# Investigating the Impact of EBA on Exports in Least Developed Countries*

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**Abstract**

Since the inception of the Everything But Arms (EBA) trade scheme, Least Developed Countries (LDCs) have experienced a surge in exports, particularly in the apparel sector. However, existing studies do not conclusively show whether this export boom can only be attributed to the EBA or if there are other underlying reasons. This paper aims to address this gap by examining the impacts of trade liberalization, factor endowments, and global demand on the export shock. The study confirms that exports increased with the implementation of the EBA scheme;it also acknowledges that additional factors played a crucial role in this export expansion. The paper has policy-making implications, suggesting that the elimination of tariffs alone may be insufficient in stimulating exports in developing nations and emphasizes the importance of addressing various external factors that plays a role in export boom.

*The code and data is available at https://github.com/AhnafAlam1/Europe-and-apparel-export and replicated files are available at https://www.socialsciencereproduction.org/reproductions/8b22209f-2847-4ed8-ac83-2222520c6b5a/index

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# 1 Introduction

In 2001, the European Union launched the 'Everything But Arms' (EBA) initiative, providing tariff-and-quota-free access to its market for 47 of the world's least developed countries (LDCs), aiming to promote development through increased exports (Faber and Orbie 2009). EBA excluded tariffs on LDC imports, except for arms, notably boosting exports from Asian LDCs to the EU (Gradeva and Martínez-Zarzoso 2010). However, existing

studies fail to suggest whether this export boom is solely attributable to EBA, or if factors like global demand, trade liberalization, and factor endowments drove the trade shift in LDCs. The paper looks to fill this gap.

European nations heavily rely on apparel imports; for instance, Germany imports 95 percent of its apparel, while France, Italy, and Spain import 85 percent, 65 percent, and 55 percent, respectively (Gereffi, Frederick, and Gereffi 2010). EBA has raised concerns over LDCs competing for trade contracts, causing decreased clothing prices benefiting EU countries. Some studies label the scheme as "more political than developmental" (Page and Hewitt 2002). European dependence on apparel imports is evident as trade preferences with Myanmar remained unaffected despite crises (Pennisi di Floristella 2023). This highlights the role of European apparel imports in driving high export volumes in LDCs.

This paper uses Sytsma (2022)'s analysis on preferential market access, focusing on a Bangladesh case study, to establish how LDC exports evolved since EBA's introduction. The original paper highlights how using internationally sourced textiles for LDC exports leads to increased firm-level revenue growth.

Utilizing graphs and figures, this paper demonstrates how LDCs capitalized on the EBA scheme, resulting in an export boom. However, it acknowledges that factors like trade liberalization, factor endowments, and global demand also influenced the export boost. The investigation concludes that while EBA contributed to increased LDC exports, it is not the primary driver; other crucial factors play a role. This finding underscores the importance of global demand and trade liberalization for LDCs to benefit from free trade.

The paper begins with a discussion on the data sets used, followed by a Results section showcasing export increases after EBA. The subsequent Discussion section explores factors contributing to the overall trade level rise for all countries. Finally, the Conclusion section wraps up the paper with a discussion on the next iteration.

Table 1: Table explaining the variables in raw Eurostat data

| Variable | Description |
|---|---|
| Declarant_lab | Importing country |
| Partner_lab | Exporting country |
| Product | HS Code. HS system is a standardized way of classifing traded products |
| Product_lab | Description of what is being traded |
| Stat_regime_lab | How the imported product was processed |
| Eligibility_lab | Eligibility preferences of the product |
| Import_lab_regime | What type of prefereces granted to the imported product |
| year | Year of the trade |
| value | value of the trade (in Euros) |

# 2 Data

R (R Core Team 2023), a statistical programming language, is exclusively used in this paper. For the purposes of cleaning and preparing the data, the libraries tidyverse (Wickham et al. 2019), janitor (Firke 2023), knitr (Xie 2023), kableExtra (Zhu 2021) and wesanderson (Ram and Wickham 2023) are used. For the graphs, ggplot2 (Wickham 2016) and ggpubr (Kassambara 2023) is used.

## 2.1 Incorporating LDC dataset

The raw data for `ldc` comes from Eurostat ("Adjusted EU-EXTRA Imports by Tariff Regime, by HS6" 2002). A description table for the raw data table is provided (see Table 1). The raw data cleaned by removing all columns, excluding HS Code, value and year, which were used to create a new column, `util`. The new column reports on utilization rate of EBA, which signifies fraction of apparel import under the EBA, relative to total apparel import from LDCs. Ultimately, the final market share data set includes three columns: year, util and variance.

Table 2: Table displaying clean market share data set provided by Systma (2022). Source: UN Comtrade

| Year | Export Value (in USD) | Total trade (in USD) | Share of trade | China or LDCs |
|---|---|---|---|---|
| 2014 | 173,436,846 | 437,654,939 | 0.40 | China |
| 2015 | 162,226,190 | 413,547,559 | 0.39 | China |
| 2016 | 146,478,293 | 404,414,594 | 0.36 | China |
| 2017 | 145,232,261 | 436,096,539 | 0.33 | China |
| 2018 | 144,973,534 | 451,124,247 | 0.32 | China |
| 2002 | 4,065,025 | 155,015,926 | 0.03 | LDCs |
| 2003 | 5,353,943 | 188,711,615 | 0.03 | LDCs |
| 2004 | 6,319,059 | 219,791,835 | 0.03 | LDCs |
| 2005 | 6,909,101 | 236,568,754 | 0.03 | LDCs |
| 2006 | 8,305,094 | 268,416,727 | 0.03 | LDCs |
| 2007 | 9,374,261 | 306,386,684 | 0.03 | LDCs |

Eurostat does not itself collect data. However, it relies on individual countries to report trade data through their statistical agencies (2024a). The statistical agencies collect data from port customs. When a ship carrying import product arrives at an EU country, the customs authorities notes down all the pertinent information regarding that shipment, including filling out all the variables in Table 1. Once compiled, each EU member states reports these data to the Eurostat for publishing.

## 2.2 Mixing in Bangladesh, Cambodia and Nepal data

The resulting `ldc` data set does not include country-specific information. To incorporate country-specific information, data sets `bgd1`, `cmbd1` and `nep1` were created, relaying information on Bangladesh, Cambodia and Nepal, respectively. The data sets are created by merging `ldc` data with the raw data, using year column. The resulting data sets reports country-specific utilization rate and year, where utilization rate now signifies fraction of EU apparel import from a nation, relative to total EU apparel

import from that country (Sytsma 2022), and separates exports between knit material and woven materials.

## 2.3 Information of UN Comtrade

Market share data set is created using UN Comtrade's WITS database (2024b). This data set is provided by Tobias Systma for replication purposes. The raw data set reported on various aspects, with key information being export differences between China and LDCs for apparel export between 2002 and 2018. The cleaned data consists of columns reporting years, value of apparel export, value of total export and share of export, which is the ratio of apparel export to total export for LDCs and China. For visualization, please see Figure 2.

WITS database is further used to acquire information on LDCs export of apparel to high-earning OECD countries. The methodology and type of information is similar to that Comtrade data used for market share dataset. The dataset is restricted to 2018 due to the onset of the COVID-19 pandemic, which resulted in shutdown of non-essential trade.

UN Comtrade database, just like Eurostat, does not collect these data themselves, but rather relies on each individual countries to provide them with trade data, among other data sets. Both importing and exporting country collect data through customs departments, including information on variables like HS Code, valuation in USD, importing country, among others variables. If a country fails to provide data, or if there are missing values in the data set, then missing values are estimated by extrapolating from two adjacent periods ("About UN Comtrade Analytics" 2016). UN Comtrade database fills these missing gaps every two weeks.

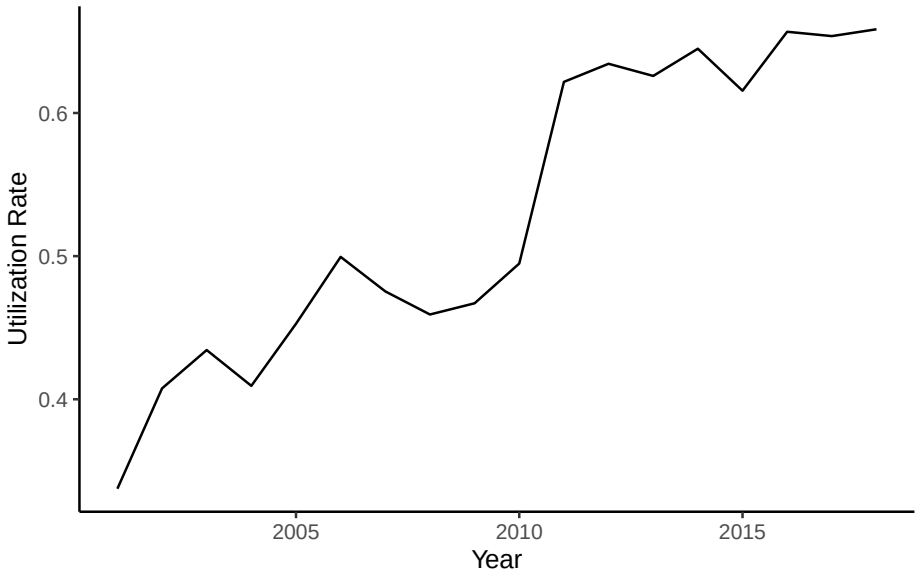


Figure 1: Utilization rate for apparel export for LDCs

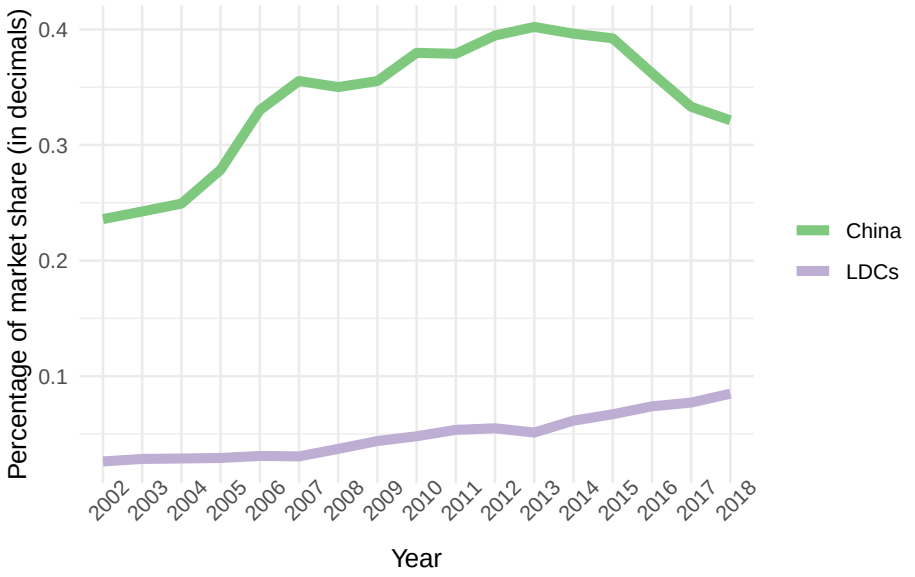


Figure 2: Difference in market share for apparel export between China and LDCs between 2001 and 2018

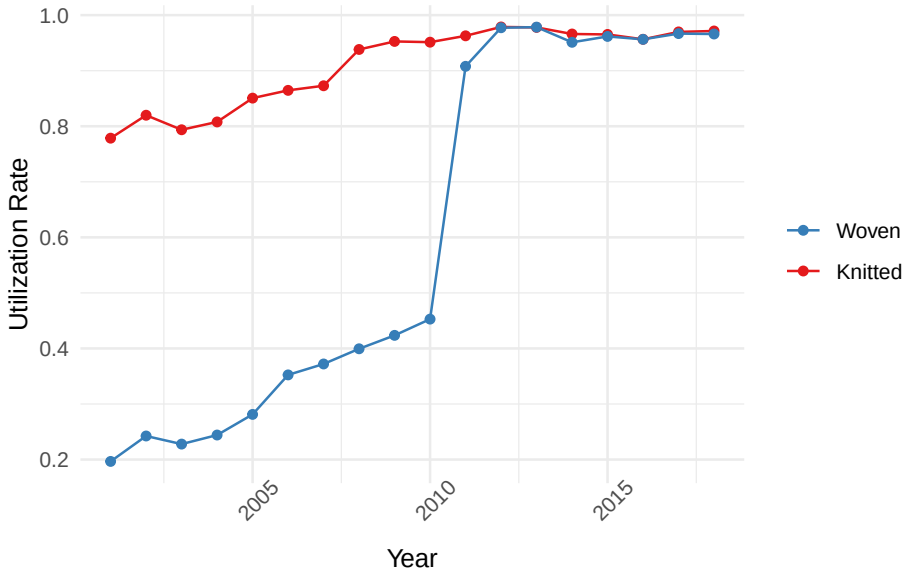


Figure 3: Difference in knit vs woven material export for Bangladesh using EBA

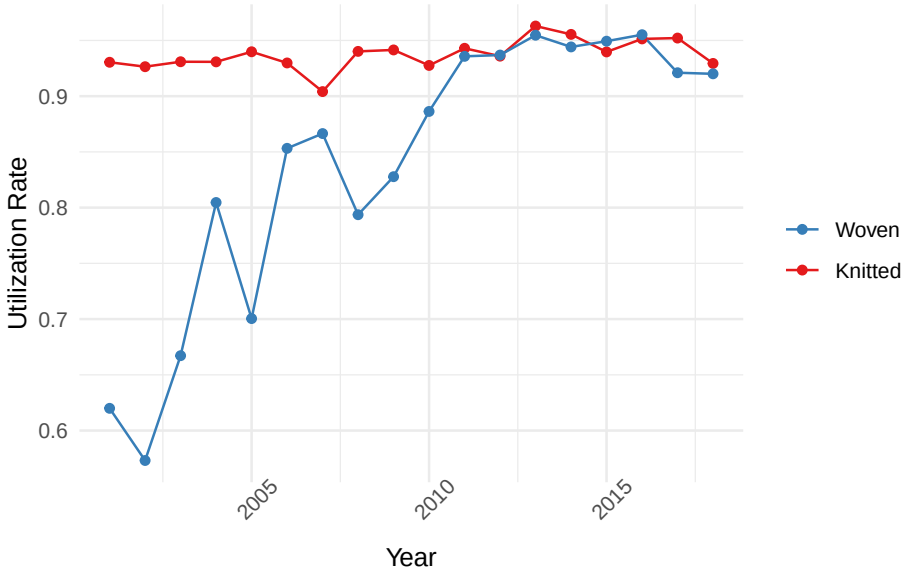


Figure 4: Difference in knit vs woven material export for Nepal using EBA

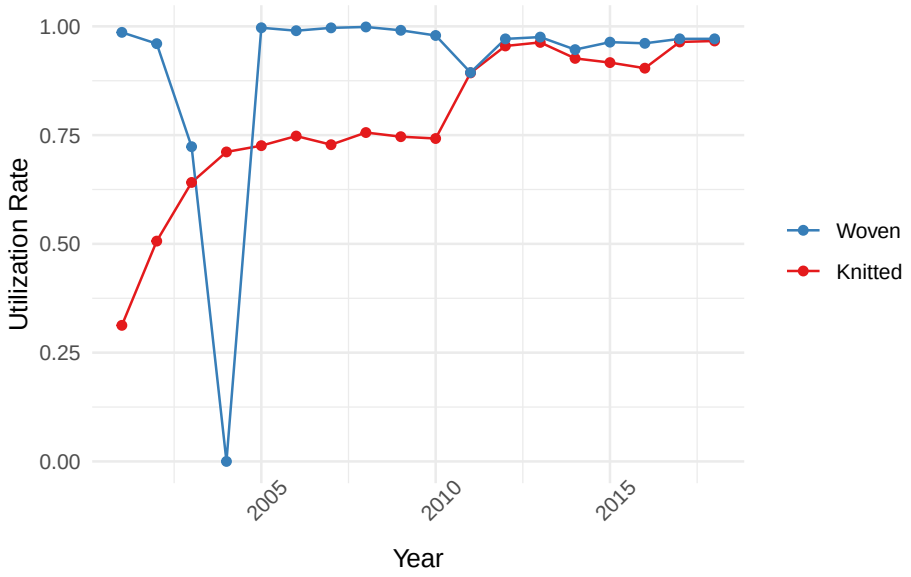


Figure 5: Difference in knit vs woven material export for Cambodia using EBA

# 3 Results

## 3.1 EBA Impact on LDC Exports

Figure 1 replicates Figure 1 in the original paper, illustrating the EBA utilization rate (2001-2018). This rate signifies the proportion of apparel imports from LDCs entering Europe under EBA. Despite a generally increasing trend, a 20 percent uptick occurred in 2010-2011 ("Adjusted EU-EXTRA Imports by Tariff Regime, by HS6" 2002), due to EBA policy changes relaxing local fabric requirements.

## 3.2 China's Apparel Export Dominance

Table 2 summarizes the m_s dataset from (Nations 2020), emphasizing differences in apparel exports between China and all other LDCs. The table underscores substantial disparities in apparel export values, with China making up majority share of the apparel export industry. Figure 2, a reproduction of Figure 3, highlights this point. China's market share surged by 33 percent, compared to LDCs, which rose from 3 percent in 2002 to around 8 percent in 2018.

## 3.3 Export Disparities: Woven vs. Knitted Materials

Figure 3, replicating Figure 4 of the original paper, depicts Bangladeshi apparel export utilization rates (2001-2018). The rate represents the ratio of EU imports under EBA to total EU imports from Bangladesh, irrespective of EBA. While knit apparel maintains a near 100 percent utilization rate, woven apparel saw a shift from roughly 20 percent in 2001 to nearly 100 percent by end-2018, with a notable increase in 2010-2011.

Figure 5 and Figure 4 extends the graphical framework in Figure 3, focusing on Cambodia and Nepal, respectively. Similarities include close to

100 percent utilization rates for both woven and knit apparel imports from 2011 onwards. Contrasting trends are evident, such as Cambodia consistently maintaining near-100 percent utilization for woven material, unlike Bangladesh and Nepal. Nepal and Bangladesh share a shift in woven apparel around 2010-2011, more pronounced in Bangladesh, while Cambodia experiences a shift in knit apparel imports around 2010-11.

### 3.4 Apparel export to high-earning OECD countries

Figure 6 depicts value of LDC export to high-income OECD countries. The graph separates the knit material, with ProductCode 61 and ProductCode 62, for woven material. It show that apparel export from LDCs have been steadily increasing since 2001, with a slowdown in 2014. This is due to economic downturn at export destinations, causing apparel consumption to decrease by 7.92 percent (Islam 2016).

## 4 Discussion

Figure 1 suggests that LDCs effectively utilized the EBA scheme, resulting in a substantial increase in the utilization rate post-implementation. Notably, Asian LDCs such as Bangladesh, Cambodia, and Nepal witnessed a surge in apparel exports in both knit and woven sectors. However, the market share of LDC exports significantly trailed behind China, as depicted in Figure 2. Yet, the data leaves unanswered whether the EBA was the exclusive reason for the upswing in LDC export levels or if other factors played a role. This is especially noticeable when we consider Figure 6, which points out how LDC exports increased to all high-earning OECD countries and not just to destinations that fall under EBA scheme. This rationale suggests there must be underlying reasons that may have caused trade to increase.

## 4.1 Exploring Trade Liberalization's Impact on Export Growth

The notion of 'trade liberalization' emerges as a potential explanation for the notable increase in export levels in LDCs. This concept revolves around dismantling barriers to free trade, particularly tariffs that previously hindered poorer nations from competing with industrialized counterparts. The creation of the General Agreement on Tariffs and Trade (GATT) in 1947 marked a significant step in promoting trade liberalization. Since then, developing countries have experienced export growth, with manufacturing comprising 80 percent of their exports (2001). Studies show that trade liberalization led to a two-percentage-point increase in developing countries' exports since the 1990s (Santos-Paulino 2002). Free trade facilitates access to affordable inputs, creating export opportunities (Dornbusch 1992). Moreover, nations engaged in open trade tend to boast more diversified export structures compared to protectionist counterparts (Osakwe, Santos-Paulino, and Dogan 2018).

The concept of trade liberalization strongly suggests that the surge in LDC exports cannot be solely attributed to the EBA. It is evident that LDCs were already experiencing export growth before the EBA's implementation, owing to open and free trading relations with other nations.

## 4.2 Global Demand as a Key Player in Export Dynamics

An essential factor influencing export levels is the global demand for resources. Global demand, especially during financial crises, tends to fluctuate, leading to price volatility adversely affects a country's exports (Meyn and Kennan 2009). Studies indicate that during global economic challenges, there is a substantial decrease in exports, with estimates suggesting a 20 percent decline in export due to financial factors (Amiti and Weinstein 2011). This phenomenon extends to LDCs, as financial crises in the global North often triggers reduced demand for exports from LDCs (Willenbockel and Robinson 2009). All these factors underscore how export

levels, not confined solely to the global North, are susceptible to influences beyond schemes like the EBA.

### 4.3 Factor endownments and export

A nation's factor endowments play significant role in determining a country fares from trading aspects. Broadly speaking, factor endowments are used to describe factors like land, capital, natural resources that a country can use to produce goods and subsequently export them to other places. Existing research suggests that this seems to the case for LDCs as both physical and human capital are positive determinants of a state's export (Coughlin and Fabel 1988). Therefore, this further highlights that factor endowments plays a crucial role in export boom.

### 4.4 Limitations

The current data lacks information on sectors beyond apparel in trade. The Everything But Arms (EBA) agreement eliminates tariffs on imports, excluding arms. However, the absence of data on crucial sectors like agriculture and manufactured goods prevents the paper from establishing whether, post EBA implementation, only apparel exports increased or if a similar trend exists across all sectors. The subsequent version of this paper must integrate data from other sectors for a more robust analysis. This will help determine if EBA uniformly impacted trade positively or if the influence is specific to the apparel sector.

Although the paper acknowledges the roles of trade liberalization, global demand, and factor endowments in export demand, it lacks corresponding data. Furthermore, the investigation lacks regression models to confirm or rule out these factors as core reasons for the overall increase in export trade. Future researchers should address these gaps in the next version of the paper.

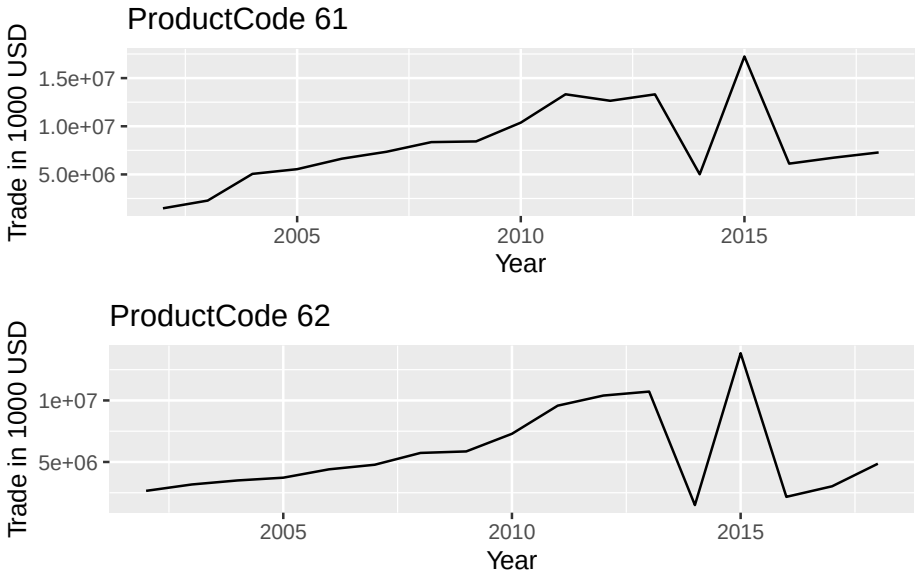


Figure 6: LDC exports to high-earning OECD countries for knit products vs woven products

# 5 Conclusion

The study looks to examine the impact of the Everything But Arms (EBA) policy on trade, with a focus on exports in the least developed countries (LDCs). Utilizing data from Sytsma (2022), the research confirms that exports, particularly in the apparel sector, have increased since the policy's initiation in 2001. However, the paper highlights that LDCs' apparel exports have not only risen to European countries but also to all advanced economies. Therefore, it can be inferred that external factors such as trade liberalization, global demand, and factor endowments may also contribute to the growth in exports. Consequently, attributing the export surge in LDCs solely to the EBA policy may not be sufficient. However, the study's limitation lies in the absence of regression analysis and data on sectors other than apparel, and that prevents us from conclusively report that global demand, factor endowments and trade liberlization are the exclusive drivers of the trade shock.

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