingning Toscana Ceramics Co., Ltd	229.04
	Foshan Xinyidian Colored Ceramics Co.,Ltd	
	Foshan Sanshui Kaililai Craft Products Co., Ltd	
	Gaoyao Tegaote Chinaware Co., Ltd	
	Guangdong Shenghui Ceramics Co., Ltd	
	Foshan Yitao Building Materials Co., Ltd	
	Foshan Hangxin Building Materials Co., Ltd	
	Foshan Saize Decorative Materials Co., Ltd	
	Foshan Nanhai Suode Glass Technics Co., Ltd	
	Jiangmen Huatao Ceramics Co., Ltd	

Temgoo International Trading Limited	Xinxing Jianxing Ceramics Co., Ltd	229.04
	Xinxingxian Yinghao Ceramics Co., Ltd	
	Zhaoqingshi Gaoyaoqu Xingda Ceramics Co., Ltd	
	Foshan Skyplanet Import & Export Co., Ltd	
The Tile Shop (Beijing) Trading Company, Ltd	Belite Ceramics (Anyang) Co., Ltd	229.04
	Foshan Xindonglong Ceramic Co., Ltd	
	Quality Tile Co., Ltd	
Super Building Material Co., Ltd. (Xiamen)	Xiamen Aidi Building Materials Industry Co., Ltd	229.04
	Zhangzhou Sage Building Material Technology Co., Ltd	
	Zhangzhou Huitai Building Materials Technology Co., Ltd	
	Quanzhou Zhengyifang Ceramic Technology Co., Ltd	
	Foshan Nanhai Meitian Glass Technology Co., Ltd	
	Yunfu Jiapeng Stone Co., Ltd	
	Foshan Debang Building Material Co., Ltd	
	Foshan Longjing Decoration Materials Co., Ltd	
Yekalon Industry Inc	Fujian Minqing Tenglong Ceramics Co., Ltd	229.04
	Romantic Ceramics Co., Ltd	
	Foshan Shiwan Eagle Brand Ceraminc Ltd	
	Fujian Hongxing Ceramic Development Co., Ltd	
	Fujian Zhangzhou Ruicheng Ceramics Co., Ltd	
	Foshan Nanhai District Traven Development Decorative Tiles Co., Ltd	
	Foshan Czun Ceramics Co., Ltd	
	Foshan Qiangguan Building Materials Co., Ltd	
	Foshan Jiana Ceramics Co., Ltd	
	Foshan GIANIA Ceramics	
	Guangdong Shenghui Ceramics Co., Ltd	
	Foshan Tai-Decor Decoration Materials Co., Ltd	
	Fujian Minqing Jintao Ceramic Co., Ltd	
	Foshan Lihua Ceramics Co., Ltd	
	Xingning Toscana Ceramics Co., Ltd	
	Foshan Nanhai Shengguan Building Materials Co., Ltd	
	Jinjiang Zhongrong Ceramic Building Material Co., Ltd	
	Foshan Yangguang Ceramics Co., Ltd	
	Xindonglong Ceramices Co., Ltd	

	Jinshajiang Ceramics Co., Ltd	
	Enping Yijian Ceramics Co., Ltd	
	Jiangmen Huatao Ceramic Co., Ltd	
	Guangdong Jialian Enterprise Ceramics Co., Ltd	
	Guangdong Xinruncheng Ceramics Co., Ltd	
	Fujian Huatai Group Co., Ltd	
	Fujian Honghua Group Co., Ltd	
	Guangdong Yonghang New Materials Industry Co., Ltd	
	Jiangxi Jingcheng Ceramics Co., Ltd	
	Zhaoqing Langfeng Ceramics Co., Ltd	
	Foshan Top-Black Ceramic Co., Ltd	
	Zhaoqing Xinhe Ceramics Co., Ltd	
Yingfei International Limited	Foshan Shuangou Ceramics Co., Ltd	229.04
Foshan Yinghui Industrial Co., Ltd	Heshan Heqiang Art China & Dinnerware Co., Ltd	229.04
Zhuhai Xuri Star Trading Co., Ltd	Zhuhai City Doumen District Xuri Pottery And Porcelain Company Limited	229.04
Zi Bo Teng Chen International Trade Co., Ltd	Zibo Jinhao Ceramics Co., Ltd	229.04
	Shandong Yuan Feng Ceramics Co., Ltd	
Zibo Belin Trading Co., Ltd	Shandong Lion King Ceramic Technology & Science Co., Ltd	229.04
	Shandong Yuanfeng Ceramic Co., Ltd	
	Shandong Shunwei Ceramic Co., Ltd	
Zibo Jiaxi Group Co., Ltd	Shandong Lionking Ceramics Co., Ltd	229.04
	Shandong Gengci Group Co., Ltd	
	Shandong Lianzhong Ceramics Co., Ltd	
	Shandong Greenkey Ceramics Co., Ltd	
	Shandong Yuxi Ceramics Co., Ltd	
	Zibo Jinhao Ceramics Co., Ltd	
	Shandong Shunyuan Ceramics Co., Ltd	
	Shandong Yuma Ceramics Co., Ltd	
	Shandong Shunwei Ceramics Co., Ltd	
	Zibo New Jinyi Ceramic And Technoogy Co., Ltd	
	Zibo Ginca Ceramics Co., Ltd	
	Linyi Aoda Ceramics Co., Ltd	

Zibo Lipin Ceramic Co., Ltd	Shandong Shunwei Ceramics Co., Ltd	229.04
	Shandong Yuanfeng Ceramics Co., Ltd	
	Shandong Shiziwang Ceramics Technology Co., Ltd	
	Shandong Zibo Luzhong Construction Materials Plant	
	Shandong Mingyu Ceramics Technology Co., Ltd	
	Zibo Xinjinyi Ceramics Technology Co., Ltd	
	Shandong Guorun Ceramics Co., Ltd	
	Zibo Jinyi Ceramics Co., Ltd	
	Anyang Fuerjia Ceramics Technology Co., Ltd	
	Shandong Gengci Group Co., Ltd	
	Zhangzhou Aoli Ceramics Development Co., Ltd	
	Nan'an Kuoda Construction Materials Co., Ltd	
	Foshan Modern Mingshi Ceramics Co., Ltd	
McMarmocer Ceramics Limited	Guangdong Overland Ceramics Co., Ltd	229.04
Zhuhai Xuri Star Trading Co. Ltd	Zhuhai City Doumen District Xuri Pottery and Porcelain Company Limited	229.04
China-Wide Entity		356.02

Note: China-Wide Entity includes Belite Ceramics (Anyang) Co., Ltd., Beilitai (Tianjin) Tile Co., Ltd., Tianjin Honghui Creative Technology Co., Ltd., Foshan Sanfi Import & Export Co., Ltd., Foshan Foson Tiles Co., Ltd., and Foshan Ibel Import and Export Ltd.

Source: 84 FR 61877, November 14, 2019.

APPENDIX E

NONSUBJECT COUNTRY PRICE DATA

Five importers reported useable price data for Brazil and/or Mexico for products 1 to 5, although not all firms reported data for all products.[1] Price data reported by these firms accounted for 4.5 percent of U.S. commercial shipments from Brazil and 3.8 percent of U.S. commercial shipments from Mexico in 2018. These price items and accompanying price data are comparable to those presented in tables V-4 to V-8. Price and quantity data for Brazil and Mexico are shown in tables E-1 to E-5 and in figures E-1 to E-5 (with domestic and subject source data).

Prices for product imported from Brazil were lower than prices for U.S.-produced product in all 46 instances. Prices for product imported from Brazil were lower than prices for product imported from China in all 46 instances. Prices for product imported from Mexico were lower than prices for U.S.-produced product in 30 instances and higher in 30 instances. Prices for product imported from Mexico were lower than prices for product imported from China in 32 instances and higher in 28 instances. A summary of price differentials is presented in table E-6.

[1] Three importers provided useable price data for Brazil and four importers reported useable price data for Mexico.

Table E-1
Ceramic tile: Weighted-average f.o.b. prices and quantities of imported product 1, by quarters, January 2016-September 2019

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Table E-2
Ceramic tile: Weighted-average f.o.b. prices and quantities of imported product 2, by quarters, January 2016-September 2019

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Table E-3
Ceramic tile: Weighted-average f.o.b. prices and quantities of imported product 3, by quarters, January 2016-September 2019

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Table E-4
Ceramic tile: Weighted-average f.o.b. prices and quantities of imported product 4, by quarters, January 2016-September 2019

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Table E-5
Ceramic tile: Weighted-average f.o.b. prices and quantities of imported product 5, by quarters, January 2016-September 2019

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Figure E-1
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by quarters, January 2016-September 2019

* * * * * * *

Figure E-2
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 2, by quarters, January 2016-September 2019

* * * * * * *

Figure E-3
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 3, by quarters, January 2016-September 2019

* * * * * * *

Figure E-4
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 4, by quarters, January 2016-September 2019

* * * * * * *

Figure E-5
Ceramic tile: Weighted-average f.o.b. prices and quantities of domestic and imported product 5, by quarters, January 2016-September 2019

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Table E-6
Ceramic tile: Summary of underselling/(overselling), by country, January 2016-September 2019

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APPENDIX F

U.S. PRODUCERS' FINANCIAL RESULTS BY COMPANY

Table F-1

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Total net sales (1,000 square feet)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total net sales quantity	894,767	943,782	900,336	688,113	644,732
	Total net sales (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Ironrock	***	***	***	***	***
Interceramic	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total net sales value	1,229,786	1,307,649	1,269,406	965,767	923,466
	Cost of goods sold (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Ironrock	***	***	***	***	***
Interceramic	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total COGS	714,252	741,410	736,942	554,631	554,239

Table continued on next page.

Table F-1—Continued

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Gross profit or (loss) (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total gross profit or (loss)	515,534	566,239	532,464	411,136	369,227
	SG&A expenses (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total SG&A expenses	275,300	300,518	315,598	242,082	247,218
	Operating income or (loss) (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total operating income or (loss)	240,234	265,721	216,866	169,054	122,009

Table continued on next page.

Table F-1—Continued

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Net income or (loss) (1,000 dollars)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Total net income or (loss)	222,481	239,667	187,189	146,938	96,861
	COGS to net sales ratio (percent)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average COGS to net sales ratio	58.1	56.7	58.1	57.4	60.0
	Gross profit or (loss) to net sales ratio (percent)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average gross profit or (loss) to net sales ratio	41.9	43.3	41.9	42.6	40.0

Table continued on next page.

Table F-1—Continued

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	SG&A expense to net sales ratio (percent)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average SG&A expense to net sales ratio	22.4	23.0	24.9	25.1	26.8
	Operating income or (loss) to net sales ratio (percent)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average operating income or (loss) to net sales ratio	19.5	20.3	17.1	17.5	13.2
	Net income or (loss) to net sales ratio (percent)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average net income or (loss) to net sales ratio	18.1	18.3	14.7	15.2	10.5

Table continued on next page.

Table F-1—Continued

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Unit net sales value (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit net sales value	1.37	1.39	1.41	1.40	1.43
	Unit raw materials (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit raw materials	0.25	0.25	0.25	0.25	0.26
	Unit energy costs (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit energy costs	0.05	0.06	0.06	0.06	0.06

Table continued on next page.

Table F-1—Continued

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Unit direct labor costs (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit direct labor	0.12	0.12	0.13	0.13	0.13
	Unit other factory costs (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit other factory costs	0.38	0.35	0.37	0.37	0.41
	Unit COGS (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit COGS	0.80	0.79	0.82	0.81	0.86

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Table F-1—Continued

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Unit gross profit or (loss) (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit gross profit or (loss)	0.58	0.60	0.59	0.60	0.57
	Unit SG&A expenses (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit SG&A expense	0.31	0.32	0.35	0.35	0.38
	Unit operating income or (loss) (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit operating income or (loss)	0.27	0.28	0.24	0.25	0.19

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Table F-1—Continued

Ceramic tile: Select results of operations of U.S. producers, by company, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Unit net income or (loss) (dollars per square foot)				
American Wonder	***	***	***	***	***
Crossville	***	***	***	***	***
Dal-Tile	***	***	***	***	***
Del Conca	***	***	***	***	***
Florida Tile	***	***	***	***	***
Florim	***	***	***	***	***
Interceramic	***	***	***	***	***
Ironrock	***	***	***	***	***
Landmark	***	***	***	***	***
MPM	***	***	***	***	***
Pratt	***	***	***	***	***
Stonepeak	***	***	***	***	***
Syzygy	***	***	***	***	***
Average unit net income or (loss)	0.25	0.25	0.21	0.21	0.15

Note: Three very small U.S. producers (***) manufacture and sold only handmade, custom, and/or made-to-order non-porcelain ceramic tile during the POI. The per unit sales value, COGS, and profit measures of these three U.S. producers are higher than the industry average as a result of the custom made product mix sold to specific customers.

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX G

ADDITIONAL DATA ON U.S. IMPORTERS' U.S. SHIPMENTS, BY PRODUCT TYPE AND WATER PERMEABILITY

Table G-1
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
Non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
Non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

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Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
Non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

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Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Value (1,000 dollars)				
Non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
Non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

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Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Value (1,000 dollars)				
Non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

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Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Unit value (dollars per square foot)				
Non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
Non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Table continued on next page.

Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Unit value (dollars per square foot)				
Non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Table continued on next page.

Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of quantity (percent)				
Non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
Non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Table continued on next page.

Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of quantity (percent)				
Non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Table continued on next page.

Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of value (percent)				
Non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: China.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***
Non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: Nonsubject.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Table continued on next page.

Table G-1--Continued
Ceramic tile: U.S. importers' U.S. shipments, by product type, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of value (percent)				
Non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All non-mosaic	***	***	***	***	***
Mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All mosaic	***	***	***	***	***
Mosaic and non-mosaic: All import sources.--					
Floor	***	***	***	***	***
Wall	***	***	***	***	***
Other	***	***	***	***	***
All product types	***	***	***	***	***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure G-1
Ceramic tile: U.S. importers' U.S. shipment volumes and average unit values, by product type (Non-mosaic vs. Mosaic), 2016-18, January to September 2018, and January to September 2019

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Figure G-2
Ceramic tile: U.S. importers' U.S. shipment volumes and average unit values, by product type (Floor vs. Wall vs. Other), 2016-18, January to September 2018, and January to September 2019

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table G-2
Ceramic tile: U.S. importers' U.S. shipments, by water permeability, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Quantity (1,000 square feet)				
China.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
Nonsubject sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
All import sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
	Value (1,000 dollars)				
China.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
Nonsubject sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
All import sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
	Unit value (dollars per square foot)				
China.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
Nonsubject sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
All import sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***

Table continued on next page.

Table G-2--Continued
Ceramic tile: U.S. importers' U.S. shipments, by water permeability, 2016-18, January to September 2018, and January to September 2019

Item	Calendar year			January to September	
	2016	2017	2018	2018	2019
	Share of quantity (percent)				
China.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
Nonsubject sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
All import sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
	Share of value (percent)				
China.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
Nonsubject sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***
All import sources.--					
Porcelain	***	***	***	***	***
Non-porcelain	***	***	***	***	***
Total U.S. shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Figure G-3
Ceramic tile: U.S. importers' U.S. shipment volumes and AUVs, by water permeability, 2016-18, January to September 2018, and January to September 2019

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.