Final report BGD-25225 March 2026

Export pricing in preferential and non-preferential markets: Firm-level evidence from Bangladesh's apparel exports in the context of LDC graduation

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Export Pricing in Preferential and Non-Preferential Markets: Firm-Level Evidence from Bangladesh's Apparel Exports in the Context of LDC Graduation

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March 2026

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Summary of Key Findings: This paper examines how Bangladeshi apparel exporters price the same products across two major destination markets operating under sharply different trade regimes: the European Union, where Bangladesh has benefited from duty-free preferential access, and the United States, where exports face Most Favoured Nation tariffs. Using detailed product-level data for 2010 to 2023 covering more than 161,000 firm-product-destination-year observations, the analysis investigates whether exporters charge systematically different free-on-board prices across these markets and whether exchange-rate pass-through and pricing-to-market behaviour vary by destination and firm characteristics.

The results show a large and persistent price wedge between the two markets. Controlling for product, firm, and destination characteristics, Bangladeshi apparel exporters receive significantly lower prices in the US market than in the EU. Exchange-rate pass-through is incomplete in both destinations, consistent with pricing-to-market behaviour, but the response of export prices to exchange-rate movements is stronger in the United States than in the European Union. This suggests that destination-specific trade regimes are associated not only with differences in price levels but also with differences in firms' markup adjustment. Additional results indicate that market reach, firm size, and product orientation matter for the level of export prices, but do not systematically alter pricing-to-market elasticities. Robustness checks further show that the destination-specific pricing pattern is more pronounced among firms with narrower destination coverage and among multi-product exporters.

The findings contribute to the literature on export pricing and firm heterogeneity by showing that preferential and non-preferential market access can shape price realisation in ways not captured by productivity differences alone. They also carry wider implications for Bangladesh's export competitiveness in the context of preference erosion and LDC graduation.

JEL Classification: F13, F14, F31, L67, O24

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I. Introduction

Recent theories of international trade place firm heterogeneity at the centre of export participation and performance. More productive firms are more likely to export, to serve a larger number of destinations, and, in many settings, to command higher prices (Bernard et al., 2007; Melitz, 2003). Nevertheless, one of the most robust findings in the empirical trade literature is that exporters do not charge a uniform price across foreign markets, even for the same product. Using disaggregated firm-product-destination data, a substantial body of work shows that the same firm may charge systematically different free-on-board (FOB) prices across destinations, reflecting destination-specific markups. Such behaviour has been documented for a wide range of countries, including France, Portugal, Hungary, Spain, China, and the United States (Berman et al., 2012; Bastos & Silva, 2010; Görg et al., 2017; De Lucio et al., 2018; Manova & Zhang, 2012; Harrigan et al., 2015). Another channel by which firms adjust destination-specific markups is pricing-to-market (PTM), whereby exporters absorb part of exchange rate and cost shocks within their margins rather than allowing those shocks to pass through fully to foreign consumers (Krugman, 1986; Goldberg & Knetter, 1996). The literature further suggests that the scope for destination-specific pricing is shaped by firm productivity and size, product differentiation and quality sorting, and the breadth of firms' product portfolios (Bernard et al., 2007; Melitz & Ottaviano, 2008; Auer et al., 2021; Bastos et al., 2018; Chatterjee et al., 2013).

While this literature has greatly improved the understanding of exporter pricing behaviour, the role of trade policy regimes in generating destination-specific price differences has received much less attention at the firm-product level. In particular, when exporters face different tariff treatment across major destination markets, pricing disparities may emerge through channels that are not reducible to productivity, quality, or demand conditions alone. Where a destination imposes relatively high tariffs and exporters lack preferential access, firms may absorb part of the tariff burden into their own margins in order to preserve competitiveness, thereby compressing markups independently of underlying productivity advantages (Asprilla et al., 2019; Winters & Chang, 2000). Conversely, preferential market access does not necessarily translate into a one-for-one improvement in exporters' realised prices. In markets where tariffs are zero, buyers may be able to appropriate part of the preference margin through stronger bargaining power, with the result that some of the rent associated with duty-free access is reflected not in higher supplier prices but in lower landed prices for importers, or in a smaller-than-expected improvement in exporters' FOB price realisation (Crowley et al., 2021; Razzaque & Islam, 2024). These considerations suggest that the tariff regime

itself may generate systematic cross-destination price wedges, yet this channel remains underexplored in the PTM literature.

Bangladesh offers a particularly informative and interesting setting in which to examine this question. As the world's second-largest apparel exporter, with more than 65 per cent of its apparel export earnings concentrated in the European Union (EU) and the United States (USA), Bangladesh sells broadly similar products into two major markets that have long operated under sharply different trade regimes. The EU grants Bangladesh duty-free access under the Everything But Arms (EBA) initiative, whereas the USA applies Most Favoured Nation (MFN) tariffs averaging around 12 to 15 per cent and offers no comparable bilateral preference (Razzaque & Islam, 2024). This institutional asymmetry matters not only because of its immediate implications for export competitiveness, but also because it provides a revealing context in which to assess whether, and to what extent, exporters adjust their FOB prices across preferential and non-preferential destinations.

The underlying mechanism linking these destination-specific price differences to firm behaviour is PTM. Rather than allowing exchange rate changes or cost shocks to pass directly into foreign-currency prices, exporters may strategically vary their markups across markets in order to stabilise demand and preserve market share (Krugman, 1986; Goldberg & Knetter, 1996). Goldberg and Knetter (1996) show that export prices in local currency terms often move by only a fraction of the exchange rate change, implying substantial markup adjustment by firms, while Fitzgerald and Haller (2014) demonstrate that such behaviour operates as a within-firm pricing response rather than merely reflecting changes in the composition of exporters. At the same time, the capacity to engage in PTM is unlikely to be uniform across firms. More productive firms, and firms with stronger margins, are generally better placed to absorb exchange rate or tariff shocks without threatening commercial viability, whereas firms operating closer to cost are more likely to pass shocks through more fully (Berman et al., 2012). Larger firms may enjoy superior bargaining power and more durable relationships with global buyers, allowing them to sustain higher markups or respond more flexibly across markets (Amiti & Khandelwal, 2013; Hallak & Sivadasan, 2013; Verhoogen, 2008). Product scope may also matter, since multi-product exporters can adjust markups across their product portfolio in ways that single-product firms cannot (Chatterjee et al., 2013; Mayer et al., 2014). In addition, some part of cross-destination price variation may reflect quality sorting, insofar as firms exporting to richer or more demanding markets upgrade inputs and product characteristics, thereby raising observed FOB unit values for reasons that are not purely mark-up based (Auer et al., 2018; Bastos et al., 2018; Khandelwal, 2010).

Against this backdrop, this paper examines whether Bangladeshi apparel exporters charge systematically different prices in the EU and the USA, and whether firm-level characteristics shape the degree and form of such destination-specific pricing. The analysis uses Bangladesh customs data for 2010 to 2023, covering more than 161,000 firm-product-destination-year observations at the HS 8-digit level. This makes it possible to compare the prices charged by the same firms for similar products across the two principal export markets, while controlling for firm-product heterogeneity, market structure, and exchange rate movements. Framed in this way, the paper speaks to two related

questions: whether a persistent price wedge exists between preferential and non-preferential markets, and whether any such wedge is conditioned by differences in firm size, market reach, product scope, or specialisation.

The paper contributes to the literature in four main ways. First, it extends the PTM literature by providing firm-level evidence from a major developing-country exporter for which trade preferences, rather than productivity alone, are likely to be an important part of the pricing environment. Second, by exploiting the long-standing EBA-MFN asymmetry between the EU and the USA, it documents a substantial and economically meaningful cross-destination price gap, with Bangladeshi firms charging markedly lower FOB prices in the US market than in the EU, even after controlling for firm-product and market-level factors, thereby placing the policy insights, as in Razzaque and Islam (2024), within a more rigorous econometric setting (Knetter, 1989; Goldberg & Knetter, 1996). Third, the results are consistent with the Dominant Currency Paradigm in showing that exchange rate movements are not transmitted symmetrically across destinations, and that Bangladeshi exporters appear to absorb a larger share of depreciation into BDT-denominated export revenue when serving the USA than when exporting to the EU (Gopinath et al., 2020). Fourth, the paper contributes to the literature on firm heterogeneity and export pricing by showing that while size, market reach, and product specialisation are associated with price levels, they do not appear to alter PTM intensity in a systematic manner, with most of the observed pricing gradient reflecting within-firm adjustment rather than compositional differences across firms, and with product scope emerging as an important constraint on selective markup adjustment (Berman et al., 2012; Manova & Zhang, 2012; Chatterjee et al., 2013).

These findings are relevant well beyond the Bangladesh case. As countries graduate from preferential trade regimes and confront a more uncertain external environment, the erosion of tariff preferences is likely to affect competitiveness not only through conventional market-access margins but also through the strategic pricing responses of exporters themselves. Understanding how firms adjust markups across destinations, and which firms possess the capacity to do so, is therefore central to assessing the resilience of export sectors in a post-preference world.

The remainder of the paper is organised as follows. Section II describes the data and empirical strategy. Section III presents descriptive evidence on firm and price variation. Section IV reports the baseline results, heterogeneity analysis, and robustness checks. Section V concludes.

II. Data and Empirical Strategy

The empirical analysis draws on Bangladesh's customs records obtained from Customs Statistics, covering the universe of merchandise exports over the period 2010 to 2023.[1] The unit of observation

[1] The timeframe is based on the availability of data.

is a firm-product-destination-year combination, that is, exports of product *i* by firm *j* to destination *k* in year *t*.

A key strength of the customs database lies in its transaction-level structure, which permits highly disaggregated analysis of exporters' pricing behaviour across markets. At the same time, the use of high-frequency trade data raises econometric concerns. As noted by Manova and Zhang (2012), combining transaction-level price information with destination characteristics observed at annual frequency may lead to downward-biased standard errors. One possible remedy is to collapse transactions to the annual level. However, such aggregation, while alleviating the frequency mismatch, also removes the within-product-destination price variation that is central to the analysis of multi-transaction firms and therefore comes at a substantial informational cost (De Lucio et al., 2018). For that reason, the data structure is preserved at the most disaggregated level consistent with the empirical design.

The product dimension of the dataset is highly detailed, extending to the 8-digit Harmonised System (HS) classification. Since the customs records do not report prices directly, export prices are proxied by unit values, following standard practice in the literature (Hallak, 2006; Schott, 2004). For each observation, unit value is defined as the ratio of export value to export quantity:

$$UV_{ijkt} = X_{ijkt} / Q_{ijkt}$$

Where, X_{ijkt} denotes export value and Q_{ijkt} indicates export quantity for product *i* exported by firm *j* to destination *k* in year *t*.

The customs data report quantities both in kilograms and in natural units. In practice, the natural-unit measure is missing for a large share of observations, making it unsuitable as a consistent basis for price construction. The analysis therefore relies exclusively on kilogram-based unit values. Although unit values are widely used in empirical trade research, they are known to be sensitive to reporting errors, compositional variation, and extreme observations. Several cleaning procedures are therefore applied before constructing the final price variable.

First, products accounting for less than 1% of a firm's total export revenue are excluded. These observations represent approximately 58.2% of the sample in count terms, but only 10.2% of total export value. Second, export shipments below BDT 500,000 are omitted. These account for around 4.2% of observations but only 0.2% of export value. Third, following Görg et al. (2017), observations are dropped where the log unit value lies more than three log points above the product-year average log unit value. This trimming affects only about 1.1% of observations. The exclusion of very small and temporary export flows is also consistent with the argument of Békés and Muraközy (2012), who show that such transactions differ systematically from regular export relationships and are often poorly explained by conventional trade models.

The analysis is restricted to apparel exports destined for the European Union and the United States. This restriction is motivated by both economic relevance and analytical clarity. Bangladesh's export

basket is heavily concentrated in apparel, and the EU and the USA together account for the dominant share of its apparel exports. More importantly, these two markets embody a persistent contrast in trade policy treatment. The EU provides duty-free access to Bangladeshi apparel under preferential arrangements, whereas the USA applies MFN tariffs and offers no comparable preference regime. Focusing on apparel exports to these two destinations therefore permits a cleaner examination of pricing behaviour under preferential and non-preferential market access, while also reducing noise arising from minor export products and thin trade relationships in unrelated sectors.

The resulting estimation sample is substantial. As shown in Table 1, the database contains roughly 3,000 exporting firms and around 200 apparel product categories per year. On average, each firm exports slightly more than four apparel products and sells each product to somewhat more than three destination markets. These patterns indicate both meaningful cross-firm heterogeneity and sufficient within-firm variation to investigate destination-specific pricing behaviour.

Table 1: Number of observations

Year	Products	Firms	Firm-product	Firm-country	Firm-product-country
2010	209	2,867	11,854	8,539	18,335
2011	199	2,943	11,473	9,076	18,500
2012	199	3,025	11,387	9,207	18,394
2013	204	4,242	15,168	12,653	24,762
2014	193	3,662	12,481	10,531	20,212
2015	195	3,000	11,436	9,038	18,462
2016	205	2,810	11,546	8,864	18,841
2017	197	2,858	11,823	9,163	19,229
2018	194	3,256	13,262	10,207	21,227
2019	203	5,114	19,736	15,858	31,707
2020	197	3,500	13,533	10,842	21,734
2021	192	2,472	10,921	8,133	17,617
2022	207	2,495	11,974	8,234	18,954
2023	193	2,482	12,866	7,925	19,908

Source: Authors' representation using the data from the Bangladesh Customs data.

The unit-value measure exhibits substantial dispersion even within narrowly defined 8-digit apparel categories. The average coefficient of variation is approximately 67.7%, ranging from 55.8% for knitted products to 78.9% for woven items. A variance decomposition of unit values within 8-digit apparel categories further indicates that around 48% of the observed variation is associated with firm fixed effects, whereas destination fixed effects account for only about 2%. Since the analysis is confined to the EU and the USA, where differences in bilateral distance from Bangladesh are relatively limited, these patterns suggest that much of the remaining price variation is more plausibly linked to firm characteristics and pricing strategies than to transport-related factors. This within-product dispersion provides the empirical basis for examining destination-specific pricing at the firm level.

The empirical strategy follows the PTM framework developed by Knetter (1989) and synthesised by Goldberg and Knetter (1996). The objective is to estimate whether exporters adjust markups across destinations in response to exchange rate movements and whether such behaviour differs systematically between the EU and the USA. A fixed-effects panel specification is employed in order to separate destination-specific pricing responses from time-invariant differences in firm capability, product composition, and quality.

To test for asymmetric pricing behaviour across the two destination groups, a binary indicator for the USA market is interacted with the exchange rate. This interaction allows the elasticity of export prices with respect to exchange rate movements to differ between the USA and the EU. The baseline estimation equation is specified as follows:

$$\ln \mathrm{P_{ijkt}} = \beta_0 + \beta_1 \ln \mathrm{ER_{kt}} + \beta_2 \mathrm{D_{USA}} + \beta_3(\mathrm{D_{USA}} \times \ln \mathrm{ER_{kt}}) + \lambda \mathrm{X_{ikt}} + \delta_{\mathrm{ijt}} + \varepsilon_{\mathrm{ijkt}}$$

Where,

- $\ln P_{ijkt}$ is the natural log of the export unit value (denominated in BDT) of product i exported by firm j to destination k in year t.
- $\mathrm{D_{USA}}$ is the dummy variable that equals 1 if destination k is the USA and 0 otherwise (EU countries).
- $\ln \mathrm{ER_{kt}}$ is the natural log of the nominal exchange rate in destination k at time t (BDT per unit of foreign currency).
- $\mathrm{X_{ikt}}$ is the destination-specific and destination-product-specific control variable, which includes the destination country's GDP (market size), GDP per capita (income level), average product price (intensity of competition), and average product tariff rate.
- δ_{ijt} is the firm-product-year fixed effect, which captures within firm's price-to-market strategy. However, following Görg et al. (2017), we have also used product-year fixed effects to capture across firm's price-to-market strategy.

The coefficients of principal interest are β_1, β_2, and β_3. The coefficient β_2 captures the average price difference between the USA and EU markets, conditional on the other covariates. A statistically significant coefficient indicates that the same exporting environment is associated with systematically different FOB prices across the two destination groups. The coefficient β_1 represents the baseline elasticity of export prices with respect to exchange rate movements in the EU market and therefore captures the degree of PTM under the preferential regime. A positive and statistically significant coefficient is consistent with incomplete pass-through and destination-specific markup adjustment. The interaction coefficient β_3 captures whether the response of export prices to exchange rate changes differs in the USA relative to the EU. A significant estimate for this term would indicate asymmetric PTM behaviour across preferential and non-preferential markets.

Several control variables are included in all specifications to reduce omitted-variable bias. First, competitive conditions in the destination market are proxied by average product prices, which may also partly capture cross-country differences in quality demand not fully reflected by income levels. Following Martin (2012), these measures are constructed from product-level trade data using total import values and quantities at the country-HS6-year level obtained from the CEPII database, from

which logarithmic average unit values are computed. Second, tariffs at the country-HS6-year level are included using weighted average effectively applied ad valorem rates from the UN TRAINS database. Third, destination GDP is included to capture market size, while destination GDP per capita is used to proxy income levels. Data on GDP and GDP per capita are drawn from the World Development Indicators (WDI).

III. Salient features of the data

3.1. Exporting Firms, Their Products and Destinations

Descriptive evidence from Bangladesh's customs data on apparel exports to the European Union and the United States reveals several important features of exporter behaviour. Table 2 reports the distribution of firms by the number of destination markets served in 2023. On average, each firm exported to 3.7 countries, suggesting a relatively limited destination reach even within these two major market groups. This average, however, conceals substantial heterogeneity across firms. Around 20.9% of exporters served only a single destination, and these firms accounted for 12.9% of total export value. At the other extreme, only 0.5% of firms exported to more than 10 destinations, contributing less than 1% of total export earnings. The pattern suggests that Bangladesh's apparel exports to the EU and the USA are driven primarily by firms with low or moderate levels of destination diversification, while highly geographically diversified exporters remain rare and quantitatively less important in this sample.

Table 2: Number of markets served per firm, 2023

Number of markets served	% of firms	% of value
1	20.94	12.91
2	16.25	13.38
3	16.33	14.31
4	12.29	12.75
5	11.16	14.27
6	9.04	11.81
7	6.04	7.63
8	4.30	6.79
9	2.43	3.91
10	0.74	1.38
More than 10	0.48	0.87
Average number of markets per firm	3.73	-
Maximum number of markets per firm	13	-

Source: Authors' estimation using the data from the Bangladesh Customs Data

A similar pattern emerges with respect to product diversification. As shown in Table 3, 15.6% of firms exported only a single product category, but these firms accounted for just 2.2% of total export value. By contrast, firms exporting more than 10 product categories represented only 5.2% of all firms, but

contributed 9.6% of total export earnings. The average firm exported 4.6 product categories, while the maximum observed number was 19.[2] This indicates that although many firms remain concentrated in a narrow product range, a smaller group of more diversified exporters contributes disproportionately to apparel export earnings in the EU and US markets.

Table 3: Number of products exported per firm, 2023

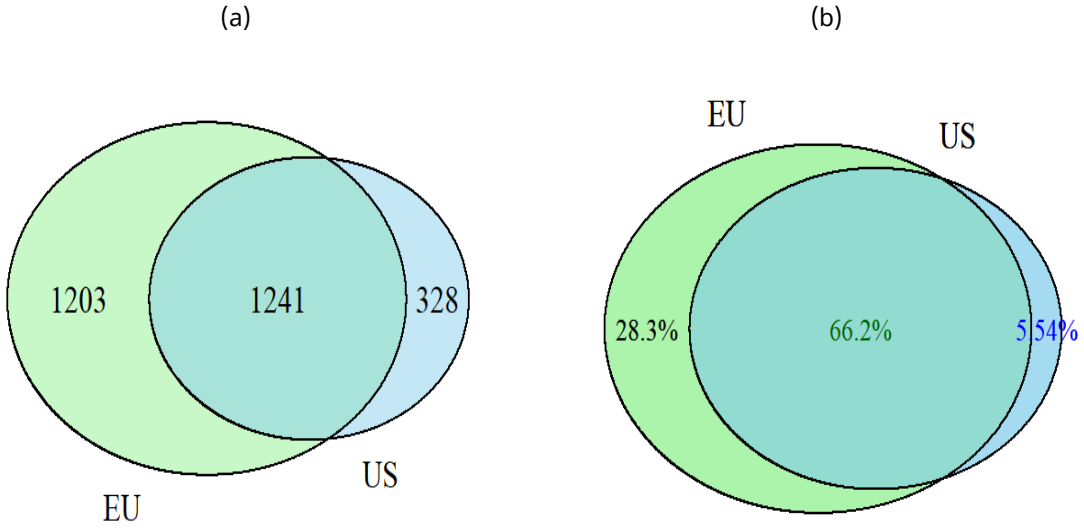
Number of markets served	% of firms	% of value
1	15.64	2.18
2	15.46	7.86
3	15.03	13.06
4	11.03	10.31
5	10.08	13.07
6	8.34	8.95
7	7.34	11.26
8	4.78	6.74
9	4.39	8.94
10	2.69	7.99
More than 10	5.21	9.64
Average number of products per firm	4.56	-
Maximum number of products per firm	19	-

Source: Authors' estimation using the data from the Bangladesh Customs Data

The distribution of firms across the EU and US markets further highlights the structure of export participation. Figure 1(a) shows that a substantial share of firms, 43.4%, exported only to the EU, whereas only 11.8% served the US market exclusively. The remainder exported to both markets. Yet the distribution of export value, shown in Figure 1(b), is markedly different. Firms serving both markets accounted for more than 66% of total apparel export value in 2023. This contrast indicates that while many firms remain active in only one of the two markets, the dominant share of export earnings is generated by firms with simultaneous access to both destinations.

[2] The firm exporting 19 products in 2023 is a vertically integrated apparel manufacturer specialising in both knitwear and woven garments, with more than 50% of the exports concentrated in the woven items. The firm's product portfolio includes jackets, trousers, dresses, sweaters, and outerwear, catering to diverse export markets in the EU and the USA.

Figure 1: Number of firms and their export value serving in the EU and USA markets, 2023

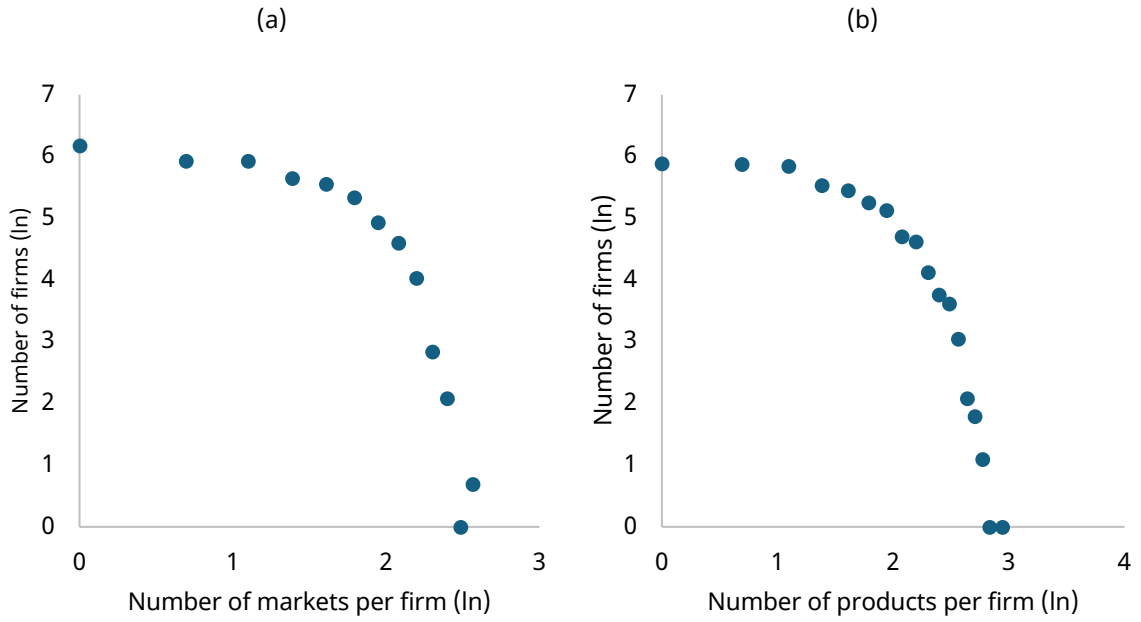


Source: Authors' representation using Bangladesh Customs data. Notes: Panel (a) presents the number of firms serving the EU only, the USA only, and both markets. Panel (b) shows the corresponding shares of total export value.

Figures 2 and 3 provide additional perspective on firms' extensive margins. Figure 2 shows the frequency distribution of exporters by the number of destination markets served and the number of apparel products shipped at the HS 8-digit level. In both cases, the distributions decline smoothly as the number of markets or products increases, indicating that firms with broad geographic reach or wide product portfolios are relatively uncommon. Figure 3 plots the number of markets served against the number of product categories exported and reveals a positive association between these two dimensions of firm scope. Exporters with a broader product range also tend to serve a larger number of destination markets.

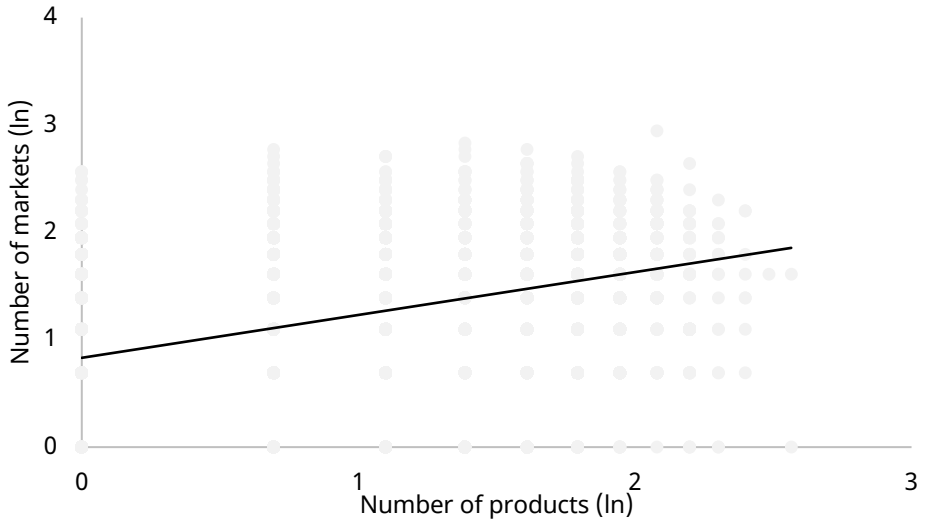
Overall, the patterns explained suggest that Bangladesh's apparel exports to the EU and the USA are characterised by substantial heterogeneity across firms, but not by widespread diversification in either products or markets. Most exporters remain concentrated along one or both dimensions, while a relatively small group combines broader product scope with wider destination coverage. This is somewhat different from the broader firm-level evidence for countries such as France, Portugal, Belgium, Hungary, the United States, Brazil, and Chile, where larger and more diversified firms tend to dominate export flows more clearly across the full set of destinations and sectors (Álvarez et al., 2015; Arkolakis et al., 2021; Bastos & Silva, 2010; Bernard et al., 2007; Eaton et al., 2004; Görg et al., 2017; Muûls & Pisu, 2009). At the same time, the difference should not be overstated. Since the present analysis is restricted to Bangladeshi apparel exports to two major destination markets, the observed concentration among firms with relatively limited market and product reach is likely to reflect the narrower sample frame rather than a contradiction of the broader literature. Even within this restricted setting, however, the positive association between product breadth and destination reach remains evident.

Figure 2: Firms, products, markets, 2023



Source: Authors' representation using the data from the Bangladesh Customs Data.

Figure 3: Scatter plot of the extensive margins



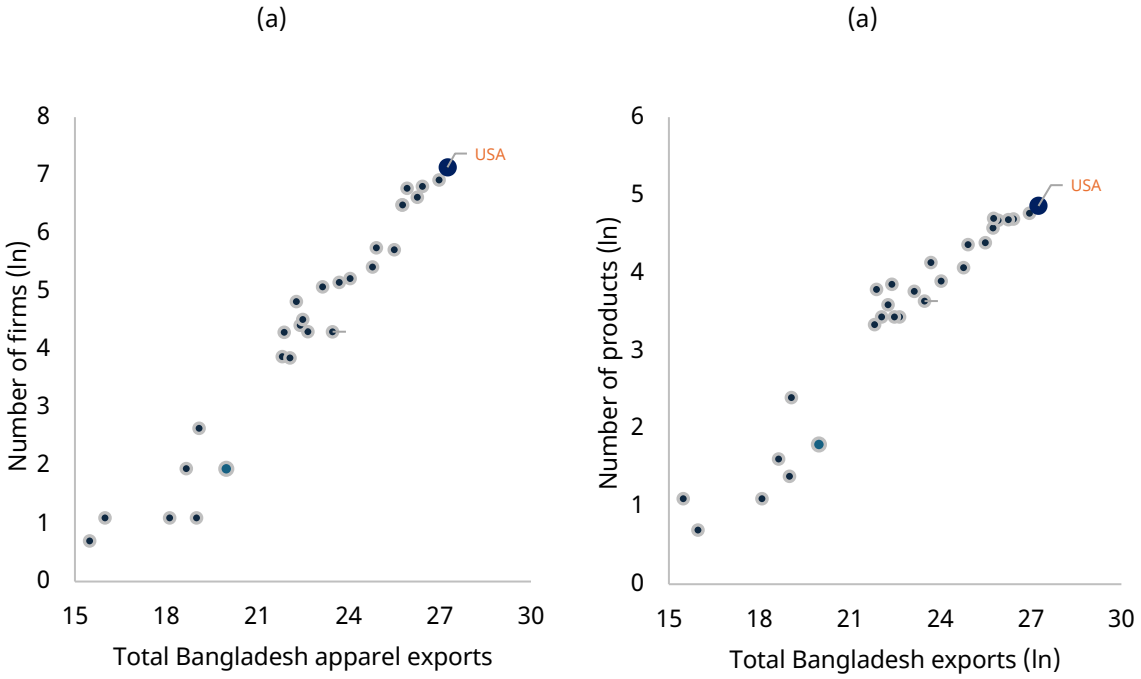
Source: Authors' representation using the data from Bangladesh customs

3.2. Export Margins Across Destination Markets

Figures 4 and 5 relate the aggregate value of Bangladesh's bilateral apparel exports to the number of exporting firms, the number of exported products, and the average export value per firm-product across destination markets in the EU and the USA. A strong positive association is evident between aggregate export value and the two extensive-margin indicators, namely the number of exporting

firms and the number of exported apparel products. This pattern suggests that larger bilateral export flows are associated primarily with broader participation by firms and greater product coverage, rather than with deeper penetration along pre-existing firm-product relationships. The association appears particularly pronounced for the US market, where higher aggregate exports are observed in destinations characterised by stronger participation along these extensive margins.

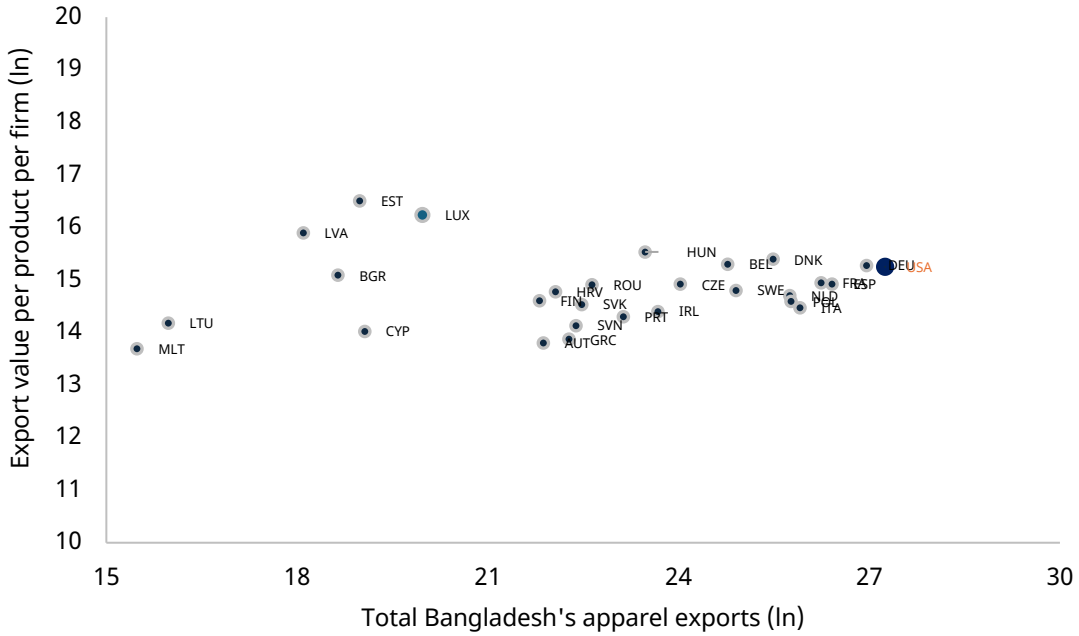
Figure 4: Distribution of bilateral apparel exports through the extensive margin, 2023



Source: Author's representation using the data from Bangladesh's Customs. Notes: USA = United States.

By contrast, the relationship between aggregate export value and the intensive margin, measured as average export value per product per firm, is much weaker. Figure 5 shows no clear systematic association between bilateral export volumes and this intensive-margin indicator across destinations. This does not imply that incumbent firms are unimportant for export growth. Rather, it suggests that, within this sample of apparel exports to the EU and the USA, cross-destination variation in aggregate export performance is more closely aligned with the breadth of firm participation and product presence than with the average value shipped within existing firm-product relationships.

Figure 5: Distribution of bilateral apparel exports through the intensive margin, 2023



Source: Author's representation using the data from Bangladesh's Customs. Notes: AUT = Austria; BEL = Belgium; BGR = Bulgaria; CYP = Cyprus; CZE = Czechia; DEU = Germany; DNK = Denmark; EST = Estonia; ESP = Spain; FIN = Finland; FRA = France; GRC = Greece; HRV = Croatia; HUN = Hungary; IRL = Ireland; ITA = Italy; LTU = Lithuania; LUX = Luxembourg; LVA = Latvia; MLT = Malta; NLD = Netherlands; POL = Poland; PRT = Portugal; ROU = Romania; SWE = Sweden; SVN = Slovenia; SVK = Slovakia; USA = United States

On the whole, the patterns of export presence seem to indicate that Bangladesh's apparel export performance across major destination markets is shaped predominantly by the extensive margin. This descriptive evidence is consistent with the broader view that market expansion in external trade often depends not only on selling more of existing products, but also on enlarging the set of firms and products active in destination markets.

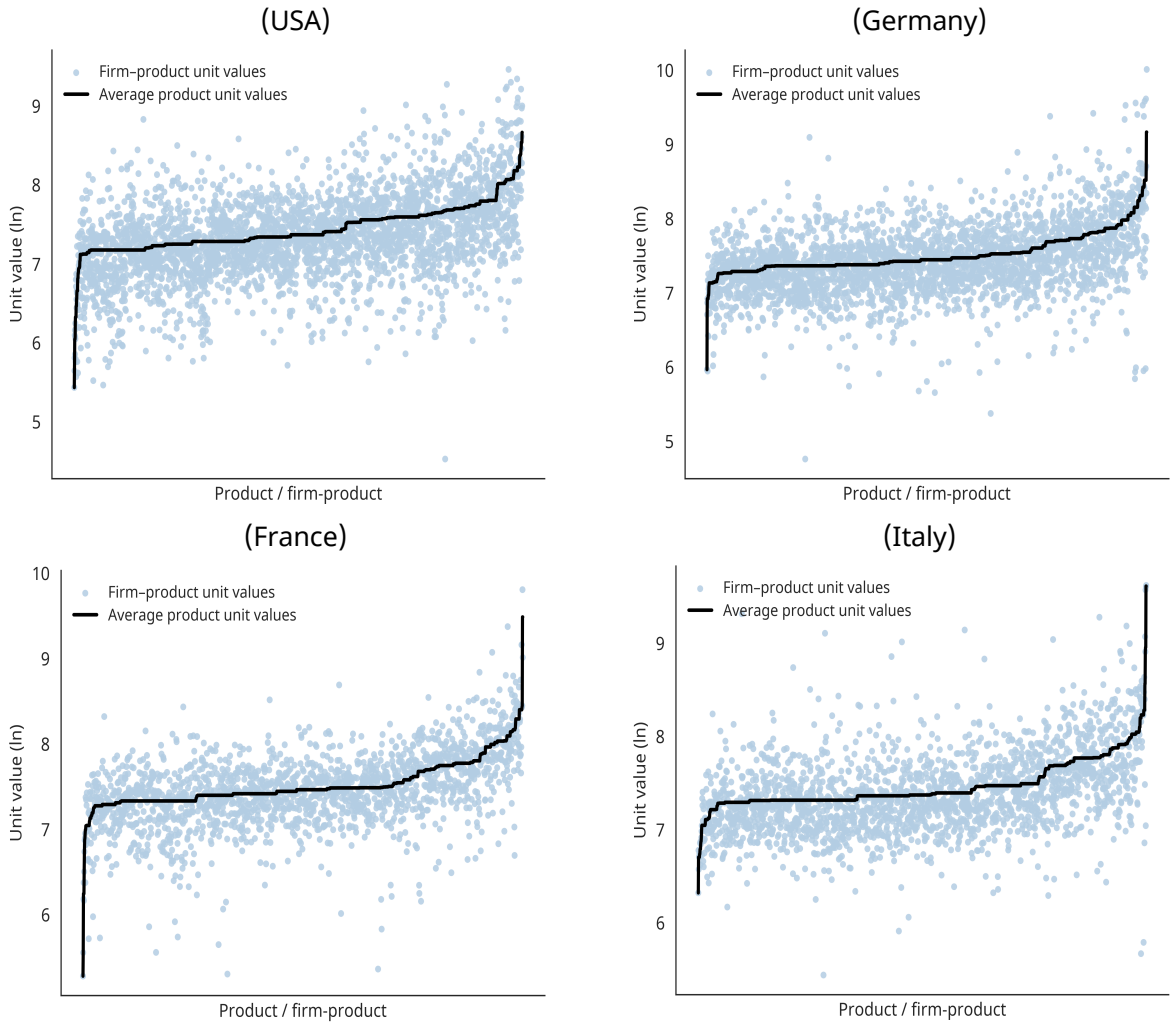
3.3. Firm, Unit Value, and Product-wise Variation

Attention is now turned to the firm-product-country unit-value data, which form the core of the subsequent empirical analysis. Figure 6 compares product-level and firm-product-level unit values across four major destinations: the United States and the three largest EU markets, Germany, France, and Italy. In each panel, the solid line plots average product-level unit values arranged in ascending order, while the scattered points represent the corresponding firm-product observations around those averages.

A striking feature of the data is the substantial dispersion in firm-level unit values within narrowly defined product categories. For the same HS 8-digit apparel item, observed unit values differ considerably across firms, often lying well above or below the corresponding product average. Such dispersion is visible in all four markets, but it appears more pronounced in the United States, where

the spread of firm-product observations around the average line is noticeably wider than in the major EU destinations. This suggests that firm-level pricing outcomes are far from uniform even within highly disaggregated product categories, and that the extent of this heterogeneity differs systematically across destination markets.

Figure 6: Apparel export unit values in top four markets: product versus firm-product data



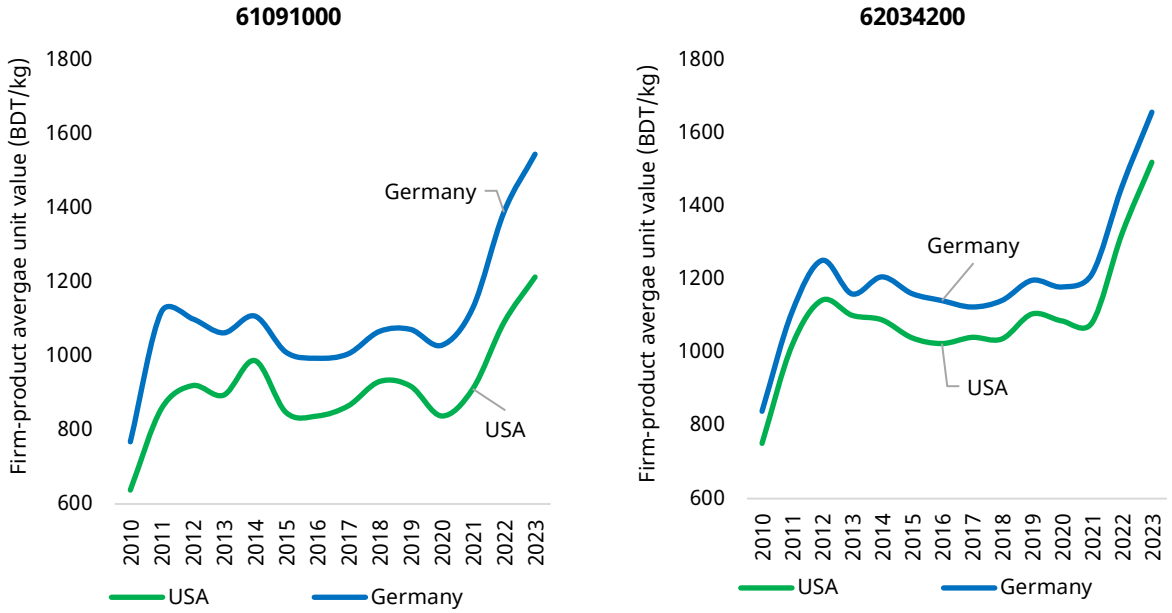
Source: Authors' representation using the data from Bangladesh Customs.

While Figure 6 does not by itself identify the source of this variation, the greater dispersion observed in the US market is consistent with the possibility that firms differ in their capacity or willingness to absorb destination-specific costs, including those associated with the non-preferential tariff regime. At a minimum, the figure indicates that the same broad product categories are associated with markedly different price realisations across firms, reinforcing the relevance of a firm-level approach to export pricing.

The destination-specific pattern becomes clearer when attention is restricted to individual products. Given the contrast between zero tariffs in the EU and relatively high MFN tariffs in the USA, Figure 7 compares average firm-product unit values over time for the two most important apparel export items in the sample: T-shirts (HS 61091000), which are especially prominent in the EU market, and trousers (HS 62034200), which feature strongly in exports to the USA.[3] For each product, the comparison is made between exports to the USA and Germany.[4]

The figure shows that average pre-tariff unit values are consistently higher in Germany than in the USA for both products. For T-shirts, the price premium in the German market is persistent throughout the sample period and generally falls in the range of BDT 200 to 400 per kilogram. A similar, though somewhat smaller, differential is observed for trousers. Even in the case of a product that is highly important in the US market, average export prices remain higher in Germany than in the USA. These patterns are consistent with the presence of a systematic price wedge between preferential and non-preferential destinations.

Figure 7: Unit price comparison of the top two exporting apparel items



Source: Authors' representation using the data from Bangladesh Customs.

The same comparison is then narrowed further to firms that serve both markets. Figure 8 plots the average unit values received by the same firms in the USA and in the five leading EU destinations for the two products considered above.[5] The pattern remains largely unchanged. Firms active in both markets continue to receive lower prices in the USA than in the major EU destinations, indicating that

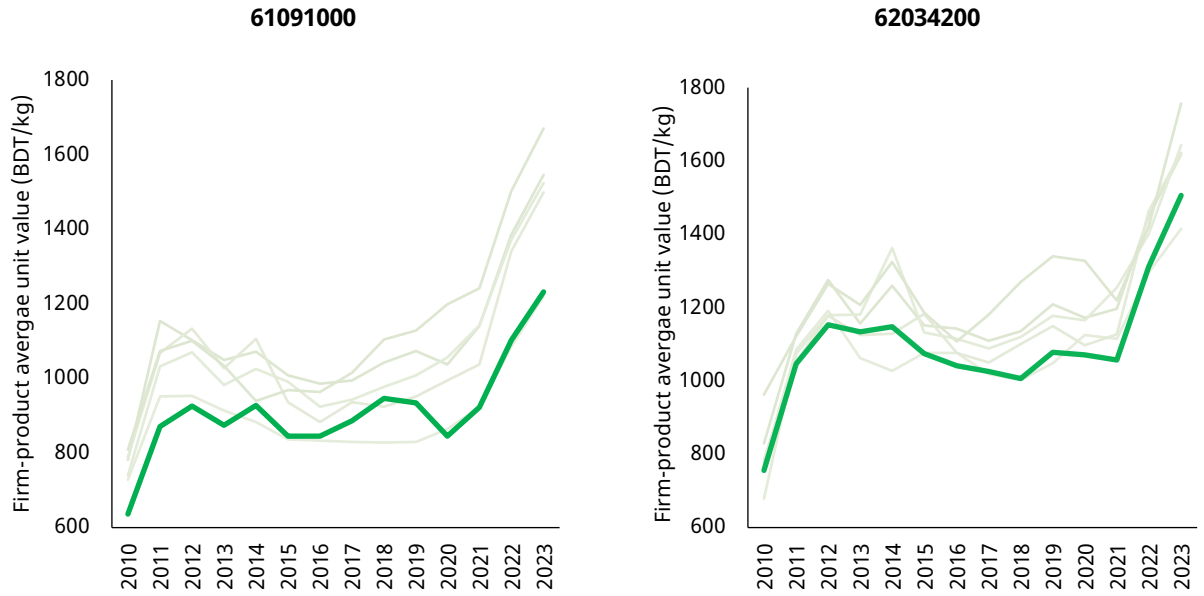
[3] In 2023, boys' cotton T-shirts (HS 6109100) made up about 24% of total apparel exports to the EU, while boys' cotton trousers (HS 62034200) accounted for roughly 21% of total apparel exports to the USA.

[4] Germany was chosen among the EU countries because it is the main export destination for Bangladeshi apparel exporters, accounting for 27% of total apparel exports to the EU market.

[5] The top five EU export destinations are Germany, France, Italy, Spain, and the Netherlands.

the price differential is not merely a consequence of comparing different sets of exporters across markets. Rather, it persists even within the subset of firms that simultaneously serve both preferential and non-preferential destinations.

Figure 8: Unit price comparison of the top two exporting apparel items by the same firm



Source: Authors' representation using the data from Bangladesh Customs. Notes: The bold green line represents the average unit value in the USA market, while the grey lines show the top five EU export destinations: Germany, France, Italy, Spain, and the Netherlands.

The descriptive evidence, therefore, points to three broad patterns. First, cross-destination differences in aggregate export performance are associated more strongly with extensive-margin adjustment than with average shipment size within existing firm-product relationships. Second, unit values display substantial within-product dispersion across firms, particularly in the US market. Third, average prices for comparable products are systematically lower in the USA than in major EU destinations, and this pattern persists even among firms serving both markets. These stylised facts do not by themselves establish the underlying mechanism, but they do provide strong motivation for the econometric analysis that follows, where the role of destination-specific pricing, exchange-rate responses, and firm heterogeneity can be examined more formally.

IV. Results

4.1 Baseline estimates

Table 4 reports the baseline estimates. Column (1) uses product-year fixed effects, while column (2) replaces these with firm-product-year fixed effects. For comparability, firm-product pairs with fewer

than two observations are excluded from the specification in column (1).[6] Across both models, the main coefficients are stable in sign, magnitude, and significance, suggesting that the principal findings are not driven by the choice of fixed effects alone.

Table 4: Baseline results

	(1)	(2)
Log of exchange	0.45***	0.41***
	(0.11)	(0.08)
USA	-0.85**	-0.76**
	(0.34)	(0.30)
USA × Log of exchange	0.16**	0.15**
	(0.08)	(0.07)
Log of imp. price level	0.05***	0.03***
	(0.01)	(0.01)
Log of dest. imp tariff	0.93***	0.59***
	(0.13)	(0.11)
Log real GDP	0.00	-0.00**
	(0.00)	(0.00)
Log real GDP p.c.	0.02	-0.01
	(0.01)	(0.01)
Constant	4.45***	5.24***
	(0.49)	(0.37)
Observations	161826	161825
R-squared	0.27	0.71
HS8 × Year FE	Yes	No
Firm × HS8 × Year FE	No	Yes

Notes:
(i) Dependent variable is the ln unit value of the product.
(ii) One observation is one firm–HS8–destination–year combination for Bangladeshi apparel exports between 2010 and 2023.
(iii) Column (1) includes product–year fixed effects, while the other columns include firm–product–year fixed effects.
(iv) Standard errors in parentheses are clustered at the destination–year level and are shown in parentheses.
(v) Asterisks denote significance at 10% (*), 5% (**), 1% (***).

The coefficient on the USA dummy is negative and statistically significant in both specifications, indicating that Bangladeshi apparel exporters receive systematically lower FOB prices in the US market than in the EU market. The implied price gap is large, with export prices to the USA lower by approximately 53% to 57% relative to those obtained in the EU.[7] This result persists even after

[6] Including these observations or excluding firm–products with less than three or four observations does not materially affect the results.

[7] $e^{(-0.85)} - 1 \approx -57.3$ per cent & $e^{(-0.807)} - 1 \approx -53.2$ per cent.

controlling for observable destination characteristics and for increasingly fine-grained forms of product and firm heterogeneity. The finding is consistent with Curran and Nadvi (2015) and Razzaque and Islam (2024), both of whom report lower Bangladeshi apparel unit values in the USA than in the EU. In the latter study, this pattern is interpreted as being consistent with partial retention of preference rents in the EU market.

The main variables of interest are the coefficient on the log of exchange and its interaction with the USA dummy, which indicates the pricing-to-market (PTM) behaviour of Bangladesh's apparel firm in the EU and USA markets. In the EU benchmark, the coefficient on the log exchange rate is 0.45 in the product-year specification and 0.41 in the firm-product-year specification. These estimates imply incomplete pass-through of exchange-rate changes into destination prices and are therefore consistent with destination-specific markup adjustment in the sense of Krugman (1986) and Goldberg and Knetter (1996). The limited reduction in the coefficient when moving from product-year to firm-product-year fixed effects further suggests that most of the observed PTM gradient is not driven by cross-firm compositional differences. Put differently, only a modest share of the variation appears to reflect which firms export where, while the larger part is more consistent with within-firm pricing adjustment across destinations.

The interaction between the USA dummy and the exchange rate is positive and statistically significant in both columns. This indicates that the response of FOB prices to exchange-rate movements is stronger in the USA than in the EU. Quantitatively, the estimates suggest that depreciation of the Bangladeshi taka is associated with a roughly 15% to 16% larger increase in BDT-denominated export prices in the US market relative to the EU. One possible interpretation is that exporters to the USA, facing a non-preferential tariff regime, may have greater incentives to retain exchange-rate gains in local currency terms rather than transmit them fully into lower border prices. This pattern is also consistent with the Dominant Currency Paradigm (DCP), under which USD invoicing weakens the responsiveness of US import prices to bilateral exchange-rate changes (Gopinath et al., 2020). The estimates should not, however, be read as a definitive test of the invoicing mechanism itself; rather, they indicate differential exchange-rate responses across the two destination markets.

The coefficients on destination-market controls are more mixed. GDP per capita is not statistically significant in the baseline estimates, while the coefficient on real GDP is insignificant in the product-year specification and negative, though economically small, in the firm-product-year specification. The negative sign is consistent with the idea that larger markets may be associated with more intense competition, which in turn places downward pressure on prices, as in Melitz and Ottaviano (2008) and Görg et al. (2017). At the same time, the magnitude of the coefficient is extremely small, suggesting that this channel is of limited quantitative importance in the present setting.

Two destination-product controls are both positive and statistically significant. First, higher destination-market import prices are associated with higher Bangladeshi export prices. A 10% increase in the destination product price level is associated with an increase of roughly 0.3% to 0.5% in Bangladeshi apparel export prices, which is in line with Görg et al. (2017). Second, the coefficient

on the destination import tariff is also positive. At first glance, this may appear counterintuitive if higher tariffs are expected to compress exporters' FOB prices through markup adjustment. In the present context, however, the tariff variable captures average tariff conditions facing comparator exporters in the destination market. Since Bangladeshi apparel exports enter the EU duty free but face MFN tariffs in the USA, a higher average tariff in the destination may raise the comparator price against which Bangladeshi exporters are priced, allowing part of that increase to be reflected in Bangladeshi FOB prices as well. The estimated elasticity is less than proportional, amounting to around 0.9 in column (1) and 0.6 in column (2), which is consistent with partial rather than full transmission.

Table 4 therefore points to three central results. First, Bangladeshi apparel exporters receive markedly lower FOB prices in the USA than in the EU. Second, exchange-rate pass-through is incomplete in both markets, consistent with PTM behaviour. Third, the exchange-rate response is stronger in the USA than in the EU, suggesting destination-specific pricing behaviour under different trade regimes.

4.2 Firm characteristics and price levels

The next set of estimates examines whether firm-level characteristics help explain variation in export prices. Four indicators of firm heterogeneity are considered: market reach, defined as the number of destinations served within the EU and the USA; the share of technology-intensive imports in total imports, based on the classification of Lall (2000); a large-firm dummy identifying the top 5% of exporters in each year following Freund and Pierola (2015); and a knitted-export concentration dummy equal to one where more than 50% of firm exports are knitted products. The results are reported in Table 5.

Table 5: Impact of different levels of firm characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
Log of exchange	0.45***	0.58***	0.86***	0.45***	0.46***	0.84***
	(0.16)	(0.12)	(0.13)	(0.16)	(0.16)	(0.11)
USA	-0.92**	-0.70*	-0.91***	-0.93**	-1.04**	-0.87**
	(0.42)	(0.38)	(0.35)	(0.42)	(0.44)	(0.37)
USA × Log of exchange	0.17*	0.12	0.17**	0.17*	0.20*	0.16*
	(0.10)	(0.09)	(0.08)	(0.10)	(0.10)	(0.08)
Log of imp. price level	0.06***	0.06***	0.06***	0.06***	0.07***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log of dest. imp tariff	0.52***	0.45***	0.46***	0.51***	0.45***	0.37***
	(0.13)	(0.12)	(0.11)	(0.13)	(0.12)	(0.11)
Log real GDP	0.00	0.01	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Log real GDP p.c.	0.03**	0.03**	0.03**	0.03**	0.03**	0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log of market reach		0.04***				0.02***
		(0.01)				(0.01)
High technological intensity			-0.02			-0.00
			(0.02)			(0.02)
Large firm				0.30***		0.27***
				(0.02)		(0.02)
Knitted export concentration					-0.13***	-0.10***
					(0.01)	(0.01)
Constant	4.16***	3.50***	2.50***	4.18***	4.23***	2.59***
	(0.73)	(0.55)	(0.59)	(0.73)	(0.73)	(0.53)
Observations	288661	273074	248796	288661	288661	239482
R-squared	0.19	0.21	0.21	0.20	0.20	0.22
Firm controls	None	Reach	Technology	Large firm	Knit	Full

Notes:
(i) Dependent variable is the ln unit value of the product.
(ii) One observation is one firm–HS8–destination–year combination for Bangladeshi apparel exports between 2010 and 2023.
(iii) All column includes product–year fixed effects.
(iv) High technological intensity is defined as the share of high-technology imports in a firm's total imports; large firm takes dummy 1 if its total exports is higher than the top 5 percentile of the total Bangladesh's export; and knitted export concentration is the dummy of 1 if knitted apparel exports (HS61) in a firm's total exports higher than 50 per cent.
(v) Standard errors in parentheses are clustered at the destination–year level and are shown in parentheses.
(vi) Asterisks denote significance at 10% (*), 5% (**), 1% (***).

The coefficient on market reach is positive and statistically significant. Firms serving a larger number of destinations tend to charge higher prices, which is consistent with the view that broader destination reach is associated with stronger firm capabilities, including productivity and product positioning. This result accords with evidence for China and the United States in Manova and Zhang (2012) and Harrigan et al. (2015) respectively. It is also broadly consistent with Kee and Krishna (2008), who argue that Bangladeshi RMG firms capable of reaching more, or more demanding, markets tend to be more productive and better able to command higher prices. Interestingly, the coefficient of the USA dummy is significant only at 10 per cent, and its interaction dummy with the exchange rate is positive but insignificant. This suggests that firms with a broader market reach do not systematically adopt different pricing-to-market strategies between the EU and US markets.

Column (3) of Table 5 controls for firm's share of high technological intensive import. The share of technology-intensive imports is found to be negatively associated with but statistically insignificant. Within the context of Bangladesh's apparel sector, this suggests that the use of more technologically

advanced imported inputs does not translate into a measurable price premium. One possible explanation is that imported technology in this setting is used primarily for cost efficiency and scale rather than for product innovation or quality upgrading. This interpretation is consistent with Cirera et al. (2022), who show that technology adoption in Bangladesh is concentrated in production equipment, especially advanced sewing machinery, rather than in design, administration, or other functions more directly linked to value addition and differentiation.

The large-firm dummy is positive and highly significant. Large exporters obtain substantially higher prices than smaller firms, with the premium estimated at roughly 30% to 35%. This is consistent with Hallak & Sivadasan (2013) and Verhoogen (2008), who associate larger firms with higher-quality production and stronger access to more lucrative markets. It is also in line with Amiti and Khandelwal (2013), where larger firms are better positioned to absorb shocks and sustain stronger markups, partly because of more stable relationships with major buyers.

The coefficient on knitted export concentration (column 5 in Table 5) is negative and statistically significant. Firms specialising in knitted items receive lower prices, on average, than firms with a stronger orientation toward woven products. The estimated discount is around 10 to 13%. This is plausible in light of the generally lower complexity of knitted production relative to woven garments. More woven-intensive firms may possess stronger technological, organisational, and design capabilities, which in turn support higher value realisation, as suggested by Sytsma (2022). In a different study, Razzaque et al., (2026) also found that woven garments, characterised by higher import intensity, receives higher price than that of knitted items due to lower ERPT, which also limits its competitiveness as well.

When all firm-level controls are included simultaneously in column (6), the main patterns remain intact. Market reach and firm size retain positive and significant effects, knitted concentration remains negative and significant, and the coefficient on technology intensity remains close to zero and insignificant. GDP per capita is also positive and statistically significant in this fuller specification, which may reflect stronger demand for quality in higher-income markets, greater scope for quality-based price discrimination, or both (Bastos et al., 2018; Chen & Juvenal, 2022). Overall, the evidence indicates that observable firm characteristics matter for price levels, even though their influence is uneven across different dimensions of firm heterogeneity.

4.3 Firm characteristics across preferential and non-preferential markets

Table 6 examines whether the price effects associated with firm heterogeneity differ systematically between the EU and the USA. In other words, the question here is not whether these characteristics matter in general, but whether they matter differently across preferential and non-preferential destination markets.

Table 6: Impact of different levels of firm characteristics on preferential and non-preferential markets

	(1)	(2)	(3)	(4)	(5)	(6)
Log of exchange	0.45***	0.57***	0.86***	0.45***	0.46***	0.84***

	(0.16)	(0.12)	(0.13)	(0.16)	(0.16)	(0.11)
USA	-0.92**	-0.63*	-0.90**	-0.93**	-1.03**	-0.81**
	(0.42)	(0.36)	(0.35)	(0.42)	(0.44)	(0.36)
USA × Log of exchange	0.17*	0.09	0.17**	0.17*	0.20*	0.14*
	(0.10)	(0.08)	(0.08)	(0.10)	(0.10)	(0.08)
Log of imp. price level	0.06***	0.06***	0.06***	0.06***	0.07***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log of dest. imp tariff	0.52***	0.46***	0.46***	0.52***	0.44***	0.39***
	(0.13)	(0.12)	(0.11)	(0.13)	(0.12)	(0.11)
Log real GDP	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Log real GDP p.c.	0.03**	0.03**	0.03**	0.03**	0.03**	0.03*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log of market reach		0.03***				0.01*
		(0.01)				(0.01)
USA × Log of market reach		0.05***				0.04***
		(0.01)				(0.01)
High technological intensity			-0.03*			-0.01
			(0.02)			(0.02)
USA × High technological intensity			0.12			0.10
			(0.11)			(0.11)
Large firm				0.26***		0.23***
				(0.02)		(0.02)
USA × Large firm				0.13***		0.12***
				(0.03)		(0.03)
Knitted export concentration					-0.12***	-0.10***
					(0.01)	(0.01)
USA × Knitted export concentration					-0.02**	-0.00
					(0.01)	(0.01)
Constant	4.16***	3.57***	2.51***	4.18***	4.23***	2.64***
	(0.73)	(0.55)	(0.59)	(0.73)	(0.73)	(0.53)
Observations	288661	273074	248796	288661	288661	239482
R-squared	0.19	0.21	0.21	0.20	0.20	0.22
Firm controls	None	Reach	Technology	Large Firm	Knit	Full

Notes:
(i) Dependent variable is the ln unit value of the product.

(ii) One observation is one firm–HS8–destination–year combination for Bangladeshi apparel exports between 2010 and 2023.
(iii) All column includes product–year fixed effects.
(iv) High technological intensity is defined as the share of high-technology imports in a firm's total imports; large firm takes dummy 1 if its total exports is higher than the top 5 percentile of the total Bangladesh's export; and knitted export concentration is the dummy of 1 if knitted apparel exports (HS61) in a firm's total exports higher than 50 per cent.
(v) Standard errors in parentheses are clustered at the destination–year level and are shown in parentheses.
(vi) Asterisks denote significance at 10% (*), 5% (**), 1% (***).

The results suggest that some dimensions of firm heterogeneity are indeed more strongly rewarded in the USA than in the EU. Firms with greater market reach receive a larger price premium in the USA, as indicated by the positive and significant interaction between the USA dummy and market reach. A similar pattern emerges for large firms. The interaction between the USA dummy and the large-firm indicator is positive and highly significant, suggesting that the pricing advantage associated with firm size is larger in the non-preferential US market than in the EU.

By contrast, the interaction between the USA dummy and technology intensity is not statistically significant. There is therefore little evidence that firms with more technology-intensive imported inputs perform differently across the two market types in terms of price realisation. The interaction with knitted export concentration is negative and significant when introduced on its own, but loses significance in the full specification. This suggests that any additional US discount associated with specialising in knitted products is not especially robust once other firm characteristics are accounted for jointly.

These results indicate that market reach and scale are more strongly associated with price-setting advantages in the USA than in the EU, whereas technology intensity does not appear to differentiate pricing outcomes across the two destination regimes in a meaningful way. At the same time, these are level effects rather than PTM effects. They suggest differences in the prices firms receive across destination markets, but they do not yet establish that such firms respond differently to exchange-rate movements.

4.4 Firm heterogeneity and pricing-to-market

The next question is whether firm heterogeneity alters the extent of pricing-to-market itself. Table 7 addresses this by interacting the exchange rate with each firm-level characteristic. The results are striking in their consistency. Across nearly all specifications, the interaction terms between the exchange rate and the firm-level variables are statistically insignificant.

Table 7: Role of firm-level heterogeneity in pricing to market

	(1)	(2)	(3)	(4)	(5)	(6)
Log of exchange	0.45***	0.42**	0.85***	0.45***	0.47***	0.88***
	(0.16)	(0.19)	(0.12)	(0.16)	(0.17)	(0.17)
USA	-0.92**	-0.85**	-0.92***	-0.92**	-1.04**	-0.70**
	(0.42)	(0.41)	(0.34)	(0.42)	(0.44)	(0.35)

USA × Log of exchange	0.17*	0.16*	0.18**	0.17*	0.19*	0.15*
	(0.10)	(0.09)	(0.08)	(0.10)	(0.10)	(0.08)
Log of imp. price level	0.06***	0.06***	0.06***	0.06***	0.07***	0.04***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log of dest. imp tariff	0.52***	0.45***	0.46***	0.51***	0.45***	0.36***
	(0.13)	(0.12)	(0.11)	(0.13)	(0.12)	(0.10)
Log real GDP	0.00	0.01	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Log real GDP p.c.	0.03**	0.03**	0.03**	0.03**	0.03**	0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Log of market reach		-0.38				0.28
		(0.33)				(0.21)
Log of exchange × Log of market reach		0.10				-0.06
		(0.07)				(0.05)
High technological intensity			-1.75			-1.56
			(1.08)			(1.01)
Log of exchange × High technological intensity			0.39			0.35
			(0.25)			(0.23)
Large firm				-0.63		-0.75
				(0.87)		(0.83)
Log of exchange × Large firm				0.21		0.23
				(0.20)		(0.19)
Knitted export concentration					-0.06	-0.53
					(0.29)	(0.39)
Log of exchange × Knitted export concentration					-0.02	0.10
					(0.07)	(0.09)
Constant	4.16***	4.21***	2.54***	4.19***	4.18***	4.54***
	(0.73)	(0.84)	(0.58)	(0.73)	(0.75)	(0.91)
Observations	288661	273074	248796	288661	288661	239482
R-squared	0.19	0.21	0.21	0.20	0.20	0.22
Firm heterogeneity	None	lnE × Reach	lnE × Technology	lnE × Large firm	lnE × Knit	lnE × Full

Notes:
(i) Dependent variable is the ln unit value of the product.

(ii) One observation is one firm–HS8–destination–year combination for Bangladeshi apparel exports between 2010 and 2023.
(iii) All column includes product–year fixed effects.
(iv) High technological intensity is defined as the share of high-technology imports in a firm's total imports; large firm takes dummy 1 if its total exports is higher than the top 5 percentile of the total Bangladesh's export; and knitted export concentration is the dummy of 1 if knitted apparel exports (HS61) in a firm's total exports higher than 50 per cent.
(v) Standard errors in parentheses are clustered at the destination–year level and are shown in parentheses.
(vi) Asterisks denote significance at 10% (*), 5% (**), 1% (***).

This pattern suggests that although firms differ in the price levels they obtain, these observable differences do not translate into systematically different exchange-rate responses. Market reach, technology intensity, firm size, and knitted concentration may all matter, to varying degrees, for the level of export prices, but they do not appear to alter the extent to which firms absorb exchange-rate movements into their markups. The baseline PTM result, therefore, seems to reflect a pricing response that is broadly shared across firms rather than one driven disproportionately by particular types of exporters.

This finding is also consistent with the baseline comparison between product-year and firm-product-year specifications, where only a limited share of the PTM gradient appears to be attributable to the composition of firms across destinations. Most of the exchange-rate response is more plausibly associated with within-firm pricing behaviour. The estimates in Table 7 reinforce that conclusion by showing that the inclusion of interactions between the exchange rate and observable firm characteristics does not materially alter the main PTM result.

4.5 Robustness checks

Table 8 reports a set of robustness checks based on alternative sample restrictions. Across these specifications, the central findings remain broadly intact. The coefficients on the exchange rate remain positive and significant in all but the single-product PTM interaction case, while the USA dummy remains negative in most specifications. The broad pattern of lower US prices and incomplete pass-through therefore survives a range of alternative sample definitions.

Some heterogeneity does, however, emerge across subsamples. Firms serving more than five destinations continue to exhibit lower prices in the USA than in the EU, although the coefficient is only weakly significant. Among firms serving fewer than five destinations, the US-EU price differential is larger in magnitude and more precisely estimated. The interaction between the USA dummy and the exchange rate is also stronger in this group. One possible interpretation is that firms with more limited destination reach display sharper differences in pricing behaviour across markets, while more diversified exporters have greater flexibility to smooth markups across destinations. This interpretation is consistent with Berman et al. (2012), who show that more productive exporters are better able to absorb shocks without substantial adjustments in market position.

The distinction between single-product and multi-product firms is particularly informative. Single-product exporters show no statistically significant PTM differential between the USA and the EU, whereas multi-product exporters do. This is consistent with the literature emphasising product scope as a source of pricing flexibility. Manova and Zhang (2012) argue that multi-product firms can vary prices systematically across destinations by reallocating markups across product lines, while Chatterjee et al. (2013) similarly highlight product scope as an important determinant of firms' ability to adjust pricing in response to shocks. The absence of a significant destination-specific PTM effect among single-product exporters in Table 8 accords closely with this view.

Table 8: Robustness Analysis

	(1) Single product with more than 20% share	(2) Firm with more than 5 destinations	(3) Firm with less than 5 destinations	(4) Firm with single product	(5) Firm with multiple products
Log of exchange	0.44***	0.44***	0.40***	0.52***	0.40***
	(0.09)	(0.09)	(0.12)	(0.19)	(0.08)
USA	-0.66**	-0.46*	-1.54**	-0.09	-0.77***
	(0.31)	(0.26)	(0.63)	(0.79)	(0.30)
USA × Log of exchange	0.12*	0.08	0.32**	-0.01	0.15**
	(0.07)	(0.06)	(0.14)	(0.18)	(0.07)
Log of imp. price level	0.02***	0.03***	0.0 2	0.03	0.03***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)
Log of dest. imp tariff	0.51***	0.59***	0.69***	1.50***	0.54***
	(0.12)	(0.12)	(0.24)	(0.41)	(0.11)
Log real GDP	-0.00	-0.00*	-0.01***	-0.02***	-0.00*
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Log real GDP p.c.	-0.00	-0.01	0.00	0.00	-0.01
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Constant	5.05***	5.13***	5.35***	4.82***	5.27***
	(0.39)	(0.41)	(0.53)	(0.88)	(0.38)
Observations	131700	118596	26487	5484	156341
R-squared	0.72	0.70	0.75	0.74	0.71
Firm × HS8 × Year FE	Yes	Yes	Yes	Yes	Yes

Notes:
(i) Dependent variable is the ln unit value of the product.
(ii) One observation is one firm–HS8–destination–year combination for Bangladeshi apparel exports between

2010 and 2023.
(iii) All column includes firm-product–year fixed effects.
(iv) Standard errors in parentheses are clustered at the destination–year level and are shown in parentheses.
(v) Asterisks denote significance at 10% (*), 5% (**), 1% (***).

The robustness checks, therefore, strengthen confidence in the main results. The central price wedge between the USA and the EU remains visible across alternative samples, and the evidence continues to point to incomplete exchange-rate pass-through and stronger PTM behaviour in the USA. At the same time, the subsample results suggest that product scope matters for the capacity to differentiate pricing behaviour across destinations, whereas broader destination reach may moderate, rather than intensify, such differences.

V. Policy Implications

This paper has examined destination-specific export pricing behaviour among Bangladeshi apparel exporters in two major markets operating under sharply different trade regimes, the EU, where Bangladesh has enjoyed duty-free preferential access, and the United States, where exports continue to face MFN tariffs. Using firm-product-destination data from customs records, the analysis has documented three central patterns. First, Bangladeshi exporters receive systematically lower free-on-board prices in the USA than in the EU. Second, exchange-rate pass-through is incomplete in both markets, indicating the presence of pricing-to-market behaviour. Third, while certain firm characteristics, particularly market reach, scale, and product orientation, are associated with price levels, they do not appear to alter pricing-to-market responses in a systematic manner. These results carry several implications for trade policy, export strategy, and industrial upgrading in the context of Bangladesh's impending post-LDC transition.

A first implication concerns the economic significance of trade preferences. Much of the policy discussion around LDC graduation has focused on the direct tariff shock that will arise once preferential access is withdrawn. The findings here suggest that the implications may be broader than a simple tariff-equivalent calculation would imply. If duty-free access in the EU is associated with systematically higher realised export prices, whether because of partial rent retention, stronger product positioning, or a more favourable bargaining environment, then the erosion of preferences may affect exporters through both market access and price realisation channels. This implies that the loss of preferences could exert pressure not only on export volumes but also on margins, thereby compressing the room available to firms for adjustment. From a policy standpoint, this reinforces the importance of treating post-graduation market access not as a narrow tariff issue, but as a broader competitiveness challenge.

A second implication relates to the need to secure and preserve preferential access in major markets. The persistent price wedge between the EU and the USA indicates that destination-specific trade

regimes continue to matter even within a sector as globally integrated as apparel. This lends support to Bangladesh's efforts to obtain durable post-LDC trade arrangements, including successful transition into the EU's GSP+ regime and the preservation or negotiation of favourable access in other key markets. Such efforts are often justified in terms of export volumes, employment, and foreign exchange earnings. The present evidence suggests an additional rationale: more favourable trade regimes may also support better price realisation at the firm level. That is especially important in a sector where thin margins, buyer power, and intense international competition already constrain profitability.

A third implication concerns exchange-rate policy and its relationship with export competitiveness. The results indicate that exchange-rate movements are not transmitted symmetrically across destination markets, and that exporters adjust markups strategically rather than passing through shocks fully. This has two related consequences. On the one hand, nominal depreciation may provide a temporary cushion by increasing local-currency revenues, particularly in markets such as the USA where exporters operate under tariff disadvantage. On the other hand, the incomplete pass-through found in the estimates suggests that exchange-rate adjustment alone cannot be relied upon as a sufficient instrument for restoring competitiveness after preference erosion. If firms absorb a significant part of exchange-rate gains into margins, the impact on border prices and external demand may be more limited than standard assumptions would suggest. This points to the need for a broader competitiveness strategy, rather than excessive reliance on exchange-rate adjustment as a policy response.

A fourth implication concerns firm capability and export resilience. The estimates show that firms with broader market reach and larger scale obtain higher prices, while firms specialising in woven products perform better in price terms than those concentrated in knitted items. However, these characteristics do not appear to generate systematically different pricing-to-market responses. This distinction is important. It suggests that stronger firm capabilities improve the level of price realisation, but do not fundamentally alter the underlying pricing response to exchange-rate changes. Policy support aimed at improving export resilience should therefore focus less on the expectation that some firms will be able to engineer radically different pricing strategies, and more on enabling wider upgrading in quality, scale, product composition, and destination penetration. In practical terms, this would imply greater emphasis on investment in technology, skills, compliance, design capability, logistics, and market intelligence, all of which may enhance firms' ability to secure better prices even if they do not materially change PTM behaviour.

A fifth implication relates to export diversification within apparel and beyond it. The finding that product scope matters, especially in the robustness analysis contrasting single-product and multi-product exporters, suggests that firms with a broader product portfolio are better positioned to differentiate pricing across markets. This has relevance for industrial policy. Within the apparel sector, continued movement into higher-value products, more design-intensive segments, and functionally broader export baskets may help firms manage destination-specific demand and pricing

conditions more effectively. More broadly, the evidence underscores the vulnerability associated with narrow specialisation in standardised product lines sold into highly competitive markets. The challenge for Bangladesh, therefore, is not merely to preserve apparel exports at current levels, but to strengthen the composition and sophistication of the export basket in ways that reduce exposure to a single pricing model based on low margins and tariff preferences.

A final implication concerns the interpretation of export competitiveness itself. The conventional view often treats competitiveness as a matter of cost, tariffs, and aggregate export performance. The results of this paper suggest that competitiveness also operates through firms' ability to realise different prices across markets under different institutional conditions. In that sense, export success depends not only on selling more, but on selling under terms that allow firms to retain a viable share of the value generated in international trade. For Bangladesh, this means that the post-LDC policy agenda should pay greater attention to the interaction between market access, buyer power, product upgrading, and firm-level pricing capacity. A strategy that focuses only on preserving volumes, without addressing the conditions under which exporters price and compete, may prove inadequate in a post-preference environment.

Consideration of the above would suggest that Bangladesh's response to changing external trade conditions must extend well beyond the pursuit of marginal cost competitiveness. The evidence points instead toward a more comprehensive agenda, one that combines market-access diplomacy, exchange-rate realism, firm-level upgrading, and export diversification, while recognising that the erosion of preferential treatment may alter not only how much exporters sell, but also the prices they are able to command.

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