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Between Resilience and Dependence: Sourcing Reconfiguration in the Spanish Fashion Industry During Slowbalization

Juan Navarro-Martínez

Department of Sociology, University of Granada, 18001 Granada, Spain; j.navarro@ugr.es

Abstract

Global value chains (GVCs) are undergoing significant reconfiguration in a context of slower trade growth, rising geopolitical tensions and repeated supply chain disruptions. This article examines how these pressures have shaped the sourcing geography of Spanish apparel imports between 1999 and 2023. Drawing on a panel of the 25 main supplier countries (625 country-year observations), it analyses the changing structure of sourcing through three restructuring dynamics widely discussed in the recent literature: nearshoring, diversification and friendshoring. The results show that diversification, rather than regionalization, has been the main response to recent disruptions. While Spain's apparel sourcing has become less concentrated, this shift has not led to a sustained shortening of supply chains or to a clear reduction in dependence on Asia. Geopolitical alignment has limited explanatory power at the aggregate level, although it becomes more relevant among semi-proximity suppliers competing on the basis of speed, flexibility and political reliability. Overall, the findings suggest that post-pandemic restructuring in Spanish apparel is better understood as a selective form of risk management within an existing buyer-driven GVC than as a broad move toward nearshoring.

Keywords: global value chain; fashion industry; risk diversification; slowbalization; economic geography; apparel; Low-Cost Country Sourcing (LCCS); supply chain

1. Introduction

Following the Second World War, international trade experienced a period of sustained growth, although the scope of this growth was mostly limited to advanced economies [1]. Protectionism, the collapse of the Bretton Woods monetary system in 1971 and the oil crises of 1973 and 1979 exposed the weaknesses of the post-war globalization model [2], accelerating the transition toward a more interconnected system dependent on globally fragmented supply chains [3].

It was in this context that Global Value Chains (hereinafter GVCs) emerged and soon became a key element in the transformation of trade, reflecting a growing international division of labour in the production, distribution and commercialization of goods and services [4]. While advanced economies specialized in higher value-added stages—such as design and marketing—more labour-intensive activities requiring low-skilled workers—such as manufacturing and assembly—were offshored, or delocalized, to developing countries, mainly in Asia, in order to reduce costs [5–8].

During the 1990s, the increasing flows of Foreign Direct Investment (FDI) from developed to emerging economies, advancing technology and improvements in

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transportation facilitated the expansion of the different links of GVCs, consolidating them as one of the main forms of cross-border economic organization [9,10] and one of the most visible “trademarks” of globalization [11] (p. 131). Similarly, the gradual liberalization of trade—promoted by international agreements and the creation of the World Trade Organization in 1995—favoured the integration of many countries in the GVCs in an attempt to strengthen their position within global production networks [12,13].

As a result, a global labour market emerged with heightened specialization, competitiveness and productivity [14]. Globalization thus evolved into hyperglobalization [1,15] or rapid globalization [16], a new era characterized by significantly higher growth rates in international trade and greater levels of interdependence than those recorded during post-war globalization [5,17].

However, with the 2008 financial crisis, merchandise trade began to lose its dynamism, slowing the expansion of GVCs [18,19]. In the political-institutional sphere, the hyperglobalization growth model also began to be questioned due to (1) the growing dependence of the West on Asia [20], (2) its low degree of social and environmental sustainability [21,22], and (3) the reproduction of asymmetric power relations [23] and structural economic inequalities [24,25]. Over the past decade, rising geopolitical tensions among major powers and supply chain collapses following the pandemic have intensified the risk of fragmentation in global trade [26,27]. Faced with this scenario of uncertainty and instability, many firms began restructuring their GVCs to heighten their resilience and anticipate potential new disruptions [28,29]. Together, these factors gave rise to a new era, slowbalization [30], characterized by decelerating global integration and merchandise trade [5,31], albeit with nuances [32,33].

To analyse the particularities of each phase, this paper focuses on the fashion sector, one of the few industries with a truly global value chain [34]. The establishment of the Multi-Fibre Arrangement (hereinafter MFA) in the 1970s spurred the international expansion of textile production [35,36], while its elimination in 2005 triggered an exponential increase in Asian competition [14]. From that moment on, the industry became highly dynamic in terms of location [37,38], consolidating the model of overproduction and hyper consumption known as fast fashion [39] and posing ever greater challenges in terms of social and environmental sustainability [21,40–45]. The case of Spain is particularly illustrative due to the presence of the textile giant Inditex, a pioneer in the consolidation of the fast fashion model and a global point of reference in integrated supply chain management.

The foregoing leads to the following research question: how has the sourcing geography of the Spanish fashion industry been reconfigured during the eras of hyperglobalization and slowbalization, and what role have nearshoring, diversification and geopolitical alignment played in that process? To address this question, the article examines the structure of apparel sourcing in Spain through these three dimensions of GVC reorganization. Using a quantitative approach, it analyses Spain’s clothing import flows from its 25 main trading partners over the period 1999–2023, drawing on disaggregated Eurostat data [46,47].

This article contributes to the literature in three related ways. First, it provides longitudinal evidence on the evolution of Spain’s apparel sourcing structure across hyperglobalization and slowbalization. Second, it develops an interdisciplinary interpretation of sourcing reconfiguration by relating changes in trade geography to patterns of dependence, vulnerability and uneven exposure to risk within a buyer-driven industry. Third, it offers an empirically grounded framework for understanding how resilience-oriented sourcing adjustments have unfolded in a key sector of the Spanish economy.

The paper is structured as follows: after the Introduction Section, the second section provides the theoretical context for the evolution of the globalization process and the development of GVCs during the eras of hyperglobalization and slowbalization; the third

section presents the methodology; the fourth reports the results; the fifth discusses the main findings; and the sixth sets out the main conclusions.

2. Theoretical Framework

2.1. Hyperglobalization and the Rise in GVCs

Hyperglobalization can be defined as an era of unprecedented global interdependence resulting from (1) the expansion of trade flows and also of financial and FDI flows, (2) the reduction in logistical costs and tariff barriers, and (3) the technological advances of the information society in the period between 1990 and 2008 [1]. Its main traits include strong trade integration through GVCs, the growing relevance of services (dematerialization) and the emergence of China as a mega-trader [15,17], especially after its accession to the WTO in 2001.

According to the global system theory put forward by Sklair [48], the fundamental rationale behind GVCs is the constant increase in production and global trade, with the aim of maximizing profits at the lowest possible cost within a political environment that guarantees uninterrupted consumption. Leading companies weigh the risks of delocalization or subcontracting production across several countries, and decisions are reassessed based on technological changes, consumer preferences, geographic shifts in demand and location-specific risks [49].

A firm is embedded in a GVC if it imports intermediate goods or services, exports them, or both. However, not all GVCs share the same structural characteristics. Gary Gereffi (1994, as cited in Benages et al. [50]) distinguished between two main models:

1. Producer-driven chains: power lies in the hands of final product manufacturers. These chains are typical of capital, technology, or skill-intensive sectors, such as the automotive industry. They are usually led by multinational firms that transfer part of their capabilities to actors in emerging economies.
2. Buyer-driven chains: led by major retailers and brands that subcontract production to a wide network of suppliers located in developing countries; these distributors can be considered “manufacturers without factories” ([50] p. 58). The textile sector is a classic example of a buyer driven GVC. However, exceptions exist, such as Inditex, where the boundary is more diffuse because the producer is also the distributor (see Table A1 in the Appendix A).

In both models, leading firms exert significant power over their suppliers with no need to own the production facilities, largely due to the industrial relocation dynamics promoted in recent decades [42]. Although the first cases of offshoring of production date back to the 1960s [13], it was during hyperglobalization that this practice gained strength and truly became an industrial organization strategy at the global level [3].

The relocation process unfolded in two main phases, each with distinct patterns of production integration. During the first phase (1990s and early 2000s), the production link of GVCs shifted mainly to Asia—primarily China and India—and, to a lesser extent, to North African and Eastern European countries such as Morocco and Turkey [51,52]. It also extended to other regions of the Americas, such as Mexico, which holds significant geostrategic interest for the United States and Canada due to its proximity and its position at the boundary between the Global North and South [7,53]. The high demand for labour resulting from offshoring strategies increased productivity and competitiveness in these countries, especially China, where domestic industry soon developed and labour costs began to rise [13,36].

As wages in China progressively increased, developed economies—and also new emerging powers—rushed to find new locations with lower labour costs [35]. Thus, during the first decade of the 21st century, new production hubs appeared in Pakistan, Bangladesh

and several ASEAN countries [54], as well as in regions of Central America that offered lower wages than the Mexican maquiladoras [55]. This process expanded the productive links of GVCs and began to consolidate the second phase of relocation, which was characterized by greater geographic and strategic dispersion of labour-intensive activities [56].

In the specific case of the textile sector, the elimination of import and export quotas on clothing items as of 1 January 2005—when the MFA came to an end—marked the true beginning of the second relocation phase. From that moment on, Asian countries made this industry a central pillar of their export-led growth strategies, taking advantage of virtually unrestricted access to US and EU consumer markets [57]. Thanks to advanced infrastructure, economies of scale and more efficient supply chains than those of other developing countries, Asian economies were able to rapidly integrate into GVCs [14].

While these offshoring strategies created significant opportunities for improvement at the economic level, they also reproduced the structural logics of inequality inherent to the capitalist system [22,58]. Transnational corporations have benefited from the regulatory laxity of emerging countries, where labour and environmental regulations are rarely enforced [59]. This has led, on the one hand, to a deterioration of labour rights and working conditions [21,45,60] and, on the other, to an unprecedented environmental impact in the form of water pollution, greenhouse gas emissions and the overuse of natural and energy resources [41,43,61].

From the perspective of dependency theory, this phenomenon can be interpreted as the result of increased contact between developed (core) and emerging (peripheral) economies, which has intensified the exploitative nature of capitalism and fostered the “development of underdevelopment” in peripheral countries (Frank, 1967, as cited in Ponte et al. [62] p. 4).

In response to these disparities, scholars critical of globalization began warning about the risks that transnational processes posed to local socioeconomic, political and cultural systems [24,63]. Alter-globalization movements called for “deglobalization” [64], a debate that gained renewed relevance after the 2008 financial crisis, often viewed as a turning point in the organization of the world economy [65]. From then on, the adverse effects of hyperglobalization also became more visible in Global North countries, particularly through the loss of low-skilled employment linked to industrial offshoring [55]. Some authors argued that globalization had reached its peak [66,67] or even that it had come to an end as previously conceived [68].

2.2. *Slowbalization: Toward a Reorganization of GVCs*

While deglobalization—understood to mean a reversal of globalization—has not materialized in practice [69,70], global trade has shown clear signs of deceleration since the 2008 financial crisis [18,19,27,31,71], as reflected in the share of global GDP represented by imports and exports of goods [72]. This slowdown, later described by The Economist as “slowbalization” [30], became more visible after the US–China trade war, Brexit, the COVID-19 pandemic and the Russia–Ukraine War, which exposed the fragility of fragmented production networks and the risks associated with excessive dependence on distant suppliers [55,73–75].

Taken together, these disruptions mark the transition from hyperglobalization, understood as a phase of cost-driven expansion and fragmentation of GVCs, to slowbalization, in which firms seek to preserve the advantages of global sourcing while reducing their exposure to uncertainty and disruption [76,77]. In this context, the specialized literature highlights four main strategies: relocation (reshoring or backshoring), regionalization or nearshoring, diversification and friendshoring [22,34,78–86]. Since reshoring tends to be implemented in strategic, high-tech sectors—such as medical equipment,

semiconductors, or electronics—but is practically absent in low-skill, labour-intensive sectors such as textiles [34,87,88], the analysis focuses on the remaining three strategies:

(a) Regionalization, or nearshoring, involves a geographic reconfiguration of GVCs, giving way to Regional Value Chains (hereinafter RVCs), where the different links are not as distant from one another [82]. RVCs replicate the classic model of fragmented and vertically specialized GVCs but at a regional or local scale. This dynamic may result from GVC disintegration, the growth of international production at the regional level [22], or they may be a consequence of climate change and oil depletion [66]. According to Baldwin [3], rising transportation costs favour the nearshoring of geographically dispersed production links, generating supply chains that are less global and more regional.

After the pandemic, regionalization gained traction as a strategy for restructuring global production geography, particularly as firms and policy institutions sought to reduce exposure to long-distance disruption and excessive dependence on Asian sourcing [87,89]. In the US, this reinforced interest in traditional regional partners such as Mexico [7], while in the European context, nearshoring was associated with the promotion of shorter and more integrated GVCs extending into Eastern Europe and North Africa⁶ [80,87,88]. These strategies may create alternatives to Asian sourcing, generate greater added value closer to consumer markets and reduce transport-related CO₂ emissions [41,90].

(b) Diversification leverages GVCs (rather than dismantling them) to increase the resilience of their different links [22]. As supply security has been a central issue in the debate on GVCs since the pandemic, firms may consider production diversification more effective than reshoring or nearshoring in avoiding the risks associated with excessive geographic concentration in supply chains [91–94]. The diversification of global suppliers reduces losses during crises or supply disruptions by lowering dependence on a small number of trading partners [95], but it may also entail giving up some economies of scale by incorporating more locations and suppliers into the GVC [22]. Recent studies have shown that European countries can reduce their vulnerability to GVC disruptions by diversifying value-added functions, particularly those most exposed to disruptions, which tend to be located in the early stages of the supply chain and subject to greater rigidities [28,96]. In addition, machine-learning-based studies on textile and other industrial supply chains suggest that resilience increasingly depends on anticipatory disruption management and data-driven risk detection, complementing diversification-based approaches to supply chain risk mitigation [97,98].

(c) Finally, friendshoring, or an increase in trade relations with geopolitically closer partners or those sharing common values, has gained importance as a GVC reconfiguration strategy as geopolitical conflicts have intensified worldwide [78,79]. Recent research confirms that an increase in geopolitical distance correlates with a significant and economically substantial reduction in backward participation in GVCs [99]. In fact, the average geopolitical distance of trade decreased by 7% between 2017 and 2024; that is, economies at opposite ends of the geopolitical spectrum have been trading less with each other—particularly China and the US (due to the trade tensions that began in 2018) and Germany and Russia after the invasion of Ukraine in 2022 [83,84]. This restructuring of trade toward geopolitically closer partners would increase the security of input supply but also the economic cost of exchanges [100]. Nevertheless, it should be noted that not all economies are adjusting their trade based on geopolitical criteria; in middle-alignment countries—such as ASEAN economies, Brazil and India—geopolitical distance remained stable or even increased [84].

Although the literature on GVC reconfiguration and resilience is highly insightful, it often explains sourcing shifts mainly as firms' strategic responses to external shocks, uncertainty and geopolitical fragmentation [69,101–103]. From a sociological perspective, however, sourcing is not simply a technical allocation of production across space, but a

socially embedded process shaped by governance structures, unequal bargaining power, labour regimes and historically constituted regional hierarchies [23,104].

This perspective is especially relevant in the garment sector, where buyer-driven co-ordination depends not only on cost and speed, but also on flexible and weakly protected forms of labour incorporation, often structured through gendered divisions of labour and unequal social norms [21,105,106]. Accordingly, post-2008 sourcing adjustments should not be read as a simple reversal of globalization, but as a selective and uneven reconfiguration of GVCs in which resilience concerns are filtered through pre-existing production geographies, supplier capabilities and lead firms' priorities [87,107,108]. In this sense, sourcing reorganization should be interpreted not only in terms of efficiency or proximity, but also in terms of how dependence, risk and adjustment pressures are redistributed across supplier regions [109–111].

Using the theoretical framework outlined above, this article examines how the sourcing structure of the Spanish fashion industry was reconfigured between 1999 and 2023 across the periods of hyperglobalization and slowbalization. To do so, it pursues three specific objectives: (1) to describe the evolution of Spanish fashion's sourcing geography, distinguishing between proximity, semi-proximity and long-distance suppliers in relation to key turning points in GVC restructuring; (2) to analyse the annual variation in the aggregate indicators of nearshoring, diversification and friendshoring in order to identify the main structural dynamics shaping sourcing change over time; and (3) to examine the relationship between suppliers' geopolitical alignment and their participation in Spanish apparel imports, paying particular attention to regional differences in this association.

Rather than testing *ex ante* hypotheses, the article adopts an analytically guided empirical approach. The aim is to assess how these three dimensions of reconfiguration unfold in the Spanish fashion industry and whether they do so uniformly or unevenly across supplier groups.

3. Methodology

3.1. Data

To analyse the impact of the strategies employed to restructure the GVC of Spanish fashion, this study uses data on Spain's apparel imports at the global level, considering a time span and number of suppliers broad enough to capture the sector's structural transformations during the periods of hyperglobalization and slowbalization.

The time series covers a total of 25 years, from 1999 to 2023, the most recent year with complete records in Eurostat. At the time this article was prepared, Eurostat's SITC data (Standard International Trade Classification, rev.3, two-digit level, code 84: "articles of apparel and clothing accessories") were available in a single view covering the continuous period 1999–2023 [47]. Following a subsequent restructuring of the COMEXT database views, data access is now split across two locations: data for 2002–2023 are available via the COMEXT interface [47], while data for 1999–2001 must be accessed through the historical COMEXT files provided via Eurostat's bulk download service [46].

All suppliers from which Spain imported articles of apparel worth more than one billion euros during this period were selected, resulting in a total of 25 suppliers. These 25 countries account, on average, for 96.5% of Spain's total imports in the period examined, with shares ranging from 89.6% in 1999 to 98.1% in 2018. This underscores the strong representativeness of the selected suppliers. These are, in descending order of export value: China, Bangladesh, Turkey, Morocco, Italy, France, Portugal, Germany, India, Netherlands, Belgium (incl. Luxembourg), Pakistan, Cambodia, Vietnam, United Kingdom, Myanmar, Denmark, Tunisia, Malaysia, Indonesia, Thailand, Egypt, Hong Kong, Poland and Romania (Figure 1).

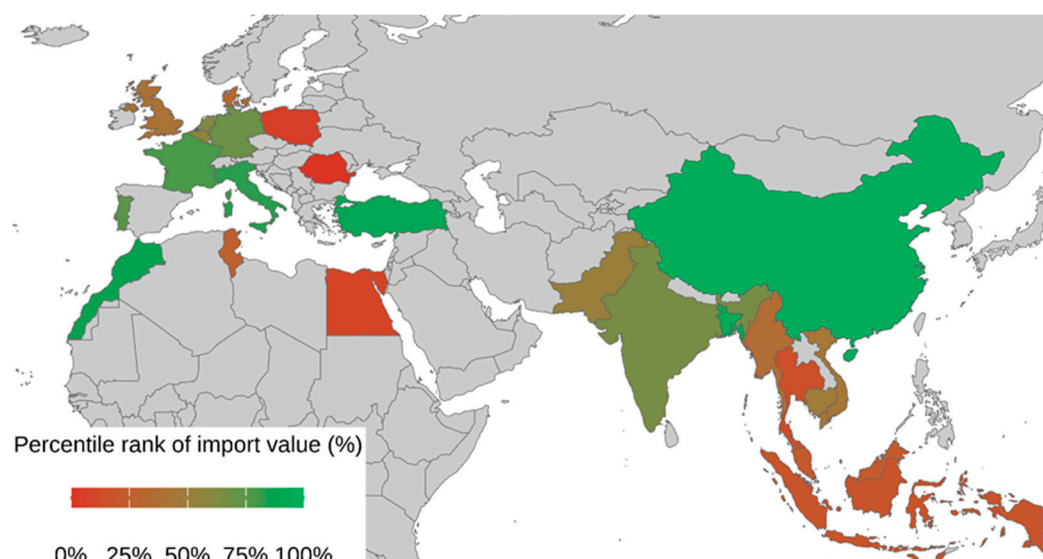


Figure 1. Top 25 clothing supplier countries to Spain. Note: Import values are displayed as percentile ranks to improve visual discrimination while preserving the relative ordering of suppliers and preventing extreme values from dominating the colour scale. Source: Author's elaboration based on import data.

For analytical purposes, suppliers are classified into three sourcing geographies: proximity, semi-proximity and long-distance suppliers. Proximity suppliers are European countries located within Spain's immediate or extended European sourcing space. Long-distance suppliers are Asian countries, whose participation reflects Spain's continued reliance on geographically distant apparel production networks. Semi-proximity suppliers refer to extra-EU sourcing locations—Turkey, Morocco, Tunisia and Egypt—that are geographically closer to Spain than Asian suppliers and are functionally relevant for shorter lead times, flexibility and rapid-response sourcing, but are not part of the European supplier group. Their intermediate position is not only geographical, but also institutional, since these suppliers operate outside the EU regulatory framework and may be more exposed to variation in governance, macroeconomic stability and political predictability.

The database is structured as a panel, where each observation corresponds to a country in a given year. The final sample consists of 625 observations, corresponding to data from Spain's 25 main trading partners over the past 25 years. The selection of these 25 suppliers is intended to capture the structural core of Spain's apparel sourcing geography over the entire period under analysis. The threshold also avoids giving disproportionate analytical weight to very small suppliers whose import shares are low, irregular or limited to only a few years, which could introduce volatility into the longitudinal comparison. At the same time, this criterion prioritizes suppliers with sustained economic relevance and may therefore underrepresent smaller or recently emerging sourcing locations.

3.2. Variables and Indicators

The dependent variable (DV) is the share of each supplier in Spain's total apparel imports in a given year. It is therefore defined at the supplier-year level and calculated as a proportion (0–1), although it can also be expressed as a percentage. The indicators were constructed as follows:

– Nearshoring

The nearshoring indicator is calculated as the inverse of the trade-weighted average distance, following the methodology proposed by Nicita [38] and UNCTAD [85], among others:

$$NS_t = \frac{1}{\sum_{i=1}^N (d_i \times w_{it})}$$

where d_i represents the geographical distance (in kilometres) between Spain and supplier i , and w_{it} is the share of country i in Spain's total imports in year t . An increase in NS_t indicates a trend towards greater geographical proximity (regionalization) of the supply chain.

– Diversification

To examine the degree of diversification of Spanish imports, the Herfindahl-Hirschman Index (hereinafter HHI) was applied. The HHI is frequently used as a measure of market concentration in international trade studies [85,96,112,113]. The HHI is defined as:

$$HHI = \sum_{i=1}^N s_i^2$$

where s_i represents the import share of country i in total imports. The HHI ranges from 0 to 1, with higher values indicating greater concentration and therefore greater dependence on a small number of dominant suppliers.

To provide a more intuitive visualization of diversification, the inverse of the index ($1/HHI$) was also calculated [114]. Higher values indicate greater diversification in Spain's fashion imports, insofar as a larger effective number of supplying countries is present. This methodological approach is backed by major international organizations [115–117].

– Friendshoring

The friendshoring indicator measures trade-weighted geopolitical alignment between countries [85]. It is based on the proposal by Bailey et al. [118], which looks at voting patterns in the United Nations General Assembly (UNGA) [119]. It maps observed voting behaviour between countries in terms of bilateral geopolitical distance, reflecting the average annual disagreement between any two countries in the UNGA [79]. This study uses "Agreement Scores All" [119]. The code assigned to Spain is 230 (COW Country Codes). The equation is:

$$FS_t = \sum_{i=1}^N (A_{it} \times w_{it})$$

where A_{it} reflects the geopolitical alignment between Spain and country i standardized on a [0–1] scale, and w_{it} is the percentage share of partner i in year t . Higher FS_t values denote greater trade with geopolitically aligned partners.

This indicator should be interpreted as a proxy for broad geopolitical affinity rather than as a direct measure of short-term geopolitical shocks. UNGA voting patterns are useful for capturing relatively stable diplomatic alignments between countries, but they may not fully reflect abrupt changes in geopolitical risk, trade frictions, or firm-level sourcing decisions. This is particularly relevant in the apparel sector, where sourcing adjustments are often gradual and constrained by existing supplier relationships, production capacity, compliance requirements, logistics, prices and lead-time considerations [20,57,103]. For this reason, the friendshoring indicator is used here to assess whether Spanish apparel imports have tended to shift toward more geopolitically aligned partners over time, rather than to identify immediate responses to specific diplomatic events.

– Backward participation (FVA)

Finally, to offer a broader view, the study also incorporates an indicator on the added value generated in non-EU economies (Foreign Value Added, FVA) through Spain's imports of inputs used to produce textiles for export [120]. This indicator represents backward participation in the textile sector's GVC. An increase in FVA reflects a greater contribution

of economies outside the EU-27 to the final value of textiles exported by Spain. Since this indicator covers not only apparel but also the textile sector as a whole (NACE Rev. 2) and is available only for 2010–2022, it is used for orientation rather than as an explanatory variable. The same indicator is also reported for the EU-27 from 2020 onward.

3.3. Analytical Strategy

The analytical strategy consists of five complementary phases. First, descriptive statistics are presented for the main variables and for the aggregate indicators of nearshoring, concentration/diversification and friendshoring. Second, the evolution of supplier participation is examined according to sourcing geography (proximity, semi-proximity and long-distance suppliers), highlighting the most significant shifts in the sourcing structure of Spanish fashion during hyperglobalization and slowbalization. The comparison between the two phases follows the periodization developed in the theoretical framework, with 2008 treated as the main turning point and the internal subperiods defined according to sector-specific and systemic events, including the end of the MFA and the COVID-19 pandemic shock.

Third, the annual variation in the three aggregate indicators—nearshoring, diversification and friendshoring—is analysed, together with their joint year-on-year dynamics, following previous studies [85]. Fourth, the relationship between geopolitical alignment and supplier participation is explored through bivariate correlation analysis. Both variables are continuous and expressed as proportions within the [0–1] interval. To calculate Pearson's correlation coefficient, the dependent variable was transformed using a logit function ($\text{logit}(p) = \ln(p/(1 - p))$), which helps reduce heteroscedasticity and non-normality issues in proportional variables. However, since the data may exhibit non normal distributions and non-linear relationships, the non-parametric Spearman's Rho coefficient was also calculated using the original dependent variable.

Fifth, this descriptive evidence is complemented with an econometric analysis based on a fractional response model with logit link, in which suppliers' import shares are modelled as a function of geopolitical alignment, supplier region and the interaction between both variables, while controlling for year effects. This specification is appropriate because the dependent variable is a proportion bounded between 0 and 1, and fractional logit models are specifically designed for this type of outcome without requiring linear-model assumptions or ad hoc transformations for estimation. Papke and Wooldridge originally developed this approach for fractional dependent variables and later extended it to panel settings, showing its suitability when the outcome is bounded and repeatedly observed over time [121]. In addition, the panel literature on correlated random effects and pooled time-series cross-section data provides the broader methodological basis for modelling repeated observations while accounting for unobserved heterogeneity and common temporal shocks [122]. In the present case, the interaction term allows the analysis to assess whether the association between geopolitical alignment and supplier participation differs across sourcing geographies, while year controls absorb common shocks affecting all suppliers. Standard errors are clustered at the supplier level to account for repeated observations within countries over time. In this way, the econometric model does not replace the correlation analysis, but subjects the descriptive pattern identified there to a more demanding test.

4. Results

4.1. General Structure of Spanish Fashion Sourcing

Table 1 presents the descriptive statistics of the variables analysed by supplying country and year; Table 2 shows the aggregate data, both for regional trade shares and for the three indicators being studied.

Table 1. Descriptive Statistics (Country–Year Level Variables).

Variable	N	Mean	SD	Min	Max
Share in Spain’s imports	625	0.0382	0.046	0.0003	0.2379
Logit (Share in Spain’s imports)	625	−4.05	1.51	−8.11	−1.16
European suppliers’ share	250	0.0383	0.035	0.0003	0.1515
Asian suppliers’ share	275	0.0355	0.054	0.0003	0.2379
Semi-proximity suppliers’ share	100	0.0454	0.044	0.0004	0.1383
Geographic distance (kilometres) (unweighted)	625	5187	4139	501	12,188
Geopolitical alignment (unweighted)	625	0.798	0.146	0.549	1

Note: N = number of observations; SD = standard deviation; Min = minimum; Max = maximum. Values are rounded for readability. Turkey is included with the three North African countries (semi-proximity suppliers). Source: Author’s calculations.

First, the mean share of Spain’s garment suppliers is relatively low ($M = 0.0382$; 3.82%), suggesting a fragmented and competitive sourcing market. However, the high standard deviation ($SD = 0.046$) indicates that some partners hold a very prominent position ($Max = 23.79\%$), while others have only a marginal role ($Min = 0.03\%$).

Similarly, the high dispersion in geographic distance between Spain and its suppliers ($SD = 4139$) reflects the global spread of its supply chain and the coexistence of sourcing strategies based on proximity, semi-proximity and long distance. Regarding geopolitical alignment, the mean value ($M = 0.798$) reveals strong affinity between Spain and its suppliers—mainly European partners with whom it shares common foreign policy values within the EU regulatory framework. The minimum value ($Min = 0.549$) further suggests that Spain has not been significantly non-aligned with any of its non-EU trading partners during the period 1999–2023.

Table 2. Descriptive Statistics (Aggregate Indicators).

Variable	N	Mean	SD	Min	Max
Total participation of European suppliers	25	0.3826	0.087	0.2705	0.5272
Total participation of Asian suppliers	25	0.3904	0.075	0.2757	0.4767
Total participation of semi-proximity suppliers	25	0.1815	0.042	0.0875	0.2466
HHI (Concentration Index)	25	0.088	0.008	0.074	0.1
1/HHI (Diversification Index)	25	11.44	1.135	10	13.5
Trade-weighted geographic distance (km)	25	4214.4	685.9	3134.5	5041.3
1/trade-weighted geographic distance (Nearshoring Index)	25	0.00024	0.00004	0.0002	0.00032
Trade-weighted geopolitical alignment (Friendshoring Index)	25	0.771	0.02	0.72	0.807
Foreign Value Added (Spain) (%)	13	40.7	2.76	34	44.54
Foreign Value Added (EU-27 countries from 2020) (%)	13	43.63	1.9	39.33	46.43

Note: Values represent annual aggregate indicators ($N = 25$). Values are rounded for readability. Source: Author’s calculations.

Secondly, Table 2 shows that although the record in participation corresponds to the group of European suppliers ($Max = 52.72\%$), the mean participation of Asian countries

over the analysed period has been higher ($M = 39.04\%$). Likewise, a gradual increase is observed in the share of semi-proximity partners, rising from 8.75% in 1999 to 24.66% in 2021. Section 4.2 provides a more detailed analysis of the evolution of sourcing geography, breaking down the largest increases and decreases in trade participation.

Interestingly, the HHI shows a mean value of 0.088 ($SD = 0.074$). According to the thresholds established by the US Federal Trade Commission [123], Spanish clothing imports are weakly concentrated (<0.1). Meanwhile, the trade-weighted average distance stands at around 4215 km, indicating that although the number of suppliers in proximity or semi-proximity is larger, the effective structure of sourcing has relied primarily on Asian partners located far from Spain.

Regarding trade-weighted geopolitical alignment, the mean value ($M = 0.771$) suggests that Spanish fashion has historically sourced from suppliers with whom it maintains good trade relations and relatively high geopolitical affinity. The influence of geopolitical alignment is examined in detail in Section 4.4.

Finally, Spain shows lower backward participation in the textile GVC ($M = 40.7\%$) than the EU-27 as a whole ($M = 43.63\%$). In other words, in the case of Spain, a smaller proportion of the Foreign Value Added (FVA) incorporated into textile exports originates from non-EU-27 countries.

4.2. Geographic Sourcing Dynamics

During hyperglobalization, the decline in the participation of European suppliers was absorbed by Asian countries and, to a lesser extent, by extra-EU partners in semi-proximity (Figure 2). In response to the rapid increase in textile exports from China following the end of the MFA in 2005, the EU approved the *EU–China Textile Agreement* (2005–2008) to prevent market distortions by limiting imports from the Asian giant [124]. This explains the slight rebound in EU suppliers between 2006 and 2008.

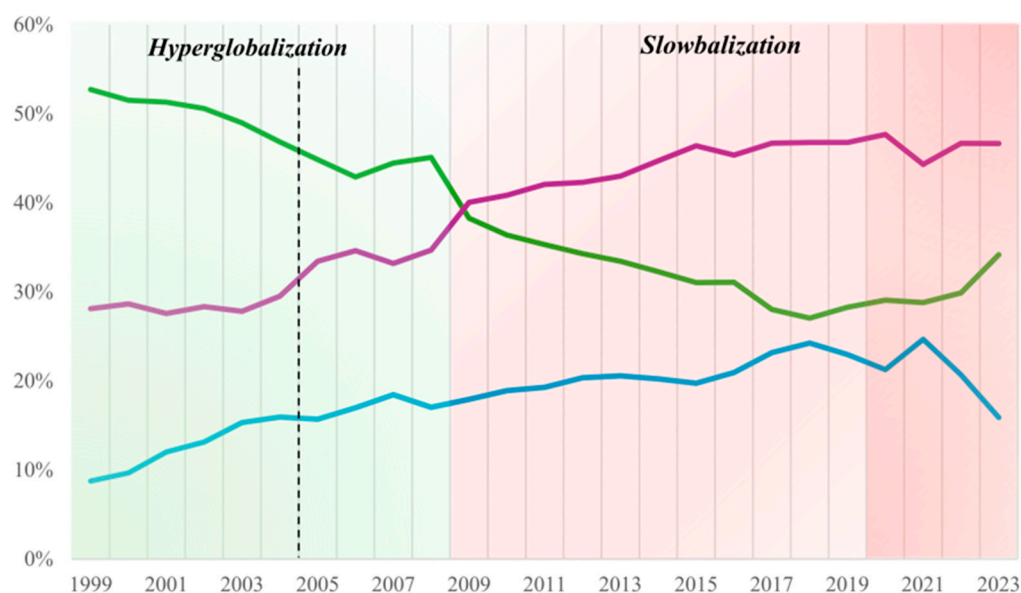


Figure 2. Percentage share of Spanish apparel suppliers, by region. Note: Purple line: Asian suppliers; green line: European suppliers; blue line: semi-proximity suppliers. The black dashed line marks the end of the Multi-Fibre Arrangement in 2005. The background colours distinguish the main analytical phases: hyperglobalization (green shading), pre-pandemic slowbalization (light red shading), and pandemic and post-pandemic slowbalization (dark red shading). Source: Author's calculations based on data from Eurostat [46,47].

However, after the agreement ended, China's share rose rapidly in 2009, marking the beginning of the dominance of Asian suppliers over European ones in Spain's clothing sourcing. In the following years, the gap between the two blocs continued to widen, reaching nearly 20 percentage points in 2018. Since then, the total share of long-distance sourcing has stabilized at around 46% of total imports. The peak recorded by Asian suppliers in 2020 (47.67%) contrasts with their decline in 2021, which was largely absorbed by extra-EU semi-proximity partners, whose share reached its highest level in the entire period (24.66%). This temporary increase can be interpreted as a response to the exceptional disruption of 2020: the collapse of Asian global supply chains, the particular difficulties affecting China and the need for shorter lead times encouraged nearshoring-oriented adjustments toward geographically closer suppliers [20,103,125]. Similarly, the sharp drop in semi-proximity partners in 2022 and 2023 was absorbed mainly by European countries, which increased their share to 34.16% in 2023—their highest level since 2012, although still below the historical mean ($M = 38.26\%$). This suggests that the 2021–2023 reversal was not a sustained structural shift away from Asia, but rather a temporary rebalancing within Spain's apparel sourcing structure after COVID-19.

Figure 3 provides a more detailed view of the evolution of Spanish fashion's sourcing geography. The hyperglobalization era is subdivided into two stages: the first, from 1999 until the end of the MFA (1 January 2005); and the second, from 2005 to 2008, the year in which the Global Financial Crisis brought this phase to a close. During the first period, the rise in South Asia—particularly Bangladesh—and of semi-proximity countries, led by Turkey, was especially notable. In contrast, Europe and the ASEAN region (Thailand, Indonesia, Malaysia, Myanmar, Vietnam and Cambodia) recorded mean annual declines of around 2.3%.

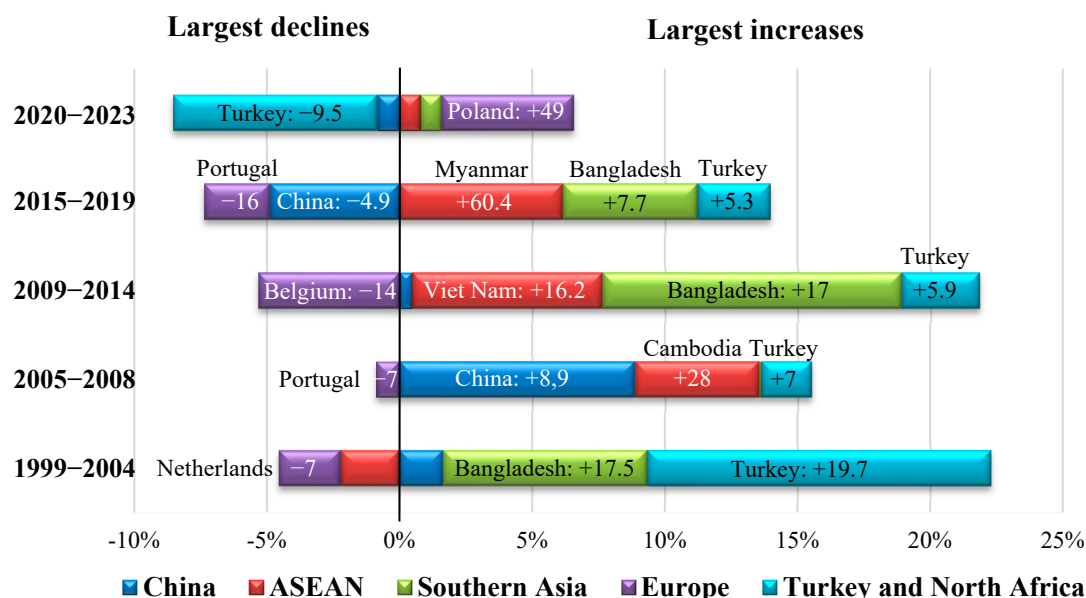


Figure 3. Evolution of the sourcing geography of the Spanish fashion industry. Note: The unit of measurement corresponds to the arithmetic mean of the year-on-year percentage change in suppliers' shares of total imports. Countries are grouped into geographical blocs according to their location, with the exception of China, whose export dominance justifies its individual presentation (Hong Kong is excluded from the analysis). The temporal phases are defined by the key systemic events highlighted in the theoretical framework. Source: Author's calculations based on data from Eurostat [46,47].

In the second stage, Asian producers grew significantly following the elimination of the quota system, in line with existing literature, e.g., [13]. China consolidated its position

as Spain's main supplier of clothing items, rising from 15.1% in 2004 to 19.71% in 2005—an annual increase in more than 30% (see Supplementary Data, Sheet S3). The *EU–China Textile Agreement* moderated its import volume until 2008, which simultaneously helped put a brake on the decline of European suppliers. At the same time, the ASEAN region began an upward trajectory that would continue throughout the entire series.

This pattern intensified during slowbalization, particularly in the first stage, from 2009 until the end of the Economic Crisis in Spain in 2014. The decline in the participation of European partners is the most pronounced in the entire series, with an average annual variation of -5.3% , representing a cumulative reduction in more than ten percentage points. Conversely, South Asian countries recorded the most significant growth ($+11.3\%$ on average), once again with Bangladesh as the main expanding production hub.

From this point on, a trend can be seen in which sourcing shifts away from traditional long-distance partners and toward new emerging suppliers, consistent with the second phase of the relocation process. On the one hand, the loss of China's share—after reaching its peak in 2010 (23.79%)—was absorbed mainly by Vietnam ($+16.2\%$) and Cambodia ($+15.2\%$), respectively. On the other hand, India, which reached its highest share in 2009 (4.77%), lost its dominance in South Asia to Bangladesh, which in 2013 became Spain's third-largest fashion supplier (9.29%), surpassing Morocco (8.77%).

This transition in the geography of sourcing continued to intensify during the second stage of slowbalization, in the period preceding the pandemic. Between 2015 and 2019, China's share recorded for the first time a negative average variation close to -5% , falling from 21.1% to 16.3% of Spain's total imports. At the same time, Bangladesh (11.15%) overtook Turkey (10.38%) as Spain's second-largest fashion supplier in 2015. Within the ASEAN region, Myanmar consolidated itself as the second production hub after Cambodia, benefiting from the decline of Malaysia, Indonesia and Thailand.

At the European level, the sharp reduction in Portugal's share during this period is noteworthy (-16% average annual variation), falling from 6.86% to 2.86% , a drop of four percentage points. As a result, in 2018 the participation of EU suppliers fell to the lowest level in the entire series (27.05%), representing just over one-quarter of Spain's fashion imports.

In the most recent stage (2020–2023), the pandemic accelerated changes in geographic sourcing patterns, increasing the participation of most European countries—except the United Kingdom, which fell by -26.76% as a consequence of Brexit. The extraordinary rise in Poland ($+49\%$ on average) was accompanied by growth in the Netherlands ($+13\%$), Belgium ($+10\%$), Germany ($+8.6\%$) and Denmark ($+7.3\%$). In the last year, Italy stood out in particular ($+20\%$), increasing its share from 6.59% in 2022 to 7.96% in 2023—its highest level since 2012. Portugal also experienced a slight post-pandemic recovery ($+10.5\%$), although its 2023 share (3.56%) represented barely one-third of its historical peak in 2003 (10.86%).

However, as Figures 2 and 3 show, the increase in EU participation during this stage was not due to a reduction in Asian sourcing, but rather to the contraction of semi-proximity suppliers, who saw the largest decline in the entire series (average annual variation of -7.7%). The sharpest drop was observed in Turkey (-9.5% on average), whose share fell to 8% in 2023—its lowest value in the slowbalization phase. Meanwhile, the nearly three-percentage-point decline of Morocco between 2021 (9.74%) and 2023 (7.02%)—its worst level since 2000—allowed Italy to overtake it as the fourth-largest supplier.

Among long-distance suppliers, the largest increases after COVID-19 were recorded by Vietnam ($+11.3\%$) and Cambodia ($+6.25\%$). In South Asia, Pakistan surpassed India for the first time in 2021, while Bangladesh reduced its gap with China to less than one percentage point in 2023 (14.9% and 15.6% , respectively), following the slight decline of the Asian giant in the post-pandemic context.

4.3. Strategic Reconfiguration of Spanish Fashion Sourcing

To assess whether the sourcing geography has been shaped by diversification/concentration strategies, geographic proximity (nearshoring), or geopolitical affinity (friendshoring), changes in the corresponding aggregated indicators must be analysed.

First of all, the HHI shows an inverted U-shaped trend: it reached its minimum value in 2002 (Min = 0.074), increased rapidly between 2005 and 2010 (Max = 0.10)—coinciding with China's record share—and, in subsequent years, gradually declined, indicating greater supplier diversification, especially during the post-pandemic phase of slowbalization. The year 2023 saw the lowest concentration value of the post-MFA era (0.081) (Figure 4a), largely due to the sharp decline of major semi-proximity suppliers (Figure 4b).

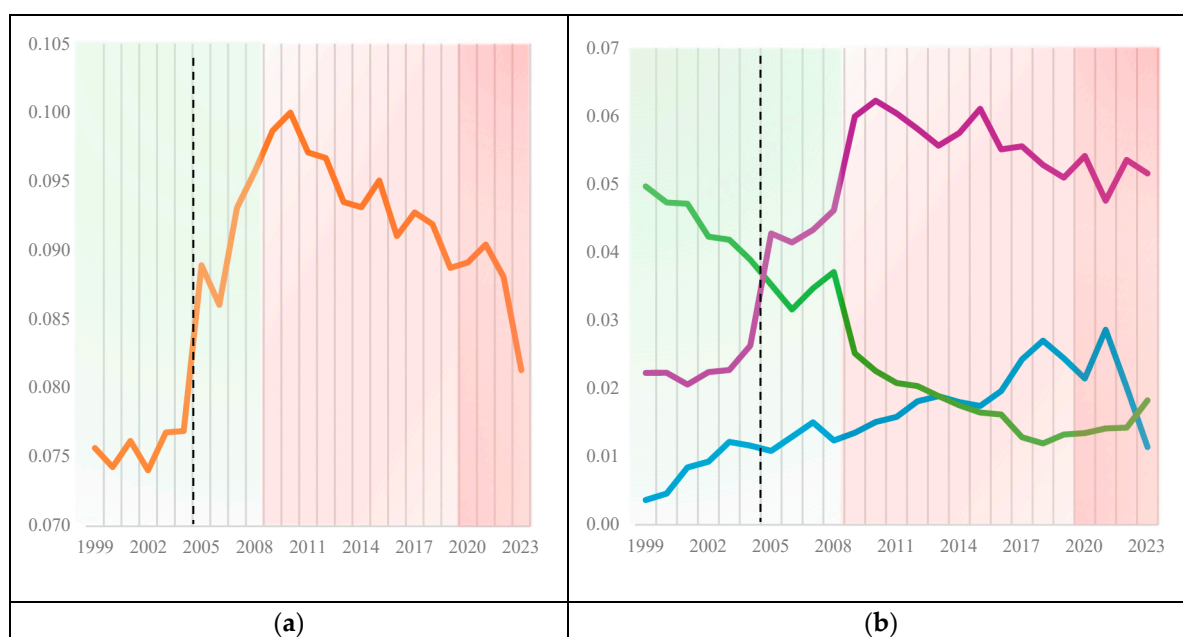


Figure 4. Concentration Index (HHI), global (a) and regional (b). Note: Purple line: Asian suppliers; green line: European suppliers; blue line: semi-proximity suppliers. Black dashed line: end of MFA era. Source: Author's calculations based on data from Eurostat [46,47].

During hyperglobalization, the trajectories of European, Asian and semi-proximity suppliers mirrored their respective import shares (see Figures 2 and 4b). However, in the slowbalization phase, the Asian bloc experienced a structural shift: while its overall participation increased (Figure 2), its degree of concentration progressively decreased (Figure 4b). This pattern reveals a territorial redistribution of long-distance sourcing, with China losing dominance in favour of the expanding South Asia and ASEAN regions.

European exporters, for their part, are the only group to show reconcentration since 2018, due to the rise in the EU partners mentioned above who, in addition to absorbing much of the share lost by semi-proximity suppliers, also benefited from the decline of the United Kingdom following Brexit.

Unlike the HHI, the aggregated indicator of trade-weighted geographic distance shows a markedly upward trend. The greatest proximity to suppliers was recorded in 2001 (Min = 3134 km), whereas in 2020—amid the sourcing difficulties caused by the pandemic—the Spanish fashion industry imported more garments than ever from long-distance Asian partners (47.67% of the total), at an average distance of 5041 kilometres (Figure 5). After the drop in 2021, the trend has remained relatively stable: in 2023 it stood at 4881 km, a value practically identical to that of 2017 (4880 km) and above the historical average ($M = 4214$ km).

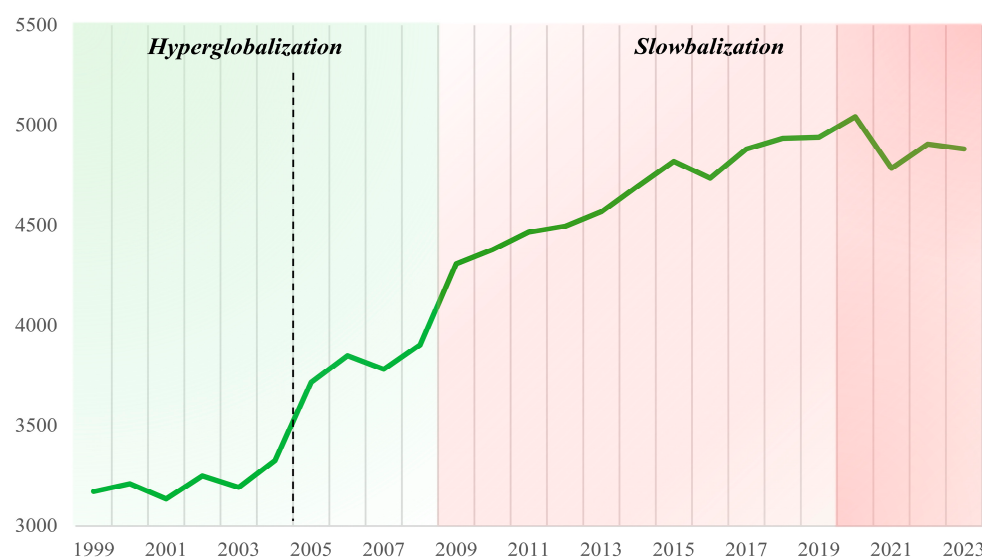


Figure 5. Trade-weighted geographic distance (km). Source: Author's calculations based on data from Eurostat [46,47] and Mayer & Zignago [126].

Finally, trade-weighted geopolitical alignment reached its maximum in 2007 (0.807), when most of Spain's fashion sourcing came from European countries (Figure 6). During slowbalization, the trend fluctuates moderately downward, with a first drop below 0.75 in 2015 (0.744), coinciding with Bangladesh's consolidation as the second-largest exporter. After the pandemic, the indicator reached its historical minimum in 2023 (0.72), suggesting that friendshoring has been losing relevance as a key strategy in the overall restructuring of Spanish fashion sourcing. However, since the value of this indicator is conditioned by the weight of suppliers with the largest market shares, these two variables are examined separately and by region in Section 4.4.

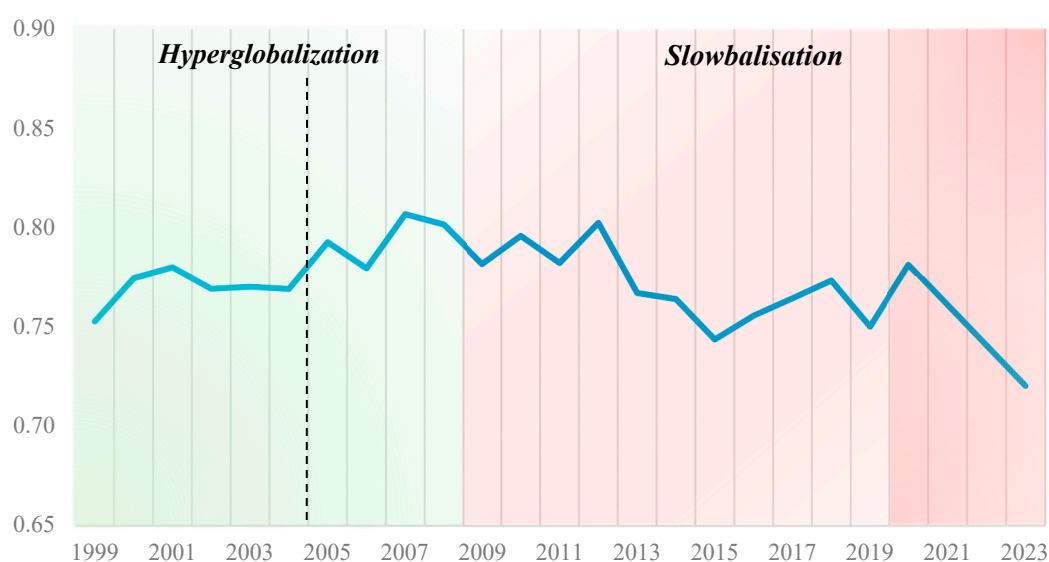


Figure 6. Trade-weighted geopolitical alignment. Note: The unit of measurement is trade-weighted geopolitical alignment, expressed on a [0–1] scale. Source: Author's calculations based on data from Eurostat [46,47] and Bailey et al. [118].

To visualize and compare them overall, Figure 7 analyses the variation in the nearshoring, diversification and friendshoring indicators, following the practice of previous studies, e.g., [83]. This approach is more sensitive to significant changes that may have

occurred in the sector, allowing structural dynamics and turning points in the Spanish fashion industry to be observed longitudinally.

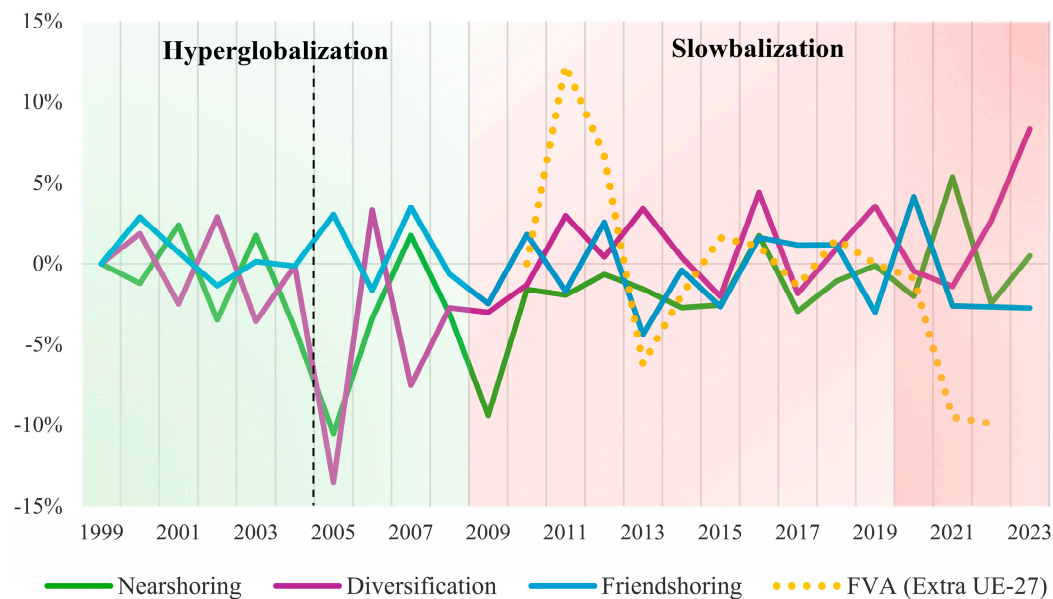


Figure 7. Global strategies in the reconfiguration of the apparel GVC. Note: Values expressed as year-on-year percentage variation. Source: Author's calculations based on data from Eurostat [46,47,120], Mayer & Zignago [126] and Bailey et al. [118].

The first striking finding is the sharp simultaneous decline in both trade diversification and nearshoring in 2005 following the end of the MFA, due to increased competition from Asian suppliers in the sector, in line with existing literature [14]. This resulted in an increase in both the concentration of imports from these countries and the geographic distance of trade, reflecting the synergies between both indicators.

Likewise, a clear paradigm shift can be seen between the phases of hyperglobalization and slowbalization, particularly regarding the diversification of garment imports. While during the first decade of the 21st century the gradual elimination of the quota system by the WTO post-MFA and also the 2008 economic recession accelerated the move toward more streamlined supply chains—where lead firms worked with fewer, larger and more capable suppliers strategically located around the world [56]—in the second and third decades the strategies changed. They appeared increasingly oriented toward expanding the number of suppliers to reduce the risks associated with geographic concentration of sourcing [4,91]. Whereas the 2008 crisis had a primarily economic impact on GVCs, the 2020 pandemic had a more logistical impact, exposing the fragility and poor resilience of supply chains due to excessive dependence on a small number of dominant producers [37]. These results align with recent GVC studies warning of the risks associated with limited geographic diversification in input sourcing [28,93].

A significant transition is also evident between the pre- and post-pandemic stages of slowbalization. Until 2020, the nearshoring indicator showed a consistently negative variation—except in 2016 due to the decline in China's share—indicating the increasing average geographic distance between Spain and its suppliers, in line with global trends over recent decades [84].

However, rising transportation costs and supply chain collapses in Asia after COVID-19 exposed the fragility associated with excessive distance between production and consumption sites. These factors prompted a surge in nearshoring in 2021, which for the first time during slowbalization showed a positive variation greater than that of

diversification. Nevertheless, this trend toward reconcentrating sourcing in proximity and semi-proximity dissipated in subsequent years, consolidating diversification as the preferred strategy to mitigate sourcing risk in the fashion industry.

The friendshoring indicator, meanwhile, is sensitive to abrupt changes in trade participation, as geopolitical alignment does not typically exhibit large year-to-year variations. Therefore, it tends to fluctuate at key moments such as the quota elimination in 2005 or the pandemic in 2020. The increase observed in 2007 was due to the decline of Asian suppliers following the *EU–China Textile Agreement* (2005–2008) and the rise in the participation of European partners. As a result, nearshoring also increased in 2007 but fell again in 2009 after China’s rebound once the agreement ended.

These results show that the sourcing structure of the Spanish fashion industry continued to expand during slowbalization, but not in a way consistent with full regionalization. Although garment sourcing became progressively more diversified during this phase, this did not translate into a greater overall share for European suppliers. On the contrary, the decline is especially clear when comparing their average participation during hyperglobalization (47.9%) with that recorded during slowbalization (31.8%) (Supplementary Data, Sheet S3).

In this sense, the evidence suggests that the Spanish fashion GVC was not regionalized following the loss of momentum in global trade after the 2008 financial crisis [18,19,27,31,71]. Nor was dependence on Asian supply substantially reduced, despite the weakening of some of the advantages associated with China’s rapid integration into the global manufacturing system during the 1990s and 2000s [27]. By contrast, the post-pandemic phase of slowbalization does reveal a progressive regionalization of value added, reflected in the sharp decline in backward participation from non-EU-27 countries in Spain’s textile GVC.

4.4. The Geopolitical Dimension

At the aggregate level ($n = 625$), geopolitical alignment appears as a relevant but limited factor in the reconfiguration of the Spanish fashion GVC, since import flows are shaped not only by geopolitical affinity itself, but also by trade agreements, pre-existing supply chains, labour costs and other structural factors. Pearson and Spearman bivariate correlations show a positive and statistically significant association between supplier participation and unweighted geopolitical alignment, although the strength of that association remains weak (Table 3). This result should therefore be read with some caution, since geopolitical alignment captures broad diplomatic proximity rather than immediate sourcing responses to short-term political shocks.

Table 3. Pearson and Spearman Bivariate Correlations between the Share in Spain’s Imports by Country Group and Geopolitical Alignment.

Country Group	N	Pearson Coefficient (r)	Spearman Coefficient (q)
Total	625	0.139 **	0.133 **
Asian countries	275	−0.095	−0.151 *
European countries	250	−0.060	−0.004
Semi-proximity countries	100	0.548 **	0.566 **

* $p < 0.05$ (two-tailed); ** $p < 0.01$ (two-tailed). Note: Correlations reflect the relationship between the share of each country in Spain’s imports and geopolitical alignment (0 = total geopolitical distance; 1 = total geopolitical alignment). For Pearson correlations, the share variable was logit-transformed to meet normality assumptions, whereas for Spearman correlations, the original DV was used. Source: Author’s calculations.

Once suppliers are grouped by sourcing geography, however, a more differentiated pattern emerges. Semi-proximity suppliers show a clearly positive and statistically

significant association between geopolitical alignment and import share in both the Pearson and Spearman coefficients, whereas European suppliers do not display any significant relationship. Asian suppliers, by contrast, show a weak and negative association, which is statistically significant only in the rank-based specification. These descriptive results suggest that the geopolitical dimension does not operate uniformly across supplier groups and that its association with Spanish apparel sourcing is more visible in semi-proximity locations than in the Asian bloc.

To assess whether this descriptive pattern holds under a more demanding specification, the analysis incorporates a fractional response model in which suppliers' import shares are modelled as a function of geopolitical alignment, supplier region and the interaction between both variables, while controlling for year effects and clustering standard errors at the supplier level. This second step is important because correlation analysis identifies broad associations but does not establish whether these remain visible once regional differences are examined within a common multivariate framework.

The econometric results indicate that the association between geopolitical alignment and supplier participation is regionally differentiated rather than uniform across the sourcing structure (Table 4). With Asia as the reference category, the interaction between geopolitical alignment and semi-proximity suppliers is positive and statistically significant, whereas the corresponding interaction for Europe is not. In substantive terms, this means that the relationship between geopolitical alignment and import share is more positive in semi-proximity suppliers than in Asian suppliers, while no clear difference can be established between Europe and Asia at the coefficient level.

Table 4. Fractional logit model of the association between geopolitical alignment and import share, by region.

Predictor	B	SE
Geopolitical alignment	−3.470	2.909
Europe	−3.079	7.974
Semi-proximity	−5.437 [†]	3.197
Geopolitical alignment × Europe	4.333	8.565
Geopolitical alignment × Semi-proximity	7.912 [*]	3.950
Year controls	Yes	
Supplier-clustered standard errors	Yes	
N	625	

[†] $p < 0.10$. ^{*} $p < 0.05$. Note: The dependent variable is supplier import share. Estimates are obtained from a fractional logit model with Asia as the reference category. Year controls are included but not displayed. Standard errors are clustered at the supplier level. Source: Author's calculations.

Average marginal effects provide a clearer interpretation of this regional heterogeneity (Figure 8). Among semi-proximity suppliers, the marginal effect of geopolitical alignment on import share is positive and statistically significant (AME = 0.190, 95% CI [0.085, 0.295]). In Asia, by contrast, the estimated marginal effect is negative but not statistically distinguishable from zero (AME = −0.119, 95% CI [−0.340, 0.102]). In Europe, the estimated effect is small and positive, but also highly imprecise (AME = 0.032, 95% CI [−0.546, 0.609]), indicating substantial uncertainty and precluding any strong inference. Taken together, these results suggest that the geopolitical dimension is not absent from Spanish apparel sourcing, but neither does it operate as a generalized friendshoring mechanism. Rather, its clearest positive association appears among semi-proximity suppliers, particularly in comparison with the Asian bloc.

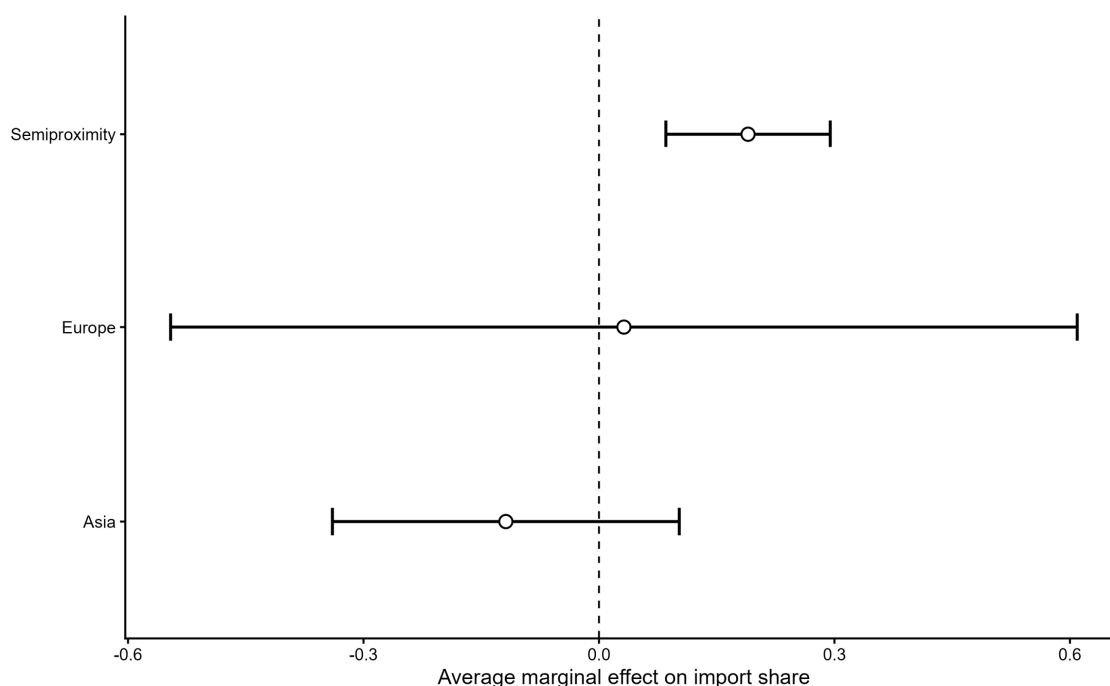


Figure 8. Average marginal effects of geopolitical alignment on import share by region. Source: Author's calculations.

This pattern can be better understood by considering recent developments in semi-proximity sourcing locations. Turkey is a clear example: although its proximity to Europe became an advantage during the pandemic, when fashion firms sought shorter lead times and lower exposure to freight disruption, this advantage weakened as shipping costs normalized and domestic inflation, rising production costs and exchange-rate pressures reduced the competitiveness of the Turkish textile and apparel sector [127]. The 2023 earthquakes added further pressure, affecting key textile-producing regions and disrupting suppliers' operations and labour conditions [128]. In the Western Mediterranean, the 2021 diplomatic crisis between Spain and Morocco also showed that nearshoring strategies in the Maghreb depend not only on geographic proximity, but also on stable bilateral relations and institutional predictability [129].

These cases do not imply a direct causal relationship between each event and annual changes in Spanish import shares. Rather, they help explain why geopolitical alignment appears more relevant among semi-proximity suppliers, where proximity-based advantages depend strongly on reliability, political stability and macroeconomic conditions. By contrast, major Asian suppliers are embedded in larger and more consolidated production networks, which may partly buffer the effect of geopolitical alignment on their aggregate participation in Spanish apparel imports [56,103].

In this regard, the decline in the aggregate friendshoring index during the latest stage of slowbalization, as shown in Figure 6, does not necessarily imply a reversal of the trend toward greater trade with geostrategically aligned partners. Rather, it may reflect changes in the weight of specific suppliers with which geopolitical distancing has occurred.

5. Discussion: Towards a Sustainable Balance Between Efficiency, Proximity and Resilience

The results reveal that Spain's garment sourcing has been diversifying during the slowbalization phase, in line with previous studies which, although confirming an increase in the average distance of trade, also point to a trend toward greater regional integration of GVCs from 2018 onwards, following the US–China trade war

[58,84,93,94,125,130]. In fact, despite the higher wage levels in European countries compared to emerging economies, more than a third of Spain's clothing imports came from within the region in 2023.

Contrary to what might be expected, this process of regionalization of Spanish fashion has not been driven by nearshoring dynamics away from Asian producers—who continue to dominate as the main textile sourcing market despite the deconcentration of Chinese supply activity—but rather by selective friendshoring strategies, without evidence of a generalized geopolitical realignment. According to recent studies, the growing regionalization of production brought by intra-EU nearshoring strategies has not entailed a rejection of globalized production in favour of intraregional production, but it has intensified state interventions with geopolitical motivations, which appear to have influenced the strategic investment decisions of EU firms [69].

In this respect, the results suggest that the geopolitical dimension of Spanish apparel sourcing is most clearly expressed among semi-proximity suppliers. This pattern may be linked to the growing fragility of sourcing relations in nearby production hubs under conditions of geopolitical uncertainty and macroeconomic instability [131], particularly in an industry such as apparel, where sourcing strategies depend heavily on flexibility, speed and coordination across fragmented value chains [20,56,132].

Taken together, these three dimensions point to the emergence of a third phase in the relocation process of the Spanish fashion industry after the pandemic, in which sourcing decisions appear to be moving from a logic predominantly centred on cost minimisation toward a more complex balance between cost, reliability and exposure to risk. Although Spanish fashion firms still face the challenge of preserving the cost advantages and economies of scale associated with Asian production [4,22,95], this new phase also involves the need to reduce excessive dependence on large extra-EU suppliers and to secure part of the sourcing structure through more reliable or geopolitically aligned partners [100]. Following the disruptions caused by COVID-19, efforts to quantify the balance between resilience and efficiency suggest that import diversification would improve supply chain performance when the likelihood of a trade disruption is high [96].

This shift—characterized by the pursuit of what we call “flexi-security”—has been shaped by a combination of factors: (1) the narrowing of production cost gaps between developing and developed countries [18,19]; (2) technological advances, which could favour the relocation of production processes closer to consumers by reducing the demand for labour-intensive activities [76,133,134]; (3) rising raw material and transportation costs [86]; and (4) pressures related to sustainability [135,136].

Regarding this last point, European regulations and the Sustainable Development Goals (SDGs) exert increasing pressure on the fashion industry, considered one of the most polluting in the world [42]. There is mounting demand for companies to implement stricter environmental and social criteria throughout the entire GVC, especially in relation to traceability, corporate sustainability due diligence, textile waste management and circularity [44,135]. In this context, specific instruments already present in the EU policy agenda—such as the Digital Product Passport and extended producer responsibility schemes—could help align supplier diversification with labour, environmental and circularity objectives [136,137].

Despite this regulatory momentum, on a large scale, the transformational shift in Spain's textile GVC toward greater sustainability during slowbalization has not materialized with the expected intensity, particularly regarding the relocation of production (nearshoring). Evidence of this can be found in the annual reports of Inditex, Spain's leading fashion company, which, despite touting proximity as a key criterion of its supply chain and stating that “a very significant part of the factories (...) are located in Spain or nearby countries such as Portugal, Morocco or Turkey” [138] (p. 341), has in fact reduced its near-

production share by 6 percentage points in recent years (from 54% in 2019 to 48% in 2023) [138,139].

Although the sharp decline in Foreign Value Added (FVA) generated by non-EU partners in Spain's textile GVC—which, according to Bontadini et al. [140], would be equivalent to intra-EU nearshoring—may suggest progress toward reinforcing the strategic autonomy of the European industry [80,88,141], the productive segment of the apparel GVC remains structurally dependent on Asian sourcing. The sustainability consequences of this continued dependence are clear: environmentally, the lengthening of GVCs increases greenhouse gas emissions during international transport [40,41]; socially, high production levels in emerging Asian economies reproduce vulnerabilities and hidden labour exploitation [21]. For this reason, the EU policy measures mentioned above should also be accompanied by support for supplier upgrading, so that diversification reduces excessive dependence on a limited number of sourcing countries without transferring labour and environmental risks to less visible production locations [20,21,28,43,115].

At the same time, from a sociological perspective, it is undeniable that the faster the pace of consumption and production, the lower the sustainability [45]. However, blaming solely companies for this unsustainable model would be only a partial explanation [44]. Whether due to economic factors—such as lack of resources to purchase high-quality, durable garments—or social factors—such as the constant desire for distinction and status through clothing [142,143]—part of the problem clearly lies with consumers, who reproduce a compulsive consumption model in the Global North [144] that perpetuates the hyper-consumption society [39].

Despite the fact that regulatory requirements have led to a slight shift in consumer behaviour and purchasing patterns—increasing interest in products made in Spain and in sustainable and recycled items [145]—most of society continues to reinforce fast-fashion consumption over more ethical alternatives such as slow fashion [146].

6. Conclusions

This paper has examined the GVC of clothing in Spain during the hyperglobalization and slowbalization eras, in a context in which the logic of international fragmentation in production has undergone considerable change, due to geopolitical frictions, global trade protectionism and sustainability pressures. The transition to slowbalization has not brought with it a transformational change in the sourcing structure of Spanish fashion, which continues to be highly dependent on long-distance supply.

Consequently, the results indicate that the geographic diversification of sourcing did not translate into a broader regionalization of the Spanish fashion GVC. Rather than shortening, the chain continued to lengthen during the slowbalization phase, despite a partial shift toward greater intra-European trade following the onset of the 2018 trade war. At the same time, the findings show that geopolitical alignment is not extraneous to Spanish apparel sourcing. Its association with supplier participation is uneven across regions and becomes particularly visible once differences in sourcing geography are taken into account.

The results also show that strategies to diversify traditional extra-EU suppliers have not led to a large-scale withdrawal from Asian countries—particularly China, which remains Spain's main textile supplier. However, since the 2008 Financial Crisis, and especially after COVID-19, the cost-minimisation logic that previously drove industrial offshoring appears to have been increasingly complemented by concerns over supply security, uncertainty and risk management. This is the basis for what the article conceptualizes as supply “flexi-security”: not a replacement of efficiency, but a rebalancing of sourcing priorities in which resilience and predictability gain importance alongside costs [22,27,81,94].

From this perspective, the study contributes to the literature on GVC reconfiguration by offering a longitudinal and sociologically informed analysis of a key sector of the

Spanish economy, in a context where the fashion industry has had to adapt rapidly to trade tensions arising from the systemic crises of the past two decades. It also contributes to the debate on the slowdown of activity in a truly global value chain [34], suggesting that, despite the partial recovery of European garment sourcing after the pandemic, both the value of imports from Asian countries and these countries' overall participation continued to increase during slowbalization. Therefore, the findings do not point to a sustained shortening of GVCs, nor do they support the claim that the expansion of Spanish fashion sourcing reached its peak in this period.

One of the main limitations of this study is that it does not capture the full production structure of Spanish fashion or its GVC, due to its focus on the flows of clothing imports. As a result, other dimensions such as domestic production, distribution, or consumption fall outside the scope of analysis. An additional limitation is that the nature of the data does not make it possible to determine the proportion of garments imported from European countries that were actually manufactured in emerging economies and subsequently re-exported to Spain. In a similar vein, the focus on the 25 main suppliers may exclude smaller or emerging sourcing locations that do not yet account for a large share of total imports but may become relevant in future diversification strategies.

Similarly, as this is a macroeconomic country-level study, it has not been possible to identify the specific strategies implemented at the firm level, even though the sourcing structure revealed in this research is directly conditioned by the strategic decisions of Inditex, Spain's leading textile group and one of the largest fashion distributors in the world.

These limitations should be taken into account when designing future research avenues, to expand the analysis toward intra-European supply chains, export and re-export flows and other links of the garment GVC, with the aim of identifying new geographic patterns, external production dependencies and more complex global strategies that cannot be captured solely through import data. All of this must be framed within a global context in which US tariffs will continue to reshape the trade landscape, forcing brands and suppliers to adapt quickly to the current scenario of globalization in crisis, rising protectionism and geopolitical tensions.

Additionally, it would be highly valuable to implement microeconomic analyses at the firm level to better understand the heterogeneity of the sector in Spain, as trade statistics do not reflect the low performance of local producers. In many cases, these producers simultaneously act as suppliers to major fashion distributors, who account for the bulk of imports [14].

Finally, an emerging and highly relevant line of research stems from the sustainability and circular-economy challenges facing the industry [44,137]. This would involve mapping the sourcing geography of recycled textile inputs, as well as the final link in the garment GVC: international flows of used clothing. Indeed, the growing popularity of recycled materials could expand the regionalization of the EU's textile and apparel GVC and increase intraregional trade in inputs [44,147].

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/world7070109/s1>, The Supplementary Data S1 (Supplementary Data.xls) contains the data used in the analysis. Sheet S1 reports annual values of Spanish apparel imports by supplier country. Sheet S2 presents the share of the top 25 suppliers in total Spanish apparel imports. Sheet S3 reports the average year-on-year change in import shares by region and year. Sheet S4 contains the calculations for the concentration/diversification index, Sheet S5 for the nearshoring index, and Sheet S6 for the friendshoring index. Sheet S7 contains the data on foreign value added. These materials are provided to support transparency, reproducibility and further analytical scrutiny.

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Abbreviations

The following abbreviations are used in this manuscript:

GVCs	Global Value Chains
MFA	Multi Fibre Arrangement
RVCs	Regional Value Chains
HHI	Herfindahl-Hirschman Index
FVA	Foreign Value Added
U.S.	United States
EU	European Union
SDGs	Sustainable Development Goals
WTO	World Trade Organization

Appendix A

Table A1. Actors in apparel distribution.

Type of Company	Degree of Production Control	Description	Examples
Mass consumption distribution	The distributor owns or buys the licence of the brand of the final product but does not have own production	The distributor licences the brand or develops its own brands, which are only sold in its stores	Carrefour, El Corte Inglés, Cortefiel, Walmart
Specialized distribution		The distributor develops own brand, which is usually the name of the stores	Gap, H&M, Benetton, Mango, Adolfo Domínguez, Springfield
Major brands	The producer is the owner of the brand which is distributed in a variety of sales points (own and external)	Manufacturers without factories. The brand controls the production process, which is totally outsourced	Nike, Adidas, Polo Ralph Lauren, Desigual, Loewe, Tous
Brand manufacturer		The company owns the brand and production. Typically combines in-house manufacturing with a variety of offshore subcontractors in emerging countries	Inditex, Fruit of the Loom

Source: Author’s elaboration based on Gereffi and Frederick [56], adapted by Benages et al. [50], p. 178).

References

1. Rodrik, D. *The Globalization Paradox: Democracy and the Future of the World Economy*; W. W. Norton & Co.: New York, NY, USA, 2011; ISBN 978-0-393-07161-0.

2. Eichengreen, B.J. *Globalizing Capital: A History of the International Monetary System*, 3rd ed.; Princeton University Press: Oxford, UK, 2019; ISBN 978-0-691-19390-8.
3. Baldwin, R. Global Supply Chains: Why They Emerged, Why They Matter, and Where They Are Going. In *Global Value Chains in a Changing World*; Elms, D.K., Low, P., World Trade Organization, Temasek Foundation, Eds.; World Trade Organization: Geneva, Switzerland, 2013; pp. 13–60, ISBN 978-92-870-3882-1.
4. OECD. *OECD Supply Chain Resilience Review: Navigating Risks*; OECD Publishing: Paris, France, 2025; ISBN 978-92-64-38595-5.
5. Blázquez, L.; Díaz-Mora, C.; González-Díaz, B. Slowbalisation or a “New” Type of GVC Participation? The Role of Digital Services. *J. Ind. Bus. Econ.* **2023**, *50*, 121–147. <https://doi.org/10.1007/s40812-022-00245-x>.
6. Balwind, R.; Ito, T.; Sato, H. *Portrait of Factory Asia: Production Network in Asia and Its Implication for Growth; the ‘Smile Curve’*; Institute of Developing Economies: Chiba, Japan, 2014.
7. Giosa, N.; Rodríguez, C. *Estrategias de Desarrollo y Equidad de Género: Una Propuesta de Abordaje y su Aplicación al Caso de las Industrias Manufactureras de Exportación en México y Centroamérica; Serie Mujer y Desarrollo*; Naciones Unidas, CEPAL, Div. de Asuntos de Género: Santiago de Chile, Chile, 2010; ISBN 978-92-1-323372-6.
8. Trinidad Requena, A.; Soriano-Miras, R.M.; Bejarano Bella, J.F.; Torres Rodríguez, A.J.; Entrena Durán, F.; García Moreno, J.M.; Martínez Martín, R.; de Guzmán Medina, A.C.; Barros Rodríguez, F.; García-Valdecasas Medina, J.I.; et al. *La Cadena Global de Valor en las Prendas de Vestir: La Conciencia del Consumidor Respecto a los Lugares de Producción*; Tecnos: Madrid, Spain, 2021; ISBN 978-84-309-8139-7.
9. Amador, J.; Cabral, S. Global Value Chains: A Survey of Drivers and Measures. *J. Econ. Surv.* **2016**, *30*, 278–301. <https://doi.org/10.1111/joes.12097>.
10. George, S.; Wolf, M. *La Globalización Liberal a Favor y en Contra*; Anagrama: Barcelona, Spain, 2006; ISBN 978-84-339-6184-6.
11. Barbieri, P.; Boffelli, A.; Elia, S.; Fratocchi, L.; Kalchschmidt, M.; Samson, D. What Can We Learn about Reshoring after COVID-19? *Oper. Manag. Res.* **2020**, *13*, 131–136. <https://doi.org/10.1007/s12063-020-00160-1>.
12. Hummels, D.; Rapoport, D.; Kei-Mu, Y. Vertical Specialization and the Changing Nature of World Trade. *Econ. Policy Rev.* **1998**, *4*, 21.
13. Milberg, W.; Winkler, D. *Outsourcing Economics: Global Value Chains in Capitalist Development*; 1st ed.; Cambridge University Press: Cambridge, UK, 2013; ISBN 978-1-107-02699-5.
14. Gandoy, R.; Díaz, C.; González-Díaz, B.; Martínez, C.; Merino, F. *Value Chains Between EU Countries and Other Member Countries of the Union for the Mediterranean*; Ministerio de Comercio. Gobierno de España: Madrid, Spain, 2023.
15. Subramanian, A.; Kessler, M. *The Hyperglobalization of Trade and Its Future*; Peterson Institute for International Economics: Washington, DC, USA, 2013.
16. Baldwin, R.; Freeman, R.; Theodorakopoulos, A. Deconstructing Deglobalization: The Future of Trade Is in Intermediate Services. *Asian Econ. Policy Rev.* **2024**, *19*, 18–37. <https://doi.org/10.1111/aepr.12440>.
17. Fernández, J.J. La Hiperglobalización y Su Impacto. In *Gobernanza Futura: Hiperglobalización, Mundo Multipolar y Estados Menguantes*; Cuadernos de Estrategia; Ministerio de Defensa: Madrid, Spain, 2018; pp. 83–118, ISBN 978-84-9091-383-3.
18. Del Val, D. ¿‘Quo Vadis’, Globalización? (Parte I): La Larga Ralentización. *CaixaBank Research*. CaixaBank Research 11 October 2023, pp. 20–21. Available online: <https://www.caixabankresearch.com/es/economia-y-mercados/actividad-y-crecimiento/quo-vadis-globalizacion-parte-i-larga-ralentizacion> (accessed on 23 April 2026).
19. World Bank Group. *Trading for Development in the Age of Global Value Chains*; World Bank Group, Ed.; World development report; International Bank for Reconstruction and Development/The World Bank: Washington, DC, USA, 2020; ISBN 978-1-4648-1457-0.
20. Fernandez-Stark, K.; Bamber, P.; Couto, V. *Analysis of the Textile and Clothing Industry Global Value Chains*; Inter-American Development Bank: Washington, DC, USA, 2022. <https://doi.org/10.18235/0004638>.
21. Anner, M. Power Relations in Global Supply Chains and the Unequal Distribution of Costs during Crises: Abandoning Garment Suppliers and Workers during the COVID-19 Pandemic. *Int. Labour Rev.* **2022**, *161*, 59–82. <https://doi.org/10.1111/ilr.12337>.
22. Xing, Y.; Wang, R.; Dollar, D. *Global Value Chain Development Report 2023 Resilient and Sustainable GVCS in Turbulent Times*; Research Institute for Global Value Chains at the University of International Business and Economics, Asian Development Bank, the Institute of Developing Economies–Japan External Trade Organization and the World Trade Organization: Geneva, Switzerland, 2023.
23. Gereffi, G.; Humphrey, J.; Sturgeon, T. The Governance of Global Value Chains. *Rev. Int. Political Econ.* **2005**, *12*, 78–104. <https://doi.org/10.1080/09692290500049805>.
24. Stiglitz, J.E. *Globalization and Its Discontents*; Penguin Books: London, UK, 2002; ISBN 978-0-14-101038-0.

25. Suwandi, I. *Value Chains: The New Economic Imperialism*; Monthly Review Press: New York, NY, USA, 2019; ISBN 978-1-58367-784-1.
26. Aiyar, S.; Chen, J.; Ebeke, C.; Garcia-Saltos, R.; Gudmundsson, T.; Ilyina, A.; Kangur, A. *Geoeconomic Fragmentation and the Future of Multilateralism*; Staff Discussion Notes; International Monetary Fund: Washington, DC, USA, 2023; ISBN 979-8-4002-2904-6.
27. European Commission. *European Economic Forecast Winter 2023*; European Commission: Brussels, Belgium, 2023.
28. Coveri, A.; Giammetti, R.; Zanfei, A. How Fragile Are European GVCs? The Role of Functional Diversification and Implications for Industrial Policy. *J. Ind. Bus. Econ.* **2025**, *52*, 629–666. <https://doi.org/10.1007/s40812-025-00349-0>.
29. Crowe, D.; Rawdanowicz, Ł. *Risks and Opportunities of Reshaping Global Value Chains*; OECD Economics Department Working Papers; Organisation for Economic Co-Operation and Development: Paris, France, 2023; Volume 1762.
30. The Economist. Slowbalization: The Future of Global Commerce. Available online: <https://www.economist.com/weeklyedition/2019-01-26> (accessed on 23 April 2026).
31. Titievskaia, J.; Kononenko, V.; Navarra, C.; Stamegna, C.; Zumer, K. *Slowing Down or Changing Track? Understanding the Dynamics of “Slowbalization”: In-Depth Analysis*; European Union: Brussels, Belgium, 2020; ISBN 978-92-846-7543-2.
32. Baldwin, R. The Peak Globalisation Myth: Part 1. Available online: <https://cepr.org/voxeu/columns/peak-globalisation-myth-part-1> (accessed on 23 April 2026).
33. Baldwin, R. The Peak Globalisation Myth: Part 2—Why the Goods Trade Ratio Declined. Available online: <https://cepr.org/voxeu/columns/peak-globalisation-myth-part-2-why-goods-trade-ratio-declined> (accessed on 23 April 2026).
34. UNCTAD. *From Global Pandemic to Prosperity for All: Avoiding Another Lost Decade*; Trade and development report; United Nations Conference on Trade and Development: Geneva, Switzerland, 2020; ISBN 978-92-1-112992-2.
35. Gereffi, G. International Trade and Industrial Upgrading in the Apparel Commodity Chain. *J. Int. Econ.* **1999**, *48*, 37–70. [https://doi.org/10.1016/S0022-1996\(98\)00075-0](https://doi.org/10.1016/S0022-1996(98)00075-0).
36. Gereffi, G.; Memedovic, O. *The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries*; UNIDO: Vienna, Austria, 2003.
37. MacCarthy, B.L.; Ahmed, W.A.H.; Demirel, G. Mapping the Supply Chain: Why, What and How? *Int. J. Prod. Econ.* **2022**, *250*, 108688. <https://doi.org/10.1016/j.ijpe.2022.108688>.
38. Nicita, A. *International Supply Networks: A Portrait of Global Trade Patterns in Four Sectors*; UN Trade and Development: Geneva, Switzerland, 2023.
39. Lipovetsky, G. *Le Bonheur Paradoxal: Essai sur la Société D’hyperconsommation*; Folio; Gallimard: Paris, France, 2009; ISBN 978-2-07-037988-0.
40. Ashby, A. From Global to Local: Reshoring for Sustainability. *Oper. Manag. Res.* **2016**, *9*, 75–88. <https://doi.org/10.1007/s12063-016-0117-9>.
41. Bick, R.; Halsey, E.; Ekenga, C.C. The Global Environmental Injustice of Fast Fashion. *Env. Health* **2018**, *17*, 92. <https://doi.org/10.1186/s12940-018-0433-7>.
42. Navarro-Martínez, J.; Miras, R.M.S.; Fernández-Urbano, R.; Requena, A.T. The New Scenarios of Globalisation. In Sustainability in the Production and Consumption of Clothing in Europe. In *Migration, Inclusiveness and Sustainability*; Routledge: London, UK, 2025; pp. 263–284; ISBN 978-1-003-61612-2.
43. Niinimäki, K.; Peters, G.; Dahlbo, H.; Perry, P.; Rissanen, T.; Gwilt, A. The Environmental Price of Fast Fashion. *Nat. Rev. Earth Environ.* **2020**, *1*, 189–200. <https://doi.org/10.1038/s43017-020-0039-9>.
44. Palm, C.; Cornell, S.E.; Häyhä, T. Making Resilient Decisions for Sustainable Circularity of Fashion. *Circ. Econ. Sustain.* **2021**, *1*, 651–670. <https://doi.org/10.1007/s43615-021-00040-1>.
45. Riezu, M.D. *La Moda Justa: Una Invitación a Vestir Con Ética*, 2nd ed.; Editorial Anagrama: Barcelona, Spain, 2021; ISBN 978-84-339-1657-0.
46. Eurostat. Comext Files. COMEXT HISTORICAL DATA PRODUCTS 1988, 2001. 2025. Available online: https://ec.europa.eu/eurostat/databrowser/bulk?lang=en&selectedTab=fileComext&breadcrumbFilter=COMEXT_HISTORICAL_DATA%2FPRODUCTS_1988_2001 (accessed on 17 April 2026).
47. Eurostat. International Trade of EU and Non-EU Countries Since 2002 by SITC. 2025. Available online: https://ec.europa.eu/eurostat/databrowser/view/ds-059331__custom_18041948/default/table?lang=en (accessed on 18 April 2026).
48. Sklair, L. *Sociology of the Global System*; Johns Hopkins University Presses: Baltimore, MD, USA, 1991; ISBN 978-0-8018-4186-6.

49. Singh, U. The Globalization of Supply Chains–Policy Challenges for Developing Countries. In *Global Value Chains in a Changing World*; Elms, D.K., Low, P., World Trade Organization, Temasek Foundation, Eds.; World Trade Organization: Geneva, Switzerland, 2013; pp. 313–328, ISBN 978-92-870-3882-1.
50. Benages, E.; Pla-Barber, J.; Solaz Alamá, M.; Villar García, C. *La Competitividad Española en las Cadenas de Valor Globales*, 1st ed.; García Pérez, F., Ed.; Fundación BBVA: Bilbao, Spain, 2020; ISBN 978-84-92937-78-3.
51. UNCTAD. (Ed.) *World Investment Report 2002: Transnational Corporations and Export Competitiveness*; United Nations Conference on Trade and Development; United Nations: New York, NY, USA, 2002; ISBN 978-92-1-112551-1.
52. UNCTAD. *World Investment Report 2004. The Shift Towards Services*; World investment report; United Nations: New York, NY, USA, 2004; ISBN 978-92-1-112644-0.
53. Trinidad Requena, A.; Soriano-Miras, R.M.; Solís, M.; Kopinak, K., (Eds.) *Localized Global Economies on the Northern Borderlands of Mexico and Morocco*, 1st ed.; Palgrave Macmillan an imprint of Springer Nature: Cham, Switzerland, 2019; ISBN 978-3-319-96588-8.
54. Miroux, A. *FDI from Developing and Transition Economies: Implications for Development*; UNCTAD, Ed.; World investment report; United Nations: New York, NY, USA, 2006; ISBN 92-1-112703-4.
55. Navarro Martínez, J.; Soriano Miras, R.M.; Trinidad Requena, A. La ‘Frontera’ En La Nueva Geografía Económica Global: Los Casos de México y Marruecos. *Pap. Eur.* **2023**, *36*, e84104. <https://doi.org/10.5209/pade.84104>.
56. Gereffi, G.; Frederick, S. The Global Apparel Value Chain, Trade and the Crisis: Challenges and Opportunities for Developing Countries. In *Global Value Chains in a Postcrisis World: A Development Perspective*; Cattaneo, O., Gereffi, G., Staritz, C., Eds.; World Bank: Washington, DC, USA, 2010; pp. 157–208, ISBN 978-0-8213-8499-2.
57. Taplin, I.M. Global Commodity Chains and Fast Fashion: How the Apparel Industry Continues to Re-Invent Itself. *Compet. Change* **2014**, *18*, 246–264. <https://doi.org/10.1179/1024529414Z.00000000059>.
58. Rodrik, D. Why Does Globalization Fuel Populism? Economics, Culture, and the Rise of Right-Wing Populism. *Annu. Rev. Econ.* **2021**, *13*, 133–170. <https://doi.org/10.1146/annurev-economics-070220-032416>.
59. Trinidad Requena, A.; Soriano-Miras, R.M.; Barros Rodríguez, F.; Kopinak, K.; Hennebry, J. La Economía Global Localizada En El Norte de Marruecos. *Rev. Esp. Investig. Sociol. (REIS)* **2015**, 121–142. <https://doi.org/10.5477/cis/reis.152.121>.
60. Martínez Martín, R.; Álvarez Lorente, T.; Morales-Giner, M.D.P. Degree of Concern and Awareness of Spanish Consumers About Working Conditions in the Clothing Industry. *Societies* **2024**, *14*, 216. <https://doi.org/10.3390/soc14110216>.
61. Ellen MacArthur Foundation. *A New Textiles Economy: Redesigning Fashion’s Future*; Ellen MacArthur Foundation: Cowes, UK, 2017.
62. Ponte, S.; Gereffi, G.; Raj-Reichert, G. Introduction to the Handbook on Global Value Chains. In *Handbook on Global Value Chains*; Edward Elgar Publishing: Cheltenham, UK; Northampton, MA, USA, 2021; pp. 1–27, ISBN 978-1-78811-376-2.
63. Sassen, S. *Una Sociología de la Globalización*, 1st ed.; Discusiones Series; Katz Editores: Bogota, Colombia, 2007; ISBN 978-987-1283-39-2.
64. Bello, W.F. *Deglobalization: Ideas for a New World Economy*; Global issues in a changing world; New updated ed.; Zed Books: London, UK, 2004; ISBN 978-1-84277-544-8.
65. Gereffi, G.; Sturgeon, T. Global Value Chain-Oriented Industrial Policy: The Role of Emerging Economies. In *Global Value Chains in a Changing World*; Elms, D.K., Low, P., Eds.; World Trade Organization: Geneva, Switzerland, 2013; pp. 329–360, ISBN 978-92-870-3882-1.
66. Curtis, F. Peak Globalization: Climate Change, Oil Depletion and Global Trade. *Ecol. Econ.* **2009**, *69*, 427–434. <https://doi.org/10.1016/j.ecolecon.2009.08.020>.
67. Nussbaum, B. Peak Globalization. *Harvard Business Review*. 20 December 2010. Available online: <https://hbr.org/2010/12/peak-globalization> (accessed on 23 April 2026).
68. Rubin, J. *Por qué el Mundo Está a Punto de Hacerse Mucho más Pequeño*; Tendencias: Barcelona, Spain, 2009; ISBN 978-84-936961-1-5.
69. Butollo, F.; Staritz, C.; Maile, F.; Wuttke, T. The End of Globalized Production? Supply-Chain Resilience, Technological Sovereignty, and Enduring Global Interdependencies in the Post-Pandemic Era. *Crit. Sociol.* **2025**, *51*, 779–798. <https://doi.org/10.1177/08969205241239872>.
70. Lund, S. De-Globalisation? The Recent Slowdown of Global Trade and Prospects for Future Rebalancing. In *Proceedings of the Central banks in a shifting world*; European Central Bank, Online, 11 November 2020; pp. 81–89.
71. Antràs, P. *De-Globalisation? Global Value Chains in the Post-COVID-19 Age*; National Bureau of Economic Research: Cambridge, MA, USA, 2020; p. w28115.

72. World Bank. World Bank Open Data. Available online: <https://data.worldbank.org/indicator/TG.VAL.TOTL.GD.ZS> (accessed on 23 April 2026).
73. Pinheiro, L. Cambio de Marcha en la Economía China: Canales de Contagio e Implicaciones Globales. *CaixaBank Research*. CaixaBank Research 11 October 2023, pp. 18–19. Available online: https://www.caixabankresearch.com/sites/default/files/content/file/2023/10/10/34454/IM10_23%2006%20EI%20Focus%204%20es.pdf (accessed on 23 April 2026).
74. Gandoy Juste, R.; González-Díaz, B. La Progresión de la Industria Española en Cadenas Transfronterizas de Producción. *Rev. ICE* **2021**, *919*, 9–23. <https://doi.org/10.32796/ice.2021.919.7170>.
75. Dankbaar, B. Global Sourcing and Innovation: The Consequences of Losing Both Organizational and Geographical Proximity. *Eur. Plan. Stud.* **2007**, *15*, 271–288. <https://doi.org/10.1080/09654310601078812>.
76. Braun, M.; García, P.M.; Molero, D.F. Nearshoring and Regional Value Chains: Are They the New Normal? In *The Elgar Companion to the World Trade Organization*; Chaisse, J., Rodríguez-Chiffelle, C., Eds.; Edward Elgar Publishing: Cheltenham, UK, 2023; pp. 638–659, ISBN 978-1-80088-286-7.
77. García, A. Reconfiguración de las Cadenas Globales de Valor: Rivalidad Estados Unidos-China y Rol de la UE. *Rev. CIDOB D’afers Int.* **2023**, 51–73. <https://doi.org/10.24241/rcai.2023.134.2.51>.
78. Alfaro, L.; Chor, D. *Global Supply Chains: The Looming “Great Reallocation”*; National Bureau of Economic Research: Cambridge, MA, USA, 2023; p. w31661.
79. Bosone, C.; Stamato, G. *Beyond Borders: How Geopolitics Is Reshaping Trade*; European Central Bank: Frankfurt am Main, Germany, 2024.
80. Brenton, P.A.; Ferrantino, M.J.; Maliszewska, M. *Reshaping Global Value Chains in Light of COVID-19: Implications for Trade and Poverty Reduction in Developing Countries*; World Bank Group: Washington, DC, USA, 2022; ISBN 978-1-4648-1821-9.
81. Dai, T.; Tang, C.S. De-Risking Global Supply Chains: Looking Beyond Material Flows. *Asia Policy* **2024**, *19*, 153–176. <https://doi.org/10.1353/asp.2024.a942841>.
82. Elia, S.; Fracocchi, L.; Barbieri, P.; Boffelli, A.; Kalchschmidt, M. Post-Pandemic Reconfiguration from Global to Domestic and Regional Value Chains: The Role of Industrial Policies. *Transnatl. Corp.* **2021**, *28*, 67–96. <https://doi.org/10.18356/2076099x-28-2-3>.
83. Seong, J.; White, O.; Birshan, M.; Woetzel, L.; Lamanna, C.; Condon, J.; Devesa, T. *Geopolitics and the Geometry of Global Trade*; Bush, J., Ed.; McKinsey Global Institute: Washington, DC, USA, 2024; 56p.
84. Seong, J.; White, O.; Birshan, M.; Smit, S.; Lamanna, C.; Devesa, T. *Geopolitics and the Geometry of Global Trade. 2025 Update*; Bush, J., Ed.; McKinsey Global Institute: Washington, DC, USA, 2025; 27p.
85. UNCTAD. *Global Trade Recovers, but Unevenly*; Special insight: Trade and industrial policy; United Nations Conference on Trade and Development, United Nations: New York, NY, USA, 2024.
86. World Trade Organization. (Ed.) *World Trade Statistical Review 2023*; WTO: Geneva, Switzerland, 2023; ISBN 978-92-870-7419-5.
87. Casadei, P.; Iammarino, S. Backshoring, Offshoring and Staying at Home: Evidence from the UK Textile and Apparel Industry. *Oper. Manag. Res.* **2023**, *16*, 2148–2173. <https://doi.org/10.1007/s12063-023-00394-9>.
88. Raza, W.; Grumiller, J.; Grohs, H.; Essletzbichler, J.; Pintar, N. *Post COVID-19 Value Chains: Options for Reshoring Production Back to Europe in a Globalised Economy*; European Parliament. Directorate General for External Policies of the Union, Ed.; Publications Office: Luxembourg, 2021.
89. Gharleghi, B.; Jahanshahi, A.A.; Thoene, T. Locational Factors and the Reindustrialisation Process in the USA; Reshoring from China. *Int. J. Bus. Glob.* **2020**, *24*, 275. <https://doi.org/10.1504/IJBG.2020.105173>.
90. Birdseye, H. The Dynamics of Global Supply Chains the Imperatives for Success in a New Market Ecology. In *Global Value Chains in a Changing World*; Elms, D.K., Low, P., Eds.; World trade organization: Geneva, Switzerland, 2013; pp. 171–194, ISBN 978-92-870-3882-1.
91. Inomata, S.; Hanaka, T. Measuring Exposure to Network Concentration Risk in Global Supply Chains: Volume versus Frequency. *Struct. Change Econ. Dyn.* **2024**, *68*, 177–193. <https://doi.org/10.1016/j.strueco.2023.10.002>.
92. Lamperti, F.; Lavoratori, K.; Tredicine, L. From Globalization to Reshoring? The Role of Industry 4.0 in Global Value Chains across Europe. *Econ. Innov. New Technol.* **2026**, *35*, 401–423. <https://doi.org/10.1080/10438599.2025.2487145>.
93. Qiu, H.; Shin, H.S.; Zhang, L.S.Y. *Mapping the Realignment of Global Value Chains*; BIS Bulletin No. 78; Bank for International Settlements: Basel, Switzerland, 2023; 8p.
94. Ríos Díaz, G. Reshoring, Cadenas Globales de Valor y Tendencias Actuales. 2023. Available online: https://www.argentina.gob.ar/sites/default/files/2021/09/reshoring_cadenas_globales_de_valor_y_tendencias_actuales_vf.pdf (accessed on 23 April 2026).

95. International Monetary Fund. *World Economic Outlook, October 2021: Recovery During a Pandemic*; World Economic Outlook; International Monetary Fund: Washington, DC, USA, 2021; ISBN 978-1-5135-7752-4.
96. Ahn, J.; Tan, B.J. *Supply Chain Diversification and Resilience*; International Monetary Fund: Washington, DC, USA, 2025. <https://doi.org/10.5089/9798229011419.001>.
97. Jebbor, I.; Benmamoun, Z.; Hachimi, H. Forecasting Supply Chain Disruptions in the Textile Industry Using Machine Learning: A Case Study. *Ain Shams Eng. J.* **2024**, *15*, 103116. <https://doi.org/10.1016/j.asej.2024.103116>.
98. Jebbor, I.; Benmamoun, Z.; Hachimi, H. Predicting Automotive Industry Supply Chain Disruptions Using Machine Learning: Challenges and Insights. In *Progress in Intelligent Computing and Secure Communication Systems*; El Mokhi, C., Hachimi, H., Hmina, N., Addaim, A., Eds.; Lecture Notes in Networks and Systems; Springer Nature: Cham, Switzerland, 2025; Volume 1555, pp. 213–229, ISBN 978-3-031-99996-3.
99. Doan, T.N.; Le, T.H. Friendshoring: The Role of Geopolitical Distance in Global Value Chain. *Int. Econ. Econ. Policy* **2025**, *22*, 66. <https://doi.org/10.1007/s10368-025-00696-2>.
100. Javorcik, B.; Kitzmüller, L.; Schweiger, H.; Yildirim, M.A. Economic Costs of Friendshoring. *World Econ.* **2024**, *47*, 2871–2908. <https://doi.org/10.1111/twec.13555>.
101. Cajal-Grossi, J.; Del Prete, D.; Macchiavello, R. Supply Chain Disruptions and Sourcing Strategies. *Int. J. Ind. Organ.* **2023**, *90*, 103004. <https://doi.org/10.1016/j.ijindorg.2023.103004>.
102. De Lucio, J.; Díaz-Mora, C.; Mínguez, R.; Minondo, A.; Requena, F. Do Firms React to Supply Chain Disruptions? *Econ. Anal. Policy* **2023**, *79*, 902–916. <https://doi.org/10.1016/j.eap.2023.07.004>.
103. Maile, F.; Staritz, C. Lead Firm Strategies in the Global Textile and Apparel Industry: Are Disruptions Reconfiguring the Geographies of Production? *J. Econ. Geogr.* **2026**, lbag016. <https://doi.org/10.1093/jeg/lbag016>.
104. Ponte, S.; Sturgeon, T. Explaining Governance in Global Value Chains: A Modular Theory-Building Effort. *Rev. Int. Political Econ.* **2014**, *21*, 195–223. <https://doi.org/10.1080/09692290.2013.809596>.
105. Elson, D.; Pearson, R. ‘Nimble Fingers Make Cheap Workers’: An Analysis of Women’s Employment in Third World Export Manufacturing. *Fem. Rev.* **1981**, *7*, 87–107. <https://doi.org/10.1057/fr.1981.6>.
106. Mezzadri, A. *The Sweatshop Regime: Labouring Bodies, Exploitation, and Garments Made in India*; Development trajectories in global value chains; Cambridge University Press: New York, NY, USA, 2017; ISBN 978-1-316-33791-2.
107. Pla Barber, J.; Pallás, A.; Botella, A. Reshoring y Regionalización de Las Cadenas de Valor Globales: evidencia En Sectores Manufactureros. *Papeles Econ. Esp.* **2024**, *181*, 139–152.
108. Merino, F.; Di Stefano, C.; Fratocchi, L. Back-Shoring vs near-Shoring: A Comparative Exploratory Study in the Footwear Industry. *Oper. Manag. Res.* **2021**, *14*, 17–37. <https://doi.org/10.1007/s12063-020-00173-w>.
109. Coe, N.M.; Yeung, H.W. Global Production Networks: Mapping Recent Conceptual Developments. *J. Econ. Geogr.* **2019**, *19*, 775–801. <https://doi.org/10.1093/jeg/lbz018>.
110. Dallas, M.P.; Ponte, S.; Sturgeon, T.J. Power in Global Value Chains. *Rev. Int. Political Econ.* **2019**, *26*, 666–694. <https://doi.org/10.1080/09692290.2019.1608284>.
111. Wright, M.W. *Disposable Women and Other Myths of Global Capitalism*; Routledge: New York, NY, USA, 2006; ISBN 978-0-415-95145-6.
112. Cadot, O.; Carrère, C.; Strauss-Kahn, V. Export Diversification: What’s behind the Hump? *Rev. Econ. Stat.* **2011**, *93*, 590–605. https://doi.org/10.1162/REST_a_00078.
113. Imbs, J.; Wacziarg, R. Stages of Diversification. *Am. Econ. Rev.* **2003**, *93*, 63–86. <https://doi.org/10.1257/000282803321455160>.
114. Kim, K.; Hwang, J.; Jung, S.; Kim, E. Which Technology Diversification Index Should Be Selected?: Insights for Diversification Perspectives. *Cogent Bus. Manag.* **2019**, *6*, 1643519. <https://doi.org/10.1080/23311975.2019.1643519>.
115. Foster-McGregor, N.; Isaksson, A. *Tool 3 Diversification and Upgrading*; UNIDO: Vienna, Austria, 2024.
116. United Nations; World Trade Organization. *A Practical Guide to Trade Policy Analysis*; Organisation Mondiale du Commerce, Conférence des Nations Unies sur le Commerce et le Développement, Ed.; World Trade Organization United Nations Conference on Trade and Development: Geneva, Switzerland, 2012; ISBN 978-92-870-3812-8.
117. World Bank. *A Guide to Trade Data Analysis*; The World Bank: Washington, DC, USA, 2010.
118. Bailey, M.A.; Strezhnev, A.; Voeten, E. Estimating Dynamic State Preferences from United Nations Voting Data. *J. Confl. Resolut.* **2017**, *61*, 430–456. <https://doi.org/10.1177/0022002715595700>.
119. Voeten, E. United Nations General Assembly Ideal Points. 2009. Available online: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/LEJUQZ> (accessed on 28 April 2026).

120. Eurostat. Foreign Value Added in Exports by Exporting Country and Importing Country-EU Country Perspective (FIGARO Application). 2026. Available online: <https://data.europa.eu/data/datasets/jltcnm6cywqheib7ntroua?locale=en> (accessed on 26 April 2026).
121. Papke, L.E.; Wooldridge, J.M. Econometric Methods for Fractional Response Variables with an Application to 401(k) Plan Participation Rates. *J. Appl. Econ.* **1996**, *11*, 619–632. [https://doi.org/10.1002/\(SICI\)1099-1255\(199611\)11:6<619::AID-JAE418>3.0.CO;2-1](https://doi.org/10.1002/(SICI)1099-1255(199611)11:6<619::AID-JAE418>3.0.CO;2-1).
122. Mundlak, Y. On the Pooling of Time Series and Cross Section Data. *Econometrica* **1978**, *46*, 69–85.
123. Federal Trade Commission; U.S. Department of Justice. *Merger Guidelines*; U.S. Department of Justice and the Federal Trade Commission: Washington, DC, USA, 2023.
124. European Commission EU–China Textile Agreement 10 June 2005. Available online: https://ec.europa.eu/commission/presscorner/detail/en/memo_05_201 (accessed on 27 April 2026).
125. Baldwin, R.; Freeman, R. Risks and Global Supply Chains: What We Know and What We Need to Know. *Annu. Rev. Econ.* **2022**, *14*, 153–180. <https://doi.org/10.1146/annurev-economics-051420-113737>.
126. Mayer, T.; Zignago, S. *Notes on CEPII's Distances Measures: The GeoDist Database*; CEPII: Paris, France, 2011.
127. Caglayan, C. Turkey's Clothing Makers Face Rising Costs from Push to Help Textile Sector. *Reuters*, 23 November 2023. Available online: <https://www.reuters.com/world/middle-east/turkeys-clothing-makers-face-rising-costs-push-help-textile-sector-2023-11-23/> (accessed on 5 June 2026).
128. Business & Human Rights Resource Centre. Turkiye: Fashion Brands Respond to Reports of Unfair Purchasing Practices Following February's Earthquake. 2024. Available online: <https://www.business-humanrights.org/en/latest-news/turkey-fashion-brands-respond-to-reports-of-unfair-purchasing-practices-following-februarys-earthquake-wpftc/> (accessed on 5 June 2026).
129. Soler i Lecha, E.; Valls, M. *Spain and the Maghreb: Neighbourhood, Nearshoring and the Post-Pandemic*; CIDOB: Barcelona, Spain, 2021; pp. 1–7.
130. European Commission. Updating the 2020 Industrial Strategy. Available online: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1884 (accessed on 27 April 2026).
131. Smorodinskaya, N.V.; Katukov, D.D.; Malygin, V.E. Global Value Chains in the Age of Uncertainty: Advantages, Vulnerabilities, and Ways for Enhancing Resilience. *Balt. Reg.* **2021**, *13*, 78–107. <https://doi.org/10.5922/2079-8555-2021-3-5>.
132. Plank, L.; Rossi, A.; Staritz, C. What Does 'Fast Fashion' Mean for Workers? Apparel Production in Morocco and Romania. In *Towards Better Work*; Rossi, A., Luinstra, A., Pickles, J., Eds.; Palgrave Macmillan: London, UK, 2014; pp. 127–147, ISBN 978-1-349-47798-2.
133. Guarascio, D.; Holzner, M.; Iacobucci, D.; Meliciani, V. European Competitiveness in the New Global Context: Structural Constraints, Strategic Dependencies and the Role of the New Industrial Policy. *J. Ind. Bus. Econ.* **2025**, *52*, 525–533. <https://doi.org/10.1007/s40812-025-00368-x>.
134. Varea, R. Innovación y Gestión Global Que Aseguran la Cadena de Suministro. *El País* 2024. Available online: <https://elpais.com/extra/grandes-empresas/2024-09-29/innovacion-y-gestion-global-que-aseguran-la-cadena-de-suministro.html> (accessed on 27 April 2026).
135. European Commission. EU Strategy for Sustainable and Circular Textiles. 2022. Available online: https://environment.ec.europa.eu/strategy/textiles-strategy_en (accessed on 27 April 2026).
136. European Commission. *Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on Corporate Sustainability Due Diligence and Amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859*; European Commission: Brussel, Belgium, 2024.
137. Petrie, L. *Sustainability and Circularity in the Textile Value Chain: A Global Roadmap*; UNEP, Ed.; United Nations Environment Programme: Paris, France, 2023; ISBN 978-92-807-4034-9.
138. Inditex Memoria Anual Grupo Inditex 2023. 2024. Available online: https://www.inditex.com/itxcomweb/api/media/604197b9-50de-4f4f-ab84-c1e379cb3fd0/Inditex_Group_Annual_Report_2024.pdf (accessed on 28 April 2026).
139. Inditex Memoria Anual 2019. 2020. Available online: https://static.inditex.com/annual_report_2019/en/ (accessed on 28 April 2026).
140. Bontadini, F.; Meliciani, V.; Savona, M.; Wirkierman, A.L. Nearshoring and Farsharing in Europe within the Global Economy: Regional Trends, Structural Components and Sectoral Patterns. *J. Ind. Bus. Econ.* **2025**, *52*, 559–597. <https://doi.org/10.1007/s40812-025-00361-4>.

141. Casadei, P.; Comotti, S.; Crescenzi, R.; Iammarino, S. *Where Global Value Chains Go Local: EU Regions, Global Value Chain Creation and Local Upgrading*; European Commission. Directorate General for Regional and Urban Policy, Ed.; Publications Office: Luxembourg, 2023.
142. Lipovetsky, G. *L'Empire de L'éphémère: La Mode et Son Destin dans les Sociétés Modernes*; Collection Folio Essais; Gallimard: Paris, France, 2008; ISBN 978-2-07-032642-6.
143. O'Cass, A. Fashion Clothing Consumption: Antecedents and Consequences of Fashion Clothing Involvement. *Eur. J. Mark.* **2004**, *38*, 869–882. <https://doi.org/10.1108/03090560410539294>.
144. Johnson, T.; Attmann, J. Compulsive Buying in a Product Specific Context: Clothing. *J. Fash. Mark. Manag. Int. J.* **2009**, *13*, 394–405. <https://doi.org/10.1108/13612020910974519>.
145. Euromonitor International. *Apparel and Footwear Specialists in Spain*; Euromonitor International: London, UK, 2025.
146. Fletcher, K. Slow Fashion: An Invitation for Systems Change. *Fash. Pract.* **2010**, *2*, 259–265. <https://doi.org/10.2752/175693810X12774625387594>.
147. Marsh, L.; Lu, S. Importing Clothing Made from Recycled Textile Materials? A Study of Retailers' Sourcing Strategies in Five European Countries. *Sustainability* **2024**, *16*, 825. <https://doi.org/10.3390/su16020825>.

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