Unveiling the EBA's Trade Triumph: Unmasking the Drivers of Export Boom in Least Developed Countries*

Ahnaf Alam

February 14, 2024

Abstract

The European Union's Everything But Arms (EBA) trade scheme has led to increased exports for Least Developed Countries (LDCs), particularly in the apparel sector. However, existing studies don't conclusively attribute this export boom solely to the EBA. This paper fills this gap by examining the impacts of trade liberalization, factor endowments, and global demand on exports shock. The study confirms that EBA implementation increased exports, but recognizes other factors also played a crucial role. The paper implies that eliminating tariffs alone may not be enough to stimulate exports in developing nations and emphasizes addressing various additional factors affecting exports.

1

Table of contents

1 Introduction

In 2001, the European Union launched the Everything But Arms (EBA)
initiative, granting tariff-and-quota-free market access to 47 of the world's
least developed countries (LDCs) to boost development through increased
exports (Faber and Orbie 2009). The EBA exempted LDC imports from
tariffs, except for arms, enhancing exports from Asian LDCs to the EU
(Gradeva and Martínez-Zarzoso 2010). However, existing studies don't

conclusively attribute the export boom solely to the EBA, leaving uncertainties about the contributions of global demand, trade liberalization, and factor endowments to the trade shift in LDCs. The paper aims to address this gap.

European nations heavily depend on apparel imports; for example, 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). The EBA has sparked concerns about LDCs vying for trade contracts, leading to reduced clothing prices benefiting EU countries. Some studies criticize the scheme as "more political than developmental" (Page and Hewitt 2002). European reliance on apparel imports is evident as trade preferences with Myanmar remained unaffected despite human rights concerns (Pennisi di Floristella 2023). This underscores 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 the EBA's introduction. The original paper highlights how using internationally sourced textiles from LDCs leads to increased firm-level revenue growth for LDCs.

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 the 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, EU and LDCs alike. Finally, the Conclusion section wraps up the paper with a discussion on improvements on the next iteration of this paper.

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 was cleaned by removing all columns, excluding HS Code, value and year, which were used to

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

create a new column, `util`. The new column reports on utilization rate of the EBA, which signifies the fraction of apparel imported under the EBA, relative to total apparel import from LDCs. Ultimately, the final market share data set includes three columns: year, util, and variance.

Eurostat does not itself collect data. Rather, 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 imported product arrives at an EU country, the customs authorities record 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 `ldc` data set lacks country-specific information. To remedy this, country-specific data sets—bgd1 for Bangladesh, cmbd1 for Cambodia,

and nep1 for Nepal—are generated by merging `ldc` data with raw data based on the year and column variables. These data sets provide information on the utilization rate and year for each country. The utilization rate now represents the fraction of EU apparel imported from a nation relative to the total EU apparel imported from that country (Sytsma 2022). Additionally, the data separates between LDC exports of knit and woven materials.

2.3 Information of UN Comtrade

The Market share data set, derived from UN Comtrade's WITS database (2024b) and provided by Tobias Systma for replication. It focuses on export differences between China and LDCs in apparel exports from 2002 to 2018. The cleaned data includes columns for years, the value of apparel export, total export value, and the share of export—representing the ratio of apparel exports to total exports for both LDCs and China. For visualization, see Figure 2.

WITS database is also utilized to gather information on LDCs' apparel exports to high-earning OECD countries. This dataset mirrors the methodology and information used by market share dataset from Comtrade database. The dataset is limited to 2018 due to the COVID-19 pandemic, which led to the shutdown of non-essential trade.

Similar to Eurostat, the UN Comtrade database doesn't collect data directly; individual countries provide trade data. Both importing and exporting countries collect data through customs departments, including variables like HS Code, valuation in USD, and the importing country. If a country fails to provide data or if there are missing values, the UN Comtrade database estimates missing values by extrapolating from two adjacent periods ("About UN Comtrade Analytics" 2016). Missing gaps are filled every two weeks in the database.
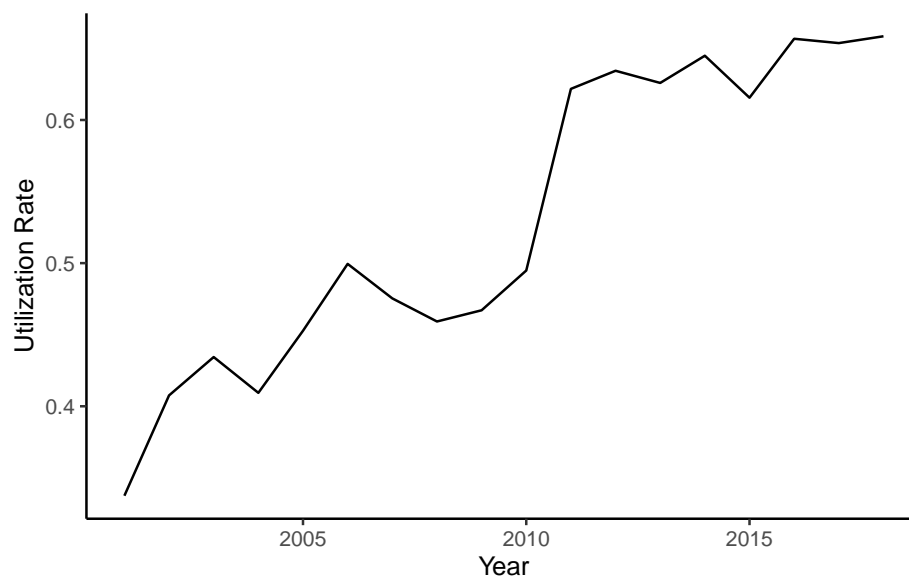
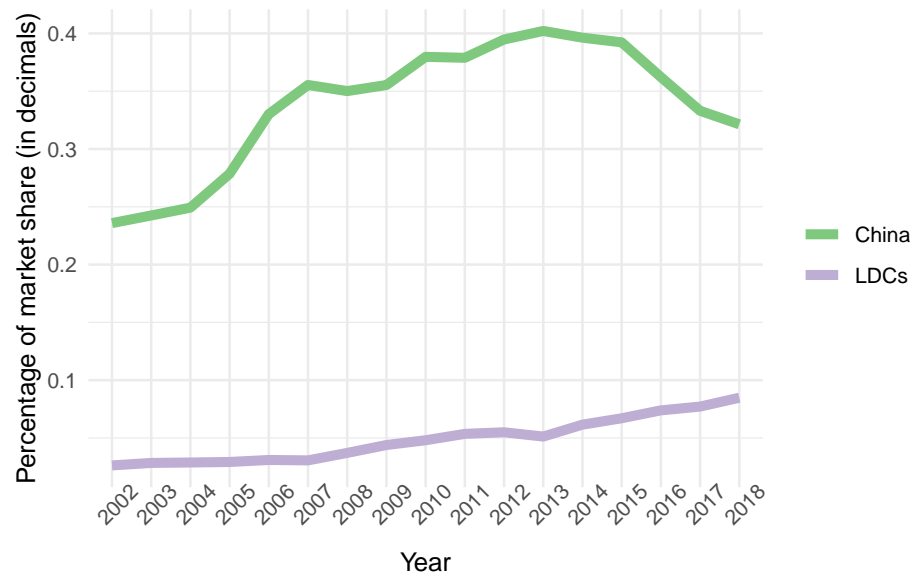Figure 1: Utilization rate for apparel export for LDCs

Figure 2: Difference in market share for apparel export between China and LDCs between 2001 and 2018
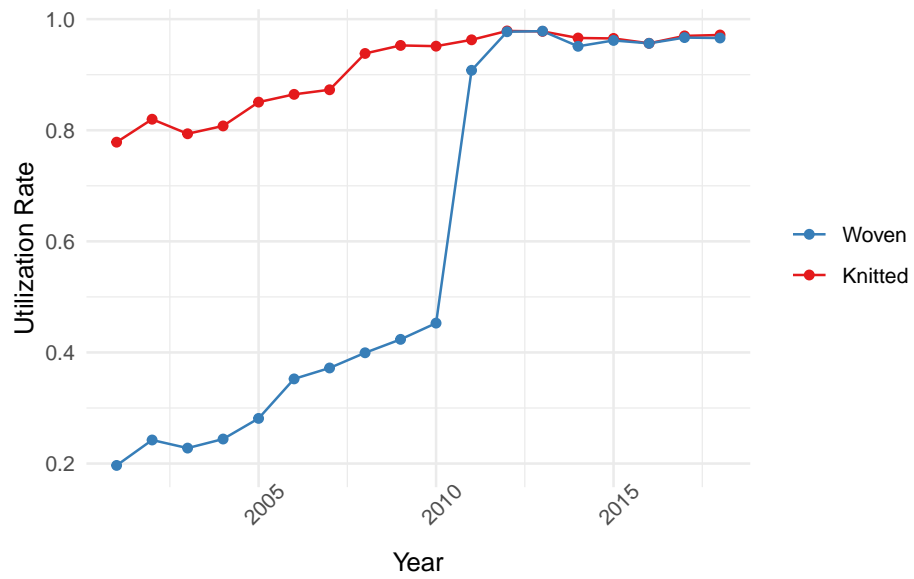
Figure 3: Difference in knit vs woven material export for Bangladesh using EBA
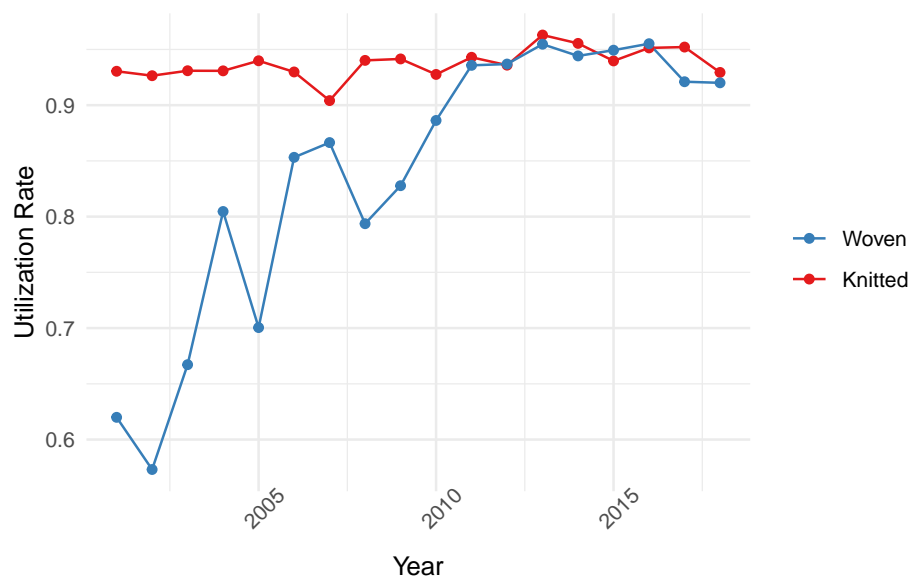
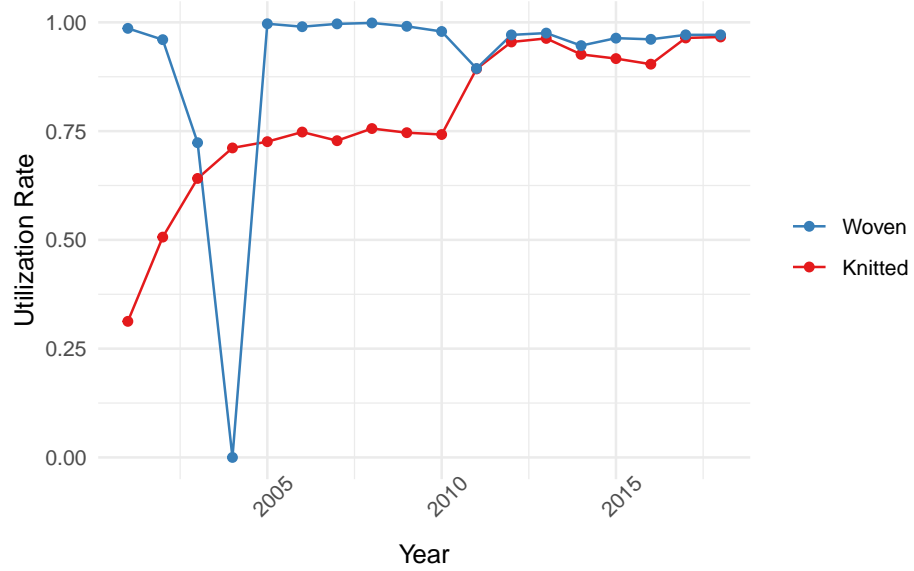Figure 4: Difference in knit vs woven material export for Nepal using EBA

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, illustrating the EBA utilization rate (2001-2018). This rate signifies the proportion of apparel imports from LDCs entering Europe under the 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 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 the EBA to total EU imports from Bangladesh, irrespective of the 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 experienced a shift in woven apparel around 2010-2011, more pronounced in Bangladesh, while Cambodia experienced 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 Product-Code 62, for woven material. It shows that apparel exports from LDCs have been steadily increasing since 2001, with a slowdown in 2014. This slowdown 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. Nonetheless, the data leaves unanswered the question of 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 the EBA scheme. This rationale suggests there must be additional underlying reasons that 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 affecting 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 significantly influence its trade performance. Factor endowments encompasses resources such as land, capital, and natural resources available to a country. Research, including Coughlin and Fabel (1988), indicates that this holds true for Least Developed Countries (LDCs), where both physical and human capital positively affect exports. Cörvers and De Grip (1997) expand on this using the Heckscher-Ohlin-Vanek (HOV) model, which posits that countries export the factors they have in abundance and import scarce ones. Their study, integrating country-specific human capital endowments into the HOV model, reveals a positive impact of high-skilled labor and technological knowledge on trade (Cörvers and De Grip 1997). This underscores the pivotal role of factor endowments in driving export growth.

4.4 Limitations

The current data lacks information on trade 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

15

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.
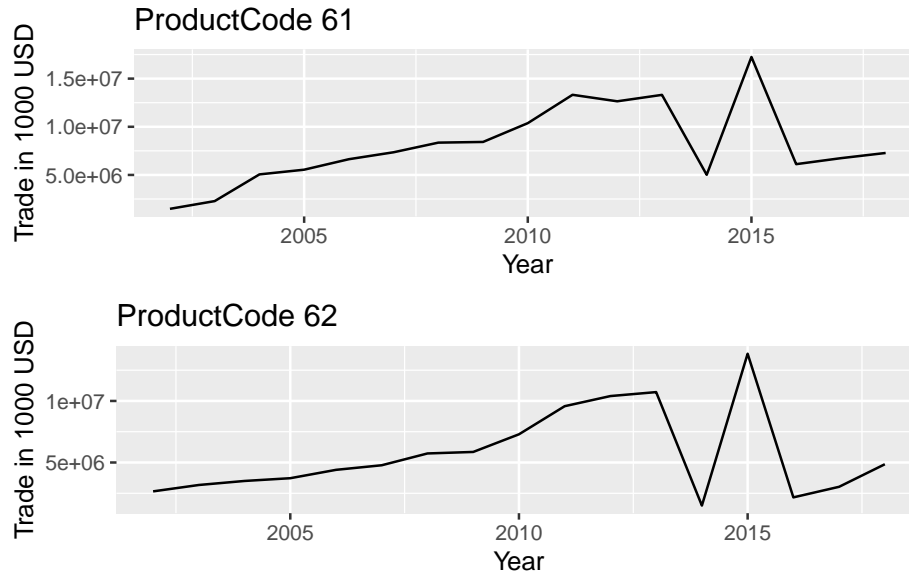

Figure 6: LDC exports to high-earning OECD countries for knit products vs woven products

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 definitively concluding that global demand, factor endowments and trade liberlization are the exclusive drivers of the trade shock.

Bibliography

2001. *International Monetary Fund.* https://www.imf.org/external/np/exr/ib/2001/110801.htm.

———. 2024a. *European Commission.* https://commission.europa.eu/topics/statistics_en#:~:text=Eurostat%20does%20not%20directly%20collect,and%20standards%2C%20monitored%20by%20Eurostat.

———. 2024b. *WITS Login.* https://wits.worldbank.org/WITS/WITS/Restricted/Login.aspx.

"About UN Comtrade Analytics." 2016. *United Nations.* United Nations. https://comtrade.un.org/labs/data-explorer/#:~:text=About%20the%20data&text=UN%20Comtrade%20data%20covers%20trade,an%20average%20annual%20exchange%20rate.

"Adjusted EU-EXTRA Imports by Tariff Regime, by HS6." 2002. European Commission, Eurostat. http://data.europa.eu/88u/dataset/u0JVlxrYC5cgAAwtEwHcDQ.

Amiti, Mary, and David E. Weinstein. 2011. "Exports and Financial Shocks." *The Quarterly Journal of Economics* 126 (4): 1841–77. https://doi.org/10.1093/qje/qjr033.

Cörvers, Frank, and Andries De Grip. 1997. "Explaining Trade in Industrialized Countries by Country-Specific Human Capital Endowments." *Economic Modelling* 14 (3): 395–416.

Coughlin, Cletus C., and Oliver Fabel. 1988. "State Factor Endowments and Exports: An Alternative to Cross-Industry Studies." *The Review of Economics and Statistics* 70 (4): 696–701. https://doi.org/10.2307/1935836.

Dornbusch, Rudiger. 1992. "The Case for Trade Liberalization in Developing Countries." *Journal of Economic Perspectives* 6 (1): 69–85.

Faber, Gerrit, and Jan Orbie. 2009. "Everything but Arms: Much More Than Appears at First Sight." *JCMS: Journal of Common Market Studies* 47 (4): 767–87.

Firke, Sam. 2023. *Janitor: Simple Tools for Examining and Cleaning Dirty Data.* https://CRAN.R-project.org/package=janitor.

Gereffi, Gary, Stacey Frederick, and Gary Gereffi. 2010. "The Global Ap-

parel Value Chain, Trade and the Crisis: Challenges and Opportunities for Developing Countries."

Gradeva, Katerina, and Inmaculada Martínez-Zarzoso. 2010. "The Role of the Everything but Arms Trade Preferences Regime in the EU Development Strategy."

Islam, Ashraful. 2016. "Global Apparel Products Slipped 7.92." *Textile Focus.* https://textilefocus.com/global-apparel-products-slipped-7-92-2015-2/.

Kassambara, Alboukadel. 2023. *Ggpubr: 'Ggplot2' Based Publication Ready Plots.* https://rpkgs.datanovia.com/ggpubr/.

Meyn, Mareike, and Jane Kennan. 2009. *The Implications of the Global Financial Crisis for Developing Countries' Export Volumes and Values.* Vol. 305. Overseas Development Institute London.

Nations, United. 2020. "UN Comtrade." United Nations. 2020. http://comtrade.un.org/.

Osakwe, Patrick N, Amelia U Santos-Paulino, and Berna Dogan. 2018. "Trade Dependence, Liberalization, and Exports Diversification in Developing Countries." *Journal of African Trade* 5 (1-2): 19–34.

Page, Sheila, and Adrian Hewitt. 2002. "The New European Trade Preferences: Does 'Everything but Arms'(EBA) Help the Poor?" *Development Policy Review* 20 (1): 91–102.

Pennisi di Floristella, Angela. 2023. "The Everything but Arms (EBA) Scheme and the EU's Normative Dilemma: The Case of Myanmar's Garment Sector." *Third World Quarterly* 44 (11): 2404–21.

R Core Team. 2023. *R: A Language and Environment for Statistical Computing.* Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Ram, Karthik, and Hadley Wickham. 2023. *Wesanderson: A Wes Anderson Palette Generator.* https://CRAN.R-project.org/package=wesanderson.

Santos-Paulino, A. U. 2002. "Trade Liberalisation and Export Performance in Selected Developing Countries." *The Journal of Development Studies* 39 (1): 140–64. https://doi.org/10.1080/00220380412331322701.

19

Sytsma, Tobias. 2022. "Improving Preferential Market Access Through Rules of Origin: Firm-Level Evidence from Bangladesh." *American Economic Journal: Economic Policy* 14 (1): 440–72. https://doi.org/10.1257/pol.20200257.

Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis.* Springer-Verlag New York. https://ggplot2.tidyverse.org.

Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.

Willenbockel, Dirk, and Sherman Robinson. 2009. "The Global Financial Crisis, LDC Exports and Welfare: Analysis with a World Trade Model."

Xie, Yihui. 2023. *Knitr: A General-Purpose Package for Dynamic Report Generation in r.* https://yihui.org/knitr/.

Zhu, Hao. 2021. *kableExtra: Construct Complex Table with 'Kable' and Pipe Syntax.* https://CRAN.R-project.org/package=kableExtra.