



# GROWTH DYNAMICS AND EXPORT PERFORMANCE OF THE INDIAN JEANS GARMENT INDUSTRY: AN EMPIRICAL ANALYSIS

**DR. RAMESH O OLEKAR**

Professor, Department of Studies in Commerce,  
V.S.K. University, Jnana Sagara Campus, Ballari-583105

## **Abstract:**

*The jeans garment sector constitutes a dynamic and competitive segment of the global apparel industry, contributing significantly to employment generation, industrial growth, and international trade flows. India has positioned itself as a notable exporter of denim apparel; however, intensifying global competition necessitates a rigorous assessment of its export performance and competitive strength. The present study aims to analyse the growth trajectory and export dynamics of India's jeans garment industry in comparison with major exporting nations and to evaluate its relative standing in the global denim market. The research adopts a quantitative approach based on secondary data sourced from the UN Comtrade Database for the period 2015–2024. Analytical tools such as Compound Annual Growth Rate (CAGR), mean export value, standard deviation, and coefficient of variation were employed to assess growth patterns, scale, and stability. The results reveal that India registered a CAGR of –3.17 percent, indicating moderate contraction, though less pronounced than Bangladesh's –15.76 percent decline. India records the highest mean export value (USD 89.60 million) and a moderate volatility level (22.26 percent), reflecting structural strength despite growth pressures. Sustained competitiveness will depend on technological upgrading, productivity enhancement, and value-chain efficiency.*

**Keywords:** *Jeans Garment Industry, Export Performance, Global Competitiveness, Compound Annual Growth Rate, Denim Apparel Trade.*

## **1. Introduction:**

The jeans garment industry forms a vital and highly competitive component of the global apparel sector, playing a crucial role in employment creation, industrial expansion, and international trade. India has established itself as

an important manufacturing and exporting nation in denim apparel, driven by cost-efficient labour, growing production capacity, and an expanding base of skilled workers. Nevertheless, the global market is intensely competitive, with strong participation from leading exporting countries such as Bangladesh, China, Colombia, Brazil, and Pakistan. These countries have enhanced their global positions through continuous technological upgrading, efficient supply chain management, favourable trade policies, and demand-driven production strategies.

Although India has recorded notable growth in denim exports, significant differences in growth trends and export performance among these countries underline the importance of a comparative evaluation of market competitiveness. In this backdrop, the present study undertakes a critical assessment of the growth dynamics and export performance of the Indian jeans garment industry in relation to major global exporters. By examining cross-country export patterns and growth behaviour, the study seeks to generate empirical evidence on India's competitive standing, emerging challenges, and strategic pathways for strengthening its share in the global denim apparel market.

## 2. Review of Literature:

1. **Yoganandan (2015)** investigated the development and export performance of the Tirupur apparel industry by reviewing long-term export data, market orientation, and competitiveness indicators. The main purpose of the study was to analyse Tirupur's export growth, key destination markets, and its overall contribution to India's textile exports. The findings showed that although export volumes increased substantially, factors such as global economic slowdown, infrastructure deficiencies, and regulatory challenges affected export stability. The study concluded that strengthening financial access, upgrading production technology, improving infrastructure, and implementing effective policy measures were crucial for ensuring sustained growth and international competitiveness of the Tirupur apparel sector.

2. **Dhiman and Sharma (2016)** examined the growth behaviour, export direction, and competitiveness of India's textile exports in the international market. The study aimed to analyse export trends, key destination markets, and comparative advantage using secondary data and analytical tools such as CAGR and revealed comparative advantage indices. The results indicated that although India showed strength in certain textile segments, unstable growth patterns and rising global competition constrained export expansion. The study concluded that technological modernization, productivity enhancement, and consistent policy support were necessary to strengthen India's export performance and global market position.

3. **Sasi Bhushan (2017)** evaluated the overall performance of the Indian textile industry by examining production levels, consumption patterns, and export growth based on secondary data analysis. The study focused on understanding long-term growth trends, employment contribution, and export expansion using descriptive and analytical techniques such as percentage and growth rate analysis. The findings showed notable progress in cotton and man-made fibre textiles, whereas silk, wool, and jute segments displayed unstable performance along with

constraints related to infrastructure and investment. The study concluded that continuous technological improvement, skill enhancement, and strong policy support were crucial to sustain growth and improve the global standing of India's textile industry.

**4. Chandra Prabha (2018)** analyzed the export performance and comparative competitiveness of Indian textile products in the global market, with special reference to China. The study aimed to analyse export trends, product-wise performance, and comparative advantage using secondary data and tools such as the Revealed Comparative Advantage (RCA) index. The findings indicated that although India showed strength in cotton textiles and selected product categories, export growth remained inconsistent and less competitive compared to China. The study concluded that technological advancement, productivity enhancement, and favourable trade policies were essential to improve India's textile export competitiveness.

**5. Aziz (2020)** studied the export performance of the Indian garment industry by focusing on major international markets such as China and the USA. The main aim of the study was to understand export trends, competitiveness, and challenges using secondary data and simple analytical tools like trend and comparative analysis. The findings showed that even though India had advantages in raw materials and skilled labour, poor infrastructure, high costs, and policy issues limited export growth. The study concluded that better technology, improved logistics, and stronger government support were necessary to increase India's garment exports and global competitiveness.

**6. Bhogal and Dave (2021)** assessed the contribution of the textile and clothing sector to the economic development of India and Bangladesh using comparative secondary data analysis. The study aimed to assess export performance, employment generation, and industry structure in both countries through descriptive and analytical techniques. The results indicated that India remained strong in fibre and fabric production, while Bangladesh dominated garment manufacturing, highlighting complementary value-chain linkages. The study concluded that enhanced technological investment, infrastructure development, and bilateral trade cooperation were crucial for improving industrial growth and export competitiveness.

### **3. Research Gap:**

Existing studies largely focus on the overall textile and apparel export performance of India, with limited attention to the jeans garment industry as a distinct segment. Moreover, comparative analyses evaluating India's growth and export competitiveness against major global exporters remain inadequate, highlighting the need for a focused empirical investigation.

### **4. Significance of the Study:**

The present study offers a focused and systematic analysis of the growth dynamics and export performance of India's jeans garment industry within a global competitive context. It provides valuable empirical insights for policymakers, exporters, and industry practitioners to formulate effective export strategies, improve industrial

competitiveness, and strengthen policy interventions. The findings also contribute to academic literature by addressing existing research gaps and supporting evidence-based decision-making for sustainable industrial development.

## 5. Objective of the study:

1. To compare India's export performance with major global jeans exporting countries.
2. To assess India's competitive position in the global denim apparel market.

## 6. Research Methodology:

The study adopts a quantitative research design based on secondary data obtained from official international trade databases, government publications, and industry reports covering major global jeans-exporting countries. The analysis spans a defined study period to examine growth patterns and export performance trends. Statistical tools such as Compound Annual Growth Rate (CAGR), percentage change analysis, mean, standard deviation, and coefficient of variation were employed to evaluate export performance and stability. A cross-country comparative framework is used to assess India's competitive position relative to leading exporters, enabling a systematic evaluation of market trends, structural changes, and export competitiveness.

## 7. Results and Discussion:

The empirical assessment highlights clear differences in export performance among major global jeans-exporting countries during the study period. India recorded moderate yet consistent export activity, reflected in its overall export value and measured growth indicators. Although the country experienced phases of contraction, particularly during periods of global disruption, its export base remained comparatively stable. In contrast, certain competitors demonstrated stronger growth momentum, supported by cost efficiency, focused garment manufacturing structures, and favorable trade arrangements in key international markets. China maintains comparatively stable export performance supported by its integrated production structure due to its integrated production systems, advanced technology, and large-scale manufacturing capacity, though recent structural adjustments have moderated its expansion rate.

Brazil and Colombia exhibited relatively stable but comparatively smaller export volumes, indicating regionally concentrated trade patterns. India's competitive position is underpinned by structural advantages such as domestic raw material availability, diversified textile infrastructure, and a well-established manufacturing ecosystem. However, recurring fluctuations in export growth, higher compliance and logistics costs, and scale limitations within garment clusters constrain its ability to achieve accelerated expansion. Overall, the findings suggest that India retains a resilient yet moderately constrained competitive standing in the global denim apparel market. Strengthening productivity, technological capability, and value-chain efficiency will be essential to enhance long-term export competitiveness and secure sustained market advancement.

## 7.1 Comparative Analysis of India's Export Performance

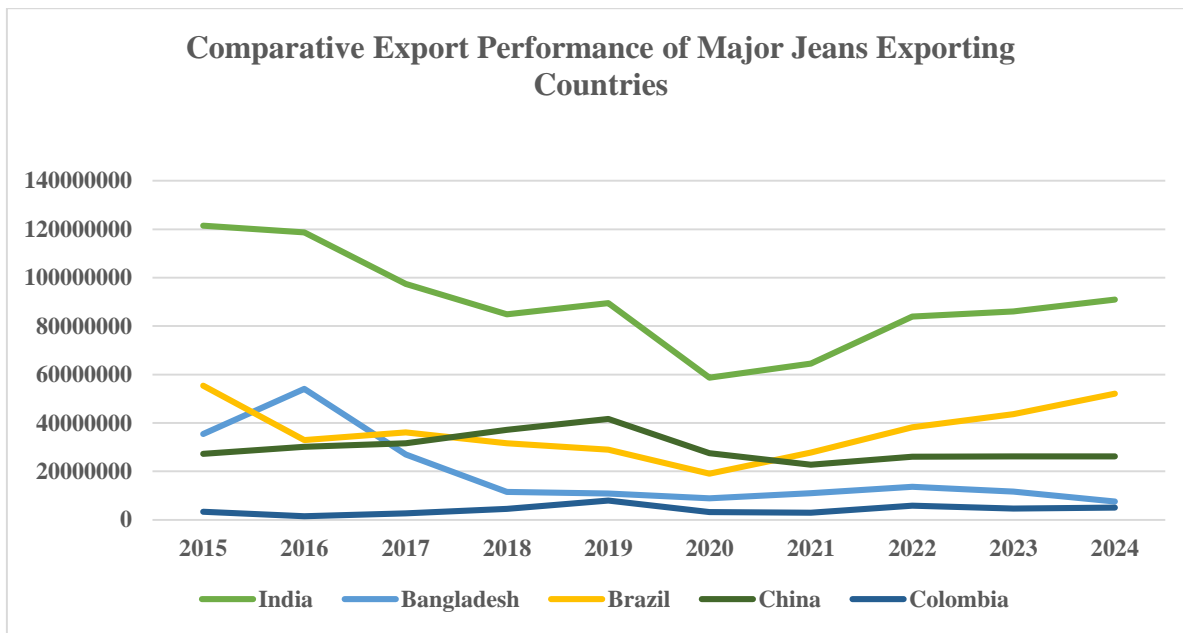
The first objective of the study is to conduct a systematic comparative assessment of India's jeans garment exports vis-à-vis major global exporting countries. This analysis aims to evaluate India's relative growth performance and positioning in the international denim apparel market over the selected period. The comparison is grounded in quantitative indicators, including export value trends, Compound Annual Growth Rate (CAGR), and global export share. Through year-wise statistical examination, the study identifies cross-country differences in growth momentum, stability, and market penetration. The comparative framework enables an evaluation of whether India's export trajectory reflects competitive convergence with leading exporters or reveals performance gaps. By situating India within the broader structure of global denim trade, the analysis provides an empirical basis for understanding its export dynamics and establishes a measurable foundation for subsequent assessment of international competitiveness.

**Table 1: Comparative Export Performance of Major Jeans Exporting Countries**

| Year        | India              | Bangladesh         | Brazil             | China              | Colombia           |
|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 2015        | 121487092          | 35487891           | 55407145           | 27206313           | 3385743            |
| 2016        | 118664125          | 54022581           | 32994732           | 30214823           | 1431989            |
| 2017        | 97454009.24        | 27019212.5         | 36076558.34        | 31680732.63        | 2677505.773        |
| 2018        | 84830374.52        | 11556469.53        | 31639569.03        | 37109996           | 4524339.958        |
| 2019        | 89461392.29        | 10867419.04        | 29024102.16        | 41663782.15        | 7906088.95         |
| 2020        | 58672746.37        | 8869882.74         | 19075501.8         | 27527710.91        | 3199650.917        |
| 2021        | 64481329.66        | 10991824.99        | 27772565.09        | 22724665.94        | 2992273.635        |
| 2022        | 83941284.5         | 13705569.79        | 38257149.38        | 26094097.96        | 5884467.367        |
| 2023        | 86020807.5         | 11604771.27        | 43587090.69        | 26203622.31        | 4625323.224        |
| 2024        | 90937262.9         | 7581570.831        | 52115136.06        | 26202909.62        | 5037646.388        |
| <b>Mean</b> | <b>89595042.4</b>  | <b>19170719.27</b> | <b>36594954.96</b> | <b>29662865.35</b> | <b>4166502.821</b> |
| <b>SD</b>   | <b>19944440.39</b> | <b>15143183.77</b> | <b>11186783.73</b> | <b>5766417.202</b> | <b>1845452.128</b> |
| <b>CAGR</b> | <b>-3.17%</b>      | <b>-15.76%</b>     | <b>-0.68%</b>      | <b>-0.42%</b>      | <b>4.51%</b>       |

Source: UN Comtrade Database <https://comtrade.un.org>

**Chart-1: Comparative Export Performance of Major Jeans Exporting Countries**



**Interpretation:**

The comparative export performance of major jeans-exporting countries during 2015-2024 reflects distinct structural and growth patterns within the global denim apparel market. India recorded a negative CAGR of -3.17 percent, indicating a moderate contraction in export value over the period. However, the decline remains relatively contained when compared with Bangladesh, which experienced a sharper reduction of -15.76 percent, signalling significant competitive pressure. Brazil and China demonstrated near-stagnant growth, with marginal negative CAGR values, suggesting stability but limited expansion capacity. In contrast, Colombia emerged as the only country registering positive growth at 4.51 percent, reflecting gradual strengthening of its export presence despite a smaller market base. The higher standard deviation values for India and Bangladesh indicate greater volatility, whereas China and Colombia display comparatively stable export patterns. Overall, the evidence suggests that India retains a resilient yet structurally constrained competitive position in the international jeans trade landscape.

**Coefficient of Variation (CV): Methodological Approach**

To assess the relative stability of export performance among major jeans-exporting countries, the Coefficient of Variation (CV) was calculated. The CV provides a standardized measure of dispersion, allowing comparison of export volatility across countries with differing export scales.

The coefficient was computed using the following formula:

$$CV = (SD/Mean)*100$$

where *SD* represents the standard deviation of annual export values and *Mean* denotes the average export value for the period 2015-2024. Annual export data were first used to estimate the mean and standard deviation for each country. The standard deviation was then divided by the mean and multiplied by 100 to derive the percentage variation. A lower CV indicates greater export stability, while a higher CV reflects increased volatility over the study period.

**Table 2: Comparative Export Stability Indicators of Major Jeans Exporting Countries**

| Country    | Mean Export Value (USD) | Standard Deviation (USD) | Coefficient of Variation (%) |
|------------|-------------------------|--------------------------|------------------------------|
| India      | 89,595,042.40           | 19,944,440.39            | 22.26%                       |
| Bangladesh | 19,170,719.27           | 15,143,183.77            | 78.99%                       |
| Brazil     | 36,594,954.96           | 11,186,783.73            | 30.57%                       |
| China      | 29,662,865.35           | 5,766,417.20             | 19.44%                       |
| Colombia   | 4,166,502.82            | 1,845,452.13             | 44.29%                       |

**Source:** Computed from UN Comtrade Database (2015-2024), calculated by the researcher.

### Interpretation:

The comparative export stability analysis reveals substantial differences in volatility among major jeans-exporting countries during 2015-2024. China exhibits the lowest coefficient of variation (19.44%), indicating the highest degree of export stability over the study period. India follows with a moderate CV of 22.26%, suggesting relatively controlled fluctuations despite experiencing negative growth. Brazil demonstrates moderate variability (30.57%), reflecting periodic export adjustments. In contrast, Colombia records higher volatility (44.29%), likely influenced by its smaller export base and sensitivity to market shifts. Bangladesh shows the highest instability (78.99%), highlighting pronounced export fluctuations and structural vulnerability. Overall, the findings indicate that India maintains a comparatively stable export performance within a competitive and dynamic global denim apparel market.

## 7.2 Assessment of India's Competitive Position in the Global Denim Apparel Market

The evaluation of India's competitive position in the global denim apparel market during 2015–2024 reveals a structurally resilient yet growth-constrained performance profile. India recorded a Compound Annual Growth Rate (CAGR) of –3.17 percent, indicating moderate contraction over the study period. However, this decline remains significantly less severe than Bangladesh's –15.76 percent contraction and broadly comparable to Brazil (–0.68 percent) and China (–0.42 percent), suggesting relative stability within a challenging global trade environment. Notably, India registers the highest mean export value among the selected countries at USD 89.59 million, substantially exceeding Brazil (USD 36.59 million) and China (USD 29.66 million), thereby confirming

its scale advantage in the international market. The coefficient of variation further strengthens this assessment, as India's export volatility (22.26 percent) remains considerably lower than Bangladesh (78.99 percent) and Colombia (44.29 percent), and only marginally higher than China (19.44 percent). These indicators collectively imply that India maintains a strong export base with moderate stability despite growth pressures. Structurally, domestic raw material availability and diversified textile capacity provide competitive support; however, logistics costs, compliance burdens, and cluster-level inefficiencies constrain accelerated expansion. Overall, India demonstrates a resilient but moderately constrained competitive position in the global denim apparel market.

## 8. Findings of the study:

1. India recorded a negative CAGR of  $-3.17$  percent during 2015–2024, indicating moderate export contraction; however, the decline remains substantially lower than Bangladesh ( $-15.76$  percent) and broadly comparable to Brazil and China, reflecting relative resilience under global trade pressures.
2. Despite growth slowdown, India retains the highest mean export value (USD 89.59 million) among the selected countries, demonstrating its strong scale advantage and established global market presence.
3. India's coefficient of variation (22.26 percent) suggests moderate export stability, with lower volatility than Bangladesh and Colombia and only marginally higher variability than China.
4. China exhibits the lowest volatility (19.44 percent), indicating superior structural stability supported by efficient and integrated manufacturing systems.
5. Colombia is the only country showing positive growth (4.51 percent CAGR), reflecting gradual strengthening from a smaller export base.
6. Although India benefits from domestic raw materials and diversified textile capacity, high logistics costs, compliance burdens, and cluster inefficiencies constrain faster global expansion.

## 9. Conclusion:

The study provides an empirical evaluation of the growth dynamics and export competitiveness of India's jeans garment industry within a global comparative framework. The findings indicate that although India experienced moderate export contraction during 2015–2024, its performance remains relatively resilient when compared with several competing exporters. India sustains the highest average export value among the selected countries and demonstrates moderate export stability, reflecting structural strength and established global presence. However, limited growth momentum and persistent volatility highlight underlying competitiveness challenges. While China exhibits superior stability and Colombia records positive growth, India's position is characterized by scale advantage combined with structural constraints. To enhance long-term competitiveness, strategic emphasis on productivity improvement, technological modernization, cost efficiency, and value-chain integration will be essential for strengthening India's standing in the global denim apparel market.

**References:**

1. Aziz, A. (2020). *Indian garments industry export performance: A case of China & USA*. **EPR International Journal of Economic and Business Review**, 8(7), 32–38. <https://doi.org/10.36713/epra2012>
2. Bhogal, B., & Dave, G. (2021). An overview of textile and clothing industry in economic growth of India and Bangladesh. *International Journal of Management*, 12(2), 875–882. <https://doi.org/10.34218/IJM.12.2.2021.085>
3. Chandra Prabha. (2018). *Trends in Indian textile export market: A comparative analysis with China*. **International Journal of Management Studies**, 5(3), 45–56.
4. Dhiman, R., & Sharma, M. (2016). Examining the growth trends, direction and competitiveness of Indian textile exports in global trade. *International Journal of Economics and Business Research*, 11(2), 123–145.
5. Sasi Bhushan, M. (2017). Growth and performance of textile industry in India: An overview. *International Journal of Academic Research*, 4(1), 38–44.
6. United Nations. (2024). UN Comtrade database: International trade statistics for jeans garments exports. <https://comtrade.un.org>
7. Yoganandan, G. (2015). *Growth of apparel export industry in Tirupur, India*. **International Journal of Research (IJR)**, 2(3), 183–187.